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Editorial.

The Ministry of Health in 1934-35.

AS an introduction to the Annual Report of the Ministry of Health for 1934-35* nothing could be more appropriate in this year of Jubilee than the summary given of the main developments during the period of the King's reign in the field of public health. In this there is reference to the establishment of the Ministry itself: and an account of the progress made in relation to National Health and Pensions Insurance, and in respect of the organisation of local government and some of the major services of local government entrusted to the Ministry. Even though couched in the language of the

official publication, the description given of the developments in these connections is most impressive. As evidence of progress in the various directions along which movement has taken place, in addition to facts that are unsailable, figures, some of them of an almost staggering immensity, are quoted. In relation to insurance, for example, it is mentioned that in the last ten years of record no less a sum than one hundred and fifty million pounds had been disbursed in the statutory sickness and maternity benefits, and over ninety millions in medical benefit. On public health it is shown that whereas the expenditure in 1910-11 was twelve million pounds, in 1932-33 it reached forty-six millions, the amount spent on housing in the same period having gone up from one to

* Cmd. 4978. H.M. Stationery Office. Price 5s. 6d. net.

thirty-nine million pounds. On new supplies of water in the period 1922-32 the capital expenditure amounted to approximately twenty-four-and-a-half million pounds. As a result of the spending of money on housing by the authorities and others, the eight million houses existing at the armistice has been increased by more than two-and-a-half millions of new houses, and in regard to slum clearance and slum replacement, remarkable progress has been made. No less remarkable has been the progress made on the side of personal health services, and in relation to tuberculosis and maternity and child welfare, the two most important of these, overwhelming proof of progress is submitted side by side with evidence of a strong desire to establish, further and spend money upon schemes for the benefit of the blind, on mental treatment and mental deficiency, public assistance, and the furtherance of medical education. As the Minister points out, expenditure on public health is generally held to be, and is defended as being, a long term investment. Even so, however, as the summary shows, already quite useful dividends have been received and continue to come in from the monies invested within even comparatively recent times. These are in the form of lives saved, and to show how considerable this has been, figures such as these are quoted: a standardised death-rate fallen from 13.2 in 1910 to 9.3 in 1934; an infant mortality rate of 105 in 1910 reduced to 64 in 1933; and a decrease in deaths from pulmonary and non-pulmonary tuberculosis from 988 and 439 per million respectively in 1910 to 639 and 160 in 1933. That these figures and the contents of the summary must be a source of gratification to His Majesty may be believed. It may be believed also that in the remainder of the report, which treats in the main of the work done and results attained in the period 1934-35, there will be found reasons for pleasure and for pride also.

Amongst the contents there is given a general account of the position in relation to public health revealed as a result of the survey recently completed. Like the extremely concise and attractively written general survey of the health organisation of the country as a whole, which appeared in the report for 1933-34, this account is full of interest and cannot fail to prove useful to all who desire to understand or find it necessary to try to explain to others how matters stand in regard to health organisation in the metropolis. As a result of the coming into operation of the

Local Government Act, 1929, considerable simplification has resulted, and from the statements made in the report it appears that the machine is working satisfactorily and giving results that warrant the paying of compliments, unexpectedly warm, having regard to the fact that the report is that of the Ministry of Health, to the Medical Officer of the London County Council. Reporting upon surveys generally, the Ministry is in a position to claim that good progress is being made. Nor does it appear necessary for the Ministry to make any comment that is unfavourable in regard to any of the areas surveyed during the year. Indeed, there is little that can be counted as unfavourable said with regard to health works or progress during the year under review.

In regard to health services directed to the prevention of disease, the statements submitted show that the schemes and methods operated, in the majority of instances, are very effective. Tuberculosis has, of course, reacted in a marked manner to the efforts directly or indirectly brought to bear upon it, and the fact that additions were and are being made to the sanatorium provision particularly, suggests that local authorities are determined to continue their efforts and are encouraged by the improvements that have taken place and the attainment in 1934 of the lowest death-rate (763 per million) ever recorded in this country. The degree of improvement and the progress made in relation to the venereal diseases is less easy to judge than in the case of tuberculosis. Even here, however, such figures as there are provide encouragement to continue, at least, the practice of the methods now in vogue. The decrease in the number of new cases of syphilis in 1934 was approximately 7.5 per cent. compared with 1933. That in gonorrhœa the decrease should be lower—2.3 per cent.—is not unexpected or unusual, corresponding as it does, more or less, with the results obtained in other countries. Amongst the infectious diseases in which a decline is reported, smallpox is the most important, only 179 cases being notified—the smallest number since 1918. The situation in regard to pneumonia was also better, both cases and deaths being fewer, the former by over 13,000 and the latter by nearly 10,000. Increases are noted in the case of diphtheria and scarlet fever. One effect of the greater prevalence of diphtheria is claimed to have been additions to the number of authorities making provision of facilities for artificial immunisation against the

disease. As a sign of progress and change it may be noted that the Ministry finds it necessary to introduce reference to the sanitary control of aerial navigation and to mention that the medical officer of health in many cases is now aerodrome medical officer, "so as to give him specific control of the medical and sanitary arrangements."

In relation to welfare activities the report contains reference to extraordinarily good work done on behalf of the blind, and the deaf and dumb, as well as under the older established schemes for mothers and children. So far as the latter are concerned, note is made of increases in the demand for maternity beds in institutions and of the numbers of children under one year of age attending centres. Unfortunately, it is impossible yet to record any improvement in "the obstinate and difficult problem, the reduction of the rate of maternal mortality," though the infant mortality rate continues to fall and in 1934 a record low figure of 59 was reached.

The discussion under the head of "Other Health Services" dwells mainly on questions relating to inspection and supervision of food, the work done in relation to milk and under the legal provisions relating to the sale of food and drugs. In regard to nutrition the only reference is to the work of the advisory committee and the joint conference with the physiologists representing the British Medical Association Committee. On local government officers the report has mention of the fact that during the year the appointments of 67 medical officers of health were approved and that out of a total of 1,080 medical officers, 415 do not engage in private practice. The total of sanitary inspectors is not given, though it is noted that of 267 appointed during the year 262 will give whole time to public duties. Referring to these and other officers and servants in another section (Local Government and Local Finance) the report indicates that approximately a quarter of a million have been brought within the Superannuation Act and that the total estimated annual cost to local authorities in respect of these is about two-and-a-half million pounds. In this section there is, of course, discussion of a large number of matters of real moment, as there is also in the sections dealing with Housing and Town Planning; Administration of the Poor Law; National Health Insurance and Contributory Pensions; and the very important part devoted exclusively to the work of the

Welsh Board of Health. A number of these actually call for quotation and comment that unfortunately cannot be made here.

In referring to the introductory summary of the Minister some note was made of what was said as to progress in relation to housing. In the year under review noteworthy contribution was made to the improvements that have taken place. The number of clearance areas declared was 3,029 with a population of 194,668, and of orders confirmed there were 1,988, involving the displacement of 101,676 persons. Of improvement areas declared there were only 42. The total number of local authorities who have declared such areas is 49. In regard to the general house-building situation it is noticed that the total number of houses built during the year under review was 291,983, of which 286,050 were erected by private enterprise.

It is recognised, as already hinted, that in what is written here nothing like justice has been done to the report of the Ministry as a piece of work. It is admitted also that much less of praise has been offered than actually is due to those responsible for the preparation of the report and for the work done and the results achieved. The report itself, however, has little or nothing to say of individuals and individual contributions of any sort. Even of Sir George Newman and Sir Arthur Robinson, to whom public health and preventive medicine owe so much, there is no mention. Partly, no doubt, this is because the resignation of these distinguished civil servants did not take effect within the period reviewed and it will be in a subsequent report that some attempt will be made to express appreciation of the wonderful services rendered by them not only in the year 1934-35 but throughout the period of their connection with the Ministry.

Consolidation of Public Health Acts.

FROM time to time over a number of years, hints from more or less authoritative and well-informed sources that progress was being made in the direction of the consolidation of public health legislation have been received. Recently these have been becoming more and more definite, so that it did not cause any great amount of surprise when the other day, following a suggestion given by Sir Harry Pritchard, in the course of an address to the Law Society, that the work of the committee concerned with the matter, of which he is a member, was nearly completed, a statement

was made to the effect that a new Public Health Bill would come before Parliament before Christmas. That consolidation was necessary, and should be undertaken, the Society of Medical Officers of Health long ago insisted, and at one time, indeed, the setting up of a committee to consider as to the lines to be followed was contemplated. Of what exactly has been done now or will be done no very precise information is as yet available. According to Sir Harry Pritchard, the committee over which Lord Addington has presided "are expected to produce a Bill which will not only consolidate the existing enactments, but will make numerous alterations in them, some of them possibly of considerable importance." Sounding as this may be, it does not really reveal very much, any more than does the statement the Minister of Health is credited with having made that the measure in course of preparation would consolidate and make such amendments as were considered necessary to Acts on public health, some of which had been on the statute book for more than a century. Whether or not, as this statement suggests, it is purely measures relating to public health and so entitled that are being dealt with is not quite clear. If it is, however, and it is not unlikely that it may be, that will probably be enough to go on with. In any case the experience gained will be of value when the time comes, as it should soon, for taking up the question of consolidation and amendment of other legislation with which health authorities and officers have concern, that relating to vaccination for example, and the infectious diseases, if this has not been dealt with, as very conveniently it might, along with the ordinary public health legislation. The laws relating to food, not excepting that relating to adulteration, though only recently submitted to a degree of consolidation, call also for such treatment as would result in the production of a single measure containing provision for the safeguarding of the food supply of the people. What may be classed as maternity and child welfare legislation is not conspicuous for its tidiness either, and there should be as little delay as possible in carrying out a process of sifting and sorting, rearrangement and amendment. It is possible, of course, that this may have been done already and it will be found that everything in the shape of consolidating that could be desired has been done.

If not, however, and it is actually only the Public Health Acts that have undergone treatment there will be reason for satisfaction. In addition also, it may be taken, there will be encouragement to hope and believe that what has been done has been merely to make a beginning, and the giving of attention to all the other subjects calling for consideration is a matter of a very short time only.

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The Central Council for Health Education.

THE Eighth Annual Conference on Health Education, organised by the Central Council for Health Education, will be held on Thursday, November 21st, 1935, in the Lecture Theatre of the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C.1. The morning session (11 a.m. to 1 p.m.) will be presided over by Dr. A. S. MacNalty, Chief Medical Officer of the Ministry of Health and Board of Education. Following the presidential address there will be a discussion on "Health Education in the Schools," to be opened by Mrs. E. V. Parker, of the National Union of Teachers. The Rt. Hon. Sir Kingsley Wood, P.C., M.P. (Minister of Health) will preside at the afternoon session (2.30 to 5.30 p.m.) and will deliver an address. Other speakers will include Dr. James Fenton (Chairman of the Central Council for Health Education), and Lieut.-Colonel Sir Arnold Wilson, C.M.G., D.S.O., M.P., who will open a discussion on "Health and Physical Education." This will be followed by a film dealing with the same subject. The Minister of Health has sanctioned the payment of reasonable expenses incurred in connection with the attendance of not more than two delegates from each authority whose accounts are subject to government audit. Names and addresses of delegates, of whom it is hoped a large number will be appointed, should be forwarded, not later than November 16th, to the Central Council for Health Education, 1, Thornhaugh Street, Russell Square, London, W.C.1, who will be glad to furnish any further information with regard to the Conference.

In co-operation with local and national statutory authorities the Central Council is inaugurating a new series of health week exhibitions in the autumn of this year. The first

of these will take place at York and at Southampton. The City of York Empire Health Week Exhibition will be opened on October 7th at 3 p.m. in the Exhibition Buildings, York, by Sir George Newman, K.C.B., formerly Chief Medical Officer of the Ministry of Health, in the presence of the Lord Mayor of York and the City Council. The County Borough of Southampton Health Week Exhibition will be opened by Sir Francis Fremantle, O.B.E., M.P., at 7.30 p.m. on November 18th in the Coliseum, Southampton. Delegates from other local authorities are cordially invited to attend the opening of these exhibitions or to pay a visit during the week that each remains on view. Enquiries will also be welcomed by the Exhibitions Department of the Central Council for Health Education for proposals for a health education campaign suitable for the requirements of any particular area.

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Fumigations with Hydrogen Cyanide.

THOUGH, having regard to the nature of the agent, accidents have been extraordinarily rare in the course of fumigations with hydrogen cyanide, the circular of the Ministry of Health (1497) of September 17th, 1935, may be counted timely, and the suggestions it contains, and the warnings it offers, appropriate.

In the view of the Minister, it is stated, twenty-four hours is normally to be regarded as the minimum period which must be allowed for ventilation of the premises after fumigation. In certain circumstances the period to be allowed must be substantially longer, e.g. in cold weather dissipation of the gas is slow, and gas may be absorbed and held for some time by porous substances.

The ventilation of bedding, etc., is particularly slow and difficult. Unless it is impracticable to do so, bedding should be treated separately in a steam disinfecter. Where bedding is fumigated with HCN, arrangements must be made to ensure that it will not in any circumstances be used again until repeated tests have shown that it is entirely free from gas.

It cannot be too strongly emphasised that HCN is highly poisonous to human beings and domestic animals, that fumigation with this gas must only be carried out by trained and responsible persons who have full know-

ledge of the nature of the gas and of the precautions which must be observed, and that no premises should be re-occupied after fumigation until a certificate in writing has been received from the responsible person in charge that the premises have been properly tested, and are free from gas and fit for occupation.

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Obituary.

CHARLES ARTHUR BRIGSTOCKE, M.R.C.S.

THE Society records with regret the death, at the age of ninety-two years, of Dr. C. A. Brigstocke, who held the post of Medical Officer of Health of Haverfordwest until as recently as June, 1933. Born at Carmarthen, Dr. Brigstocke was educated at Sir Thomas Powell's Endowed Grammar School at Carmarthen and at Swansea College. He entered St. Bartholomew's Hospital, and after obtaining his Membership of the Royal College of Surgeons returned to Wales and was for many years in private practice at Llanelly and Cardigan. He set up in practice in Haverfordwest in 1880 and continued actively until January, 1930, when he retired, but continued his public health duties for a further three and a half years. As Medical Officer of Health he was largely responsible for many of the improvements in Haverfordwest's water, sanitary and other services. Dr. Brigstocke was a Fellow of the Society of Medical Officers of Health, attached to the Welsh Branch.

FRANK CHARLES SHRUBSALL, M.D., F.R.C.P.

With great regret the death is recorded, at the age of 61 years, of Dr. F. C. Shrubsall, a Senior Medical Officer of the London County Council. Following a brilliant career at Cambridge, Dr. Shrubsall began his association with the London County Council in 1909, and at his death was the Senior Medical Officer in charge of special school work and of work under the Blind and Mental Deficiency Acts. An authority on all problems connected with mental deficiency, Dr. Shrubsall, in conjunction with Dr. A. C. Williams, wrote a standard text-book entitled "Mental Deficiency Practice." He also made a special study of anthropology and juvenile delinquency.

The Medical Officer's Practice of Housing.

By HUGH A. FAWCETT, M.R.C.S., L.R.C.P., D.P.H., D.T.M. & H., Principal Assistant Medical Officer, London County Council.

Though the practice referred to in this paper by Dr. Fawcett is that adopted in London, there is so much of general interest and value in it that it is certain to be received with as much approval as that with which it was met when it was read at the meeting of the Metropolitan Branch on September 13th, 1935. In accordance with requirements, Dr. Fawcett, in opening his paper, announced that any opinions expressed were his own, and in no respect the accepted responsibility of his Authority.

IN compiling these notes I have tried to bear in mind that any usefulness and interest they may have, on the present occasion, depend chiefly on their practical application in the ordinary routine housing work of a medical officer. Much as one is tempted to stray into the wider issues involved, to go beyond the cleared site, the technical details of the early stages must detain us here, as, unless these are clearly defined and carefully carried out, the process cannot run smoothly and progressively to its ultimate, ideal result—appropriate, healthy housing accommodation within the rights and means of everyone.

Usually it is the medical officer who is responsible for the start and early career of all slum-clearance schemes. However fine the finished work, whatever pride or praise may attach to the final accomplishment, whatever just honours may go to the others for their contributions at various stages, the initial steps, if not the most important, are certainly not the easiest.

Normal clinical medicine is said to be an art rather than a science but in public health, generally, and in housing work in particular, it is the scientific and the technical aspect which predominates. In spite of this fact, there is, perhaps, no branch of public health so liable to misinformed criticism and interference. Because houses are such familiar objects in everyday life, every man-in-the-street, every layman, no matter what his own work may be, considers he knows all about unfit houses, and the really complicated technicalities and problems of housing work. It is, perhaps, natural to overlook the fact that the fundamental principles of *health*, fitness or unfitness, sanitary or insanitary, must ultimately depend, as in all similar questions, on the considered opinions of those most qualified to give them, trained and elected for that purpose—the medical officers of health.

To meet this difficulty, and to maintain and establish the fact that housing is now, at last, truly a public health matter, the medical officer has to be prepared to demonstrate his knowledge of the subject; his ability to cope with its very wide implications and complications, and to apply himself to a study, in some detail, of technicalities and crafts normally outside his training and experience.

Prima facie, the medical officer's duties, in implementing the Housing Acts, seem simple, but those who have had some experience soon realise that the subject bristles with difficulties and that each new area, when it comes to court or public enquiry, produces like a conjuring trick, some fresh or unexpected problem, some aspect unforeseen.

Whatever his personal opinion, the medical officer may have to reconcile it, more or less, with the law and legal interpretations of the Acts under which he performs and by which he is governed. However ably he may be legally represented, the opposition, with immense interests involved, may be no less formidable. He thus finds himself in the centre of the stage, the author of the plot and "villain" of the piece, as the principal witness and the butt of cross-examination in which every detail of his statements, actions and capabilities is open to destructive criticism by those most trained and skilled to confuse and confound him. To add to his discomfiture, he may be confronted by experts in subjects hitherto outside his normal scope.

If, therefore, he is to maintain some dignity and effectiveness for himself and his authority, he must display some knowledge of such subjects as law and legal methods; surveying; valuation; building construction and materials; mapping and planning; and, of course, know, almost by heart, all relevant Acts, Bye-laws, Regulations, etc.

While hoping to avoid much reference to

legal questions, particularly the more controversial points, and concentrate on the practical side, they cannot be altogether ignored. No sooner have we become familiar with the 1925 and 1930 Acts than a new one, the 1935 Bill, becomes an operative Act while I write these notes. Whilst, therefore, it must be some time before our "learned friends" and test cases can give us its legal meanings and significances, and even longer before we learn of its effects and failures in practice, I can now, no longer, as I had hoped, avoid all reference to it.

It is, therefore, likely that I may not only repeat facts already well known, but must express opinions in illustration, which could be better given by those with legal qualifications. If this is so, my excuse is a long, perhaps unique, experience of most aspects of the subject, in which any lack of special qualifications has been somewhat compensated by knowledge inevitably acquired from observation and practice in numerous cases of every type.

Before we leave the general aspect of housing and come to the particular details and problems of London, a few remarks must be made in extenuation of the subject and as some comfort, perhaps, to those medical officers who, with some justification, still find this part of their work uninteresting and monotonous, and hardly worthy of special study.

Only a few years ago, housing, in its full sense, as far as the medical officer was concerned, was almost negligible, and, at best, a routine "side-line," largely carried out by the sanitary inspectors. Apart from certain repair sections and "nuisance" notices under the Public Health Acts, and action on individual houses, the matter of *areas* and redevelopment was left to the other officers of local authorities or, more often, to private owners or charitable trusts and societies:

In the last five years, however, there is no subject connected with public health which has grown so rapidly or become so important in so short a time. It has been in the nature of a revolution. Apart from the interest aroused, popularly, by the slogan "Clear the Slums," as a national cause, the subject has become a major political issue and, although, officially, this is no concern of the medical officer, he may find himself in this campaign of some importance in a "key" position where all his diplomatic and tactical skill may be required to maintain a proper and dignified neutrality. He will, however, have the satisfaction of having in view a

common goal, not only popular but with an urge rather than discouragement to do all he would desire, or even more, as a medical officer; and as fast as he likes.

A time may come, as in other branches of preventive medicine, when we have cured most of the defects and evils with which we have to cope, but this is as yet far off; meanwhile, the health officer, interested in housing questions, is having, at the moment, his day of days, with unprecedented scope and opportunities of playing an important part in acts which have far-reaching effects and may, in time, change the whole mode of life and appearance of our larger cities.

If this is so, he cannot be too jealous of his reputation or too conscious of the future results and possibilities of his present actions. Just as now we may go round deploring or condemning the well-meant but amazing works of a previous generation, so will sanitary authorities to come criticise and judge us, praise us or revile us, on our works started to-day.

The wholesale demolition and remodelling of buildings is no temporary, elastic affair, inexpensively and lightly carried out; few reforms can be more permanent. I do feel that this magnitude and far-reaching effect should be stressed and always borne in mind by the medical officer.

So great a responsibility justifies a special caution and an effort to be unbiased and fair. Although the majority of the public, indirectly in whose service the medical officer works, is on his side, he cannot please everyone. In housing, especially, he is up against enormous vested and financial interests. A simple signature on certain forms and maps may start a train of serious consequences for many, immediately or in time to come. His one serious opponent, however, the property owner, represents an important section of the community, but his objection is more often based on inequalities of compensation or other legal points than any lack of sympathy with the acknowledged ideal of better housing. The 1935 Act should rectify much of this and meet many of the old grievances.

Although the medical officer, in condemning property, should be concerned only with the facts which he himself notes, and judge each house on its own merits, he cannot altogether render himself unconscious of the serious difference financially between say, "site value"

(red) and "market value" (grey) or other consequences ulterior to the indifferent formality of the mere wording of the Act.

To all intents and purposes a representation is a *signed professional certificate* and should be no more lightly or inaccurately given than any other medical certificate, particularly one involving private monetary consequences as well as public funds. In fact, I suggest that houses may be regarded as "patients," to be examined with care and approached in that same spirit of impersonal skill and conduct. This not only relieves some of the mechanical monotony of the work but keeps alive that professional touch which some of us, on the more unfamiliar paths of preventive medicine, are apt to lose.

Opinions, although based on facts, are bound to vary, even among the greatest experts and in spite of standard, legal formulæ, such as Section 1 of the 1930 Act. The interpretation of the exact meaning and scope of the Section is largely left to the individual medical officer. Unless, therefore, he forms for himself and his staff some sort of standard and sticks to it impartially, no matter what the temptation and urge to vary it, he cannot hope to gain ultimately that confidence and respect from everyone concerned which he owes himself, his authority and his profession.

So much for the general principles and ethics of medical housing work.

London's housing problems are rightly regarded as abnormal, if not unique. Its immense size; its great age and varied history; its division into 29 separate authorities, each with certain powers, partly overlapping and not always clearly defined; its congested and badly-planned buildings of all types and ages; its intrusive, spread-over industries and its paucity of undeveloped sites, are among the reasons for such a view.

Hitherto, there has been little attempt at any town planning in London as a whole, and it has been slowly built up, piecemeal, without any regard to a healthy, sensible lay-out of houses or ultimate design. The result is an irregular mass of overbuilt blocks, separated by a superfluity of narrow, useless streets, *culs-de-sac* and courts; of monotonous terraces or gloomy tenements; the whole sown with large factories, workshops, railways and other businesses, crammed into almost every available space, shutting out light and air to the dwellings with which they are so intimately mingled.

The dwellings of London, "occupied or of a type suitable for occupation, by persons of the working classes," with which the medical officer may have to deal under the Housing Acts, can be divided into six main type-groups:

(1) Two-Storey Terrace Houses.

These form the majority of the properties requiring action under the Acts and constitute the bulk of clearance areas. Outside the most central boroughs they greatly predominate and are very constant in type and defects. Most of them were hurriedly and poorly built between about 70 and 120 years ago, to meet the housing demands of the poorer classes, following the industrial revolution and Napoleonic Wars.

The typical house has, usually, four rooms and a single-storey rear addition. A passage is often present. A forecourt is seldom provided (*i.e.*, no set back, even in narrow streets) and the yards or gardens back on to the rears of a similar terrace in a parallel street. The water-closet and often the water supply are outside the house. In some cases, they are only one-room deep, with a lean-to rear addition but no windows in the main rear wall.

The usual principal *defects* of this type include: old, worn-out fabric and general disrepair; bad internal arrangement, such as low rooms, dark stairs (sometimes direct from living rooms), floors below present street level, lack of passages from street to yards (necessitating the removal of refuse *via* living rooms); rising damp (in spite of extensive wooden dadoes) and possibly congestion on site (small yards or narrow streets).

If these defects are present, the most satisfactory and, in fact, the only and proper method of dealing with them is by clearance area procedure under Section 1.

(2) Three- or Four-Storey Terrace Houses.

This is the more common type in the central and western boroughs, particularly in the older, once fashionable residential districts north of the Thames. Originally substantially built, most of these houses were designed for one better-class family, but have now descended through the usual stages of "apartments," furnished rooms, etc., to tenements for working-class families, one on each floor or even in each room.

The majority of this group has basements and sometimes, in the oldest type, attics in a Mansard roof. Rear additions are not typical,

but there is sometimes a detached wash-house in the yard. Water-closet accommodation often consists only of one closet in the basement yard. Water supply and washing facilities may be in the basements and there is frequently a rather useless angle sink on the stairs.

The basements vary from the worst type, wholly below ground, with pavement grids, to fairly spacious areas with steps down and separate doors. In rear, there may be semi-basements only with yards below street-level.

Internally, a passage leads to normal, lighted stairs with small landings and half-landings. The rooms, with the exception of basements and top floors, are of adequate height or even lofty, and those on the first floor (the original drawing rooms) usually spacious and well lit. Normally there are two rooms only on each floor.

The main *defects* of this type are chiefly due to unsuitable user. Overcrowding is almost invariably present, resulting in overuse under rough tenancy, with internal or superficial disrepair. Belonging to a period of good, sound building construction, this class of property lasts well and, except for the normal wear and tear of age, may not show serious, irreparable dilapidation of fabric. Apart from disrepair, the use as tenements results in sanitary defects (defined in Section 62 (1)) such as inadequate and inaccessible conveniences (water-closets, wash-houses and water points). One or two rooms let to one family provide no reasonable cooking accommodation (the gas stove is usually on a small landing), no proper food storage and no individual washing accommodation.

The basements, in themselves, are usually unfit in all respects (dark, damp and low) and top rooms or attics, especially in rear, low and inadequately lit (undersize windows).

Although this type of property may include some of the worst housing conditions in London and often presents a picture of the popular idea of a "slum," application of Section 1 (of the 1930 Act) is not always possible. The disrepair may be chiefly decorative and superficial, capable of remedy at reasonable cost; and also the other defects, referable to overcrowding and misuse, with which Section 1 does not deal and for the abatement of which wholesale destruction of fairly sound, valuable property can be shown to be unnecessary. Congestion or bad arrangement are not often present, but provide a strong argument for clearance and reconstruction of the whole area.

Under the 1930 Act, this type of house provided the typical "improvement area."

Now that this procedure has been repeated by the 1935 Act, careful consideration must be given to those sections dealing with overcrowding, minor disrepair, inadequate accommodation, unfit basements, closure of unfit rooms, etc., before rushing into the more drastic commitments of Section 1. It may be, at any rate in some cases, proper to give the owners a five-year trial under Section 55 of the new Act, simultaneously with any necessary action as to overcrowding, unfit rooms, etc. In any case, such property might be put on the register of houses let in lodgings and kept in a reasonable state till it can be dealt with by other means.

(3) Cottages in Courts, Alleys and Culs-de-Sac.

These interesting groups are to be found tucked away in odd corners, often off old high streets and in rear of main road business premises. The majority are very old and some are obviously remnants of village conditions and once stood in rural surroundings. Now, those more centrally situated, are built in on all sides by more substantial buildings. Many have a narrow, covered entrance under other properties. They are by no means easy to find and one of the minor thrills of a "slum hunting" survey is the unexpected discovery of an unlisted specimen in the darker "jungles" of London.

The typical characteristics of the group are these: mostly true cottages, ranging from one-storey "hovels" to the more normal two-storey house, with either two or four rooms; they surround or flank a paved court, not infrequently with individual forecourts or unexpected gardens; there is often no rear yard and the houses are back-to-back in principle or fact. If rear yards are absent, the sanitary accommodation, water supply, etc., are frequently in common in the forecourt.

Internally, there are seldom any passages from front to rear; the rooms are small, very low and may be inadequately windowed; stairs are direct from living room to bedroom, steep, narrow and dark. The rear room, sometimes a mere lean-to addition, may serve as sitting room, kitchen and wash-house. Rear bedrooms, if present, are often of attic type, little more than cupboards under the sloping roof.

Many of these groups are so bad that *every possible defect*, within the meaning of Section 1, is represented and there is no class of dwelling

more definitely unfit under the Acts or in which the medical officer need hesitate less in representing for clearance, as the only satisfactory and proper procedure. Whatever personal regrets he may have in the loss of these quaint and often picturesque spots, there is no doubt they have become obsolete and intolerable in the heart of a modernised city.

Congestion and bad arrangement, both on site and internally, are the outstanding defects. From the long list of other defects, it is necessary to mention only the prevalence of rising damp, dilapidation and inadequacy of sanitary conveniences.

This class of area, owing to its small size and shut-in situation, seldom provides by itself a rehousing site and is, therefore, usually dealt with by a clearance order, with suitable restrictions as to subsequent user. The real difficulty lies in the question of rehousing, particularly in those more congested boroughs where these "black spots" are concentrated. The problem is so urgent, extensive and specific that I advise a special, scheduled list of these areas (where not already part of larger areas) and an endeavour to deal with them in batches, to save time, at one enquiry.

(4) Mews-Dwellings.

In many respects this group resembles the last in arrangement and defects, but has, in addition, special problems of its own. Mews occur most frequently in the north-west and central boroughs, particularly in the older, once fashionable residential districts, where they were built, in connection with the best class of property, to accommodate the coachman, grooms and horses in the leisured days of broughams and victoria carriages. They are, therefore, usually in *cul-de-sac* courts or narrow paved alleys, in rear of substantial houses or their old sites.

A large number have been or are being converted into business premises, workshops or, in the majority, garages. Where living accommodation is maintained, it consists of one or two rooms over these garages or the original stables and coach-houses, and approached usually by steep, ladder-like stairs.

Almost invariably, mews are back-to-back in principle, there being no yards or right of light in rear, and the back room, if any, has to be lit by a skylight only. Rooms are low, generally intercommunicating, and the only window may take the form of a dangerous "stable-door"

type, down to floor level. The original water-closet was under the stairs in the stable, and the water supply in the common yard.

The purpose for which they were built relegated them to odd corners where they are frequently congested and overbuilt, although naturally, the approach was always wide enough to take four-wheeled vehicles.

In some of the new or still fashionable residential districts, many mews dwellings have been modernised, renovated and let to the "pseudo-bohemian" or professionally "artistic" community at exorbitant rents. Unfortunately, a mauve front door, artificial flowers in window boxes and chromium fittings do not abate the essential bad arrangement or other evils. They do, however, remove these technically unfit dwellings from the scope of the Housing Acts and the medical officer may be faced with the anomalous and embarrassing situation of two fundamentally identical mews dwellings, one definitely occupied by "working-class" persons, let at a few shillings, and on which it is his duty to take action, and the other, inhabited by a film-star or artist, let at over £100 a year! One day, let us hope, sanitary legislation may be truly democratic, with less false class distinctions.

Where still occupied by persons defined as "working-class" (1903 Housing Act), mews are generally the homes of costers or hawkers, for whom barrow or even animal accommodation is essential. In these circumstances, considerable offence and nuisance may be caused by discarded fruit, vegetables, fish and other refuse; a condition further aggravated by manure from any animals kept and the flies it attracts and breeds.

Whatever is kept, whether animals or motor cars, below the living rooms there is seldom any impervious flooring between, and effluvia from the former and far more dangerous fumes from the latter, easily penetrate the ordinary boards.

The principal defects of this class of dwelling are, therefore, first, bad arrangement internally, with inadequate lighting and ventilation, and probably congestion on site; secondly, sanitary defects and inadequate sanitary accommodation; and thirdly, dilapidation and disrepair in a fabric which is cheaply built and never meant to outlive its original purpose. Nuisances and dangers from fumes can often be added, as well as the fact that an old, airless stable, under a living room with a dusty, leaking ceiling,

infested with flies, is not a hygienic store for marketable foodstuffs. True, these last defects do not come directly into the terms of the Housing Acts, but they may add weight to the medical officer's decision as to the most satisfactory method of procedure.

Personally, I have no doubt that, in most cases where it can be legally applied, clearance is the proper and most satisfactory way to deal with mews-dwellings. The problem is, I think, a difficult one, open to argument in many instances, too lengthy to pursue in detail here. There are, however, one or two main considerations.

The first is to decide whether the mews is mainly a working-class dwelling-house, more or less in its original state, or so altered or adapted that the business portion, whether garage or industry, is of far more importance, financially and otherwise, than that used for living purposes. If the latter, permanent closure of the dwelling portions (under Section 20) may meet the requirements, without seriously injuring other interests. The chief objection to closure, assuming no obstruction to other dwellings exists, is the retention of empty, derelict rooms, becoming more and more dilapidated, and receptacles for rubbish and refuse, or reservoirs of rats and other vermin. Demolition or effective sealing of the upper floor is the ideal if owners will agree.

If, on the other hand, as is more often the case, the mews are little changed, housing families as their principal function, and exhibit defects well within the terms of Section 1 or 19 of the Act, they should, I feel sure, be dealt with radically, once and for all, by clearance or demolition orders. The cleared site can then be redeveloped on modern lines for garages or other suitable purposes to the ultimate benefit of all concerned. Where, in addition to the conditions just enumerated, there is congestion, especially as is frequently the case, when it adversely affects adjoining and otherwise fit dwellings, there can be no serious argument for any procedure short of complete clearance.

Like the little courts previously mentioned, these intrusive, overbuilt stable yards and dwellings are obsolete and completely out of place in a modernised city which, at last, shows signs of some extensive and rational re-planning. It is quite possible to provide modern, healthy accommodation for the coster class but even they and their obstructive street markets must in time give way to modern urban conditions.

My own opinion is that the most unsatisfactory procedure with mews (or any type of smaller, unfit dwelling-house) is by way of repairs and minor alterations, particularly under Section 17, which carries with it a *certificate of fitness*, baulking any future clearance and merely masking and perpetuating the fundamental evils of the individual house or the area as a whole.

If, for some exceptional reasons, it is decided that reconditioning is the only and proper procedure to be adopted in the case of certain mews, the absolute minimum of works to be required should include:—

- (a) Solid floor, at least 3 inches thick (L.B.A. 75.3.a.1.).
- (b) Underside ceiled with lath and plaster (L.B.A. 75.3.a.2.).
- (c) Solid wall round water-closet (L.C.C. bye-laws) with light and ventilation.
- (d) Adequate lighting and ventilation of staircase (L.B.A. 74.2.).
- (e) Adequate windows in back rooms or at least special lantern lights (not skylights) (L.B.A. 76.).
- (f) Adequate means of through ventilation.
- (g) Internal water supply and adequate individual washing accommodation and other sanitary conveniences.

Before leaving the interesting subject of mews, it may be suitable here to remind the medical officer that he need not hesitate to deal with dwellings over garages, stables or other businesses (such as shops) as "dwelling-houses" within the meaning of Section 1 (or 19) of the Act. He was supported in the past in test cases by legal decisions, and Section 62 (1) of the 1935 Act confirms this beyond all doubt. It also overcomes the old difficulty of action on the dwelling portion only. It is also of interest to note that chauffeurs have been held to be persons of the "working-classes" within the meaning of the Acts.

(5) More Modern Block-Dwellings (Tenements).

This type-group presents a problem hitherto little recognised and seldom considered for action under the Housing Acts. That they were once described as "model dwellings" and no doubt considered in their day most suitable, may account for their comparative immunity up to the present.

The distinctive feature of these buildings is that they were built for their present use and purpose, as *blocks of separate tenement flats* for

the working-classes. Many were speculative and others were of a charitable origin, so that they are more commonly found in the poorer, more densely-populated districts in the central and eastern parts of London.

Not only are many such block-tenements obsolete and insanitary under present standards but present, *prima facie*, all the features of a typical and topical "slum." They are well-known to all charitable workers, missions and welfare visitors, and there can be no doubt that many of them are "unfit" in the more technical sense and should be within the scope of the clearance sections of the Acts.

In most cases the fabric of the buildings is sound, even exceptionally well and substantially built, and the *defects* commonly present are those already mentioned in Group (2), which result from bad site planning, congestion, bad arrangement generally and, above all, overuse. *Overcrowding* is usually severe; overbuilding, with lack of light and air, commonly present, and sanitary defects or inconveniences frequent. Among the latter are lack of individual yard space, and washing and drying facilities. Disrepair, although seldom absent, is superficial and the natural result of intensive occupation and rough usage. A difficult, not uncommon, feature is that certain parts, single rooms or lettings, may be quite unfit in all respects while the remainder of the building is not, or presents only minor defects of a remediable nature.

In dealing with this type of dwelling, therefore, the medical officer has to decide whether the building, *as a whole*, is "unfit" or fulfils the other terms of Section 1, regardless of the fact that to all appearances it is a bad "slum." A reminder may not be needed that the word *slum* looms largely in the political, press and public views but never once occurs in the Housing Acts.

Although, hitherto, few of these buildings have been condemned under Section 1 (1930 Act), and the official attitude and results are not yet well known or confirmed, there can be little doubt that many of them must be tackled by clearance procedure, and that the problem is an extensive and serious one which will have now to be faced.

Many of these large, tall buildings, although reasonably fit in themselves, are highly obstruc-

tive to other dwellings, rendering them unfit and come, therefore, within the terms of the latter half of Section 1 as "other buildings." Unfortunately, the new Act in Section 62 (1) puts difficulties in the way of this solution, but they can, once more, be considered as "obstructive buildings" (Section 58-61; 1935 H.A.) and so may be demolished.

In any case, at present, the medical officer should go cautiously under Section 1, with this class of dwellings; they are not only substantial and valuable properties, frequently built from charitable funds, but may, with modifications, serve a really useful temporary purpose in crowded areas while sites are being formed and developed elsewhere, and less substantial, older "slums" are cleared.

In many instances, closure of parts, reasonable alterations, repairs, or even demolition, of portions, together with the most necessary decrowding and re-arrangement of families, may meet the case. Had the old "improvement area" procedure proved less difficult and cumbersome, it would have seemed the ideal method in some of these cases.

The new *Redevelopment Area* procedure may solve these problems but, among the various powers of the three Acts now in conjunctive use, action to render some of the better examples temporarily fit, even for the five-year period only (Section 55; 1935 Act) should surely be possible. The structural alteration necessary in Section 55 can be of a minor character only to meet the technical requirements.

It must, however, be repeated that this still leaves a large number of these "dwellings" in which downright clearance seems the only satisfactory and proper procedure. The pity of destroying substantial buildings, erected with faith and pride by a former generation, only emphasises my earlier contention that the wholesale reconstruction of a large town should not be rushed through in any haphazard fashion.

The differences between certain quite modern block dwellings (or some still in erection) and these older tenements, are often of a minor degree, in which bad planning and congestion may be perpetuated, even within the requirements of the Building Acts, and with the same evils and problems for our successors to tackle all over again.

(6) Exceptional Dwellings.

This class is chiefly one of academic interest and little need be said except that it provides a welcome relief to the ordinary routine.

In this group may be classed the rarer, atypical examples of dwellings which do not fall into the five main divisions; such as caravans, huts, caretakers' quarters, almshouses, certain abnormal dwellings in or over industrial premises, cottages within the premises of other houses, perhaps fixed houseboats, etc.

Caravans, tents and huts, although previously held to be "dwelling-houses" by the Ministry (in 1932-33 Report), are now (Section 80, 1935 Act) definitely within the terms of the Acts and can be dealt with separately or as parts of a clearance area. Obviously they must be more or less fixed—it would not be possible to "define on a map" or later demolish a structure which might migrate from place to place! Once gone, the site becomes vacant land and, therefore, cannot be included as "red" in any order. The period of two years laid down in the new Act seems too long and might presume that a thoroughly unfit dwelling of this nature must be left, as a standing nuisance, for two years before it can be removed under the Act.

Hut encampments, as well as caravans, are to be found in the London area, and present much the same problems; but, whereas caravans have unsatisfactory sanitary arrangements and other statutory defects, the better form of army hut or *wooden bungalow* seldom presents any bad arrangement, or any defects of sanitary accommodation; light and air are more than adequate; there can be no rising damp and those that I have seen could not be better planned. They even have that great rarity, a properly ventilated larder! They often look shabby and there may be disrepair but their very construction renders this superficial and inexpensively repaired. True, there are some extremes of temperature and they were never intended to be permanent, but their death is fairly sudden and definite and, while they last and are well maintained, it would seem difficult to devise a more healthy, sanitary yet inexpensive form of dwelling. One cannot help feeling they might have their uses as temporary "decants."

Transferred to the seaside or country, these bungalows, with their ample gardens and well-fitted interiors, would be much sought after, at high prices, as sanatoria or healthy habitations. They certainly compare very favourably with the older, smaller type of brick house with which we most commonly deal.

It is, therefore, very doubtful if anything

in Section 1 of the 1930 Act applies to such hutments, and their clearance or closure is by no means an easy procedure as far as the certifying medical officer is concerned.

Almshouses and caretakers' quarters serve a special purpose and a form of accommodation not readily provided in new housing schemes; their clearance should, therefore, be postponed except in the worst cases.

Of the other abnormal types of dwelling that may be met with, it suffices to say that each must be judged and dealt with on its own merits or demerits. Each presents its specific problems too lengthy for present discussion.

Housing Surveys and Schedules.

Not only is it a duty of the medical officer of health to keep an up-to-date schedule, based on periodic inspections, of the unfit houses in his area but, in view of the fluid nature of slum property, changing standards and new Acts, it is essential he should do so for the easier running of his own housing machinery. A thorough street by street, house by house, survey pays for its initial labour and is the more easily kept up to date. This is less difficult and probably more useful if it is confined at first to "clearance areas," probably suitable for Part 1 action, as distinct from other action such as closures, repairs, etc., on individual houses.

In practice, I have found that notes, cards, schedules, etc., however elaborate, take a very secondary place as records to actual *maps*. These maps, most suitably done on the 5 feet ordnance showing individual houses distinctly, can be made out in portions relating to each area. As precise details are not needed in these preliminary surveys, the simplest and easiest procedure is to take the map personally to the suspected area and mark in suitable pencil notes or symbols for the various categories on each house. These can be filled in and completed in the office.

My method of approach is to mark first, for "red" colouring, all the houses which at once, on sample or cursory inspection, obviously come within the terms of Section 1. The next step is to mark for "blue" all those buildings which are obviously fit or outside the scope of Sections 1 and 19, and need not be pursued further. Lastly, there are always certain doubtful or "border-line" properties which will have to be *re-examined* in more detail before their category is finally determined. These are conveniently made "yellow." If there is a plain

N.B.—The ruling that a single building cannot form a "clearance area" does not apply to block flats where each letting is equivalent to a separate dwelling.

The representatives of the Association stated that efforts had been made to secure adoption of their scale by the County Councils' Association and the Association of Municipal Corporations. The C.C.A. sympathised with the attempt to obtain some uniformity of veterinary salaries but had stated that it was not within their province to advise adoption of salaries scales by their members. An interview had still to be arranged with the A.M.C. They said that the Veterinary Association took disciplinary action against any of their own members who acted in disloyalty to their salaries policy.

The representatives of the Association further said that approximately 50 counties and county boroughs employed whole-time veterinary officers, and that three of these were not applying their scale salaries. It appeared that the existence of this salaries scale was not known to some medical officers of health, and they therefore asked the Society to assist them by making the scale known to its members.

The General Purposes Committee recommend that a communication on the following lines be sent to the National Veterinary Medical Association:—"The Society heard the deputation with interest and sympathies with the aim of the Association to regularise salary conditions of municipal veterinary officers. The Society understands that one of the main obstacles to the general adoption of the scale lies in the fact that medical officers of health are ignorant of the existence of such a scale, and the Society therefore suggests that this can be remedied if the Association circularises to every M.O.H. of an authority which employs, or is likely to employ, whole-time veterinary officers a reasoned memorandum setting out the suggested salaries for the various grades of veterinary officers."

(5) *Hygiene of Crews' Spaces*.—The Committee considered the new series of recommendations drawn up by the Association of Port Sanitary Authorities with regard to the hygiene of crews' spaces, which is to be submitted by the Association to the Ministry of Health and the Board of Trade.

The Committee instructed the Executive Secretary to circulate copies of the memorandum to the next meeting of the Council and decided to recommend that the Association be thanked for giving the Society an opportunity of seeing this document.

(6) *Domestic Use of Smokeless Fuels*.—The Committee considered a report on the above subject by a special sub-committee of the Manchester City Council and the following resolution passed at the annual conference of the National Smoke Abatement Society:

"That this Annual General Meeting of the National Smoke Abatement Society congratulates the Manchester City Council upon its action in appointing, and in approving the report and recommendations of, a special sub-committee to consider the desirability and practicability of increasing the use of smokeless fuels (including gas and electricity), and urges all other local authorities either:—

(a) to consider and act upon the recommendations of the Manchester report, or

(b) to appoint committees of their own Councils with similar terms of reference."

The Committee decided to recommend to the Council that Dr. Cyril Banks, one of the Society's representatives on the National Smoke Abatement

Society, be asked to write an editorial on this subject for inclusion in PUBLIC HEALTH.

(7) *Sessional Programme Sub-Committee*.—The Committee considered the suggestion by Dr. A. Joe that a special sub-committee should each year be responsible for making early arrangements, in consultation with the President-elect, for the sessional programme.

The Committee decided to recommend that a sub-committee should be set up, to consist of the President for the time being, the Chairman of the General Purposes Committee and the Editor of PUBLIC HEALTH, who would act in consultation with the President-elect so soon as his name was known.

It was further suggested that this sub-committee should consider the arrangements for papers being read by representatives of the Society at conferences or meetings of other bodies.

(8) *Treatment and Use of Drugs at M. & C.W. Centres*.—The Committee considered a memorandum on the above subject presented by the Maternity and Child Welfare Group.

The Committee were of the opinion that it was difficult and unwise to try to define exactly the functions of maternity and child welfare centres, and that it was owing to the elasticity which had existed in the past that such success had been achieved. They therefore decided to recommend the Council to take no action on this memorandum.

The Council discussed the Group's memorandum at some length, and the Group's representative was asked to convey to them the reasons of the Council for accepting the recommendation that no action be taken.

(9) *Readmission to the Society*.—The Committee considered a letter from Dr. Peter Lowe, C.M.O.H., Herefordshire, enquiring whether he would be allowed to rejoin the Society.

In the opinion of the Committee there is nothing in the constitution of the Society to prevent a former member from applying for readmission, but his re-election would be subject to the usual conditions set out in Article 10.

In this connection, standing instructions were given to the Executive Secretary to refer to the General Purposes Committee any cases of doubt amongst those applying for election to the Society.

(10) *Carriage of Butcher's Meat in Vehicles used for Transporting Animals*.—The Committee considered a letter from the Association of County Medical Officers of Health, enclosing a communication from the Lindsey Diseases of Animals Committee with regard to the practice of using the same vehicles for carrying butcher's meat as are used for transporting animals.

The Committee decided to recommend that a reply be sent to the Association that, in the view of the Society, the powers given under Article 21 of the Public Health (Meat) Regulations 1924, if properly applied, are ample for the control of such a practice.

(11) *Local Government Hospital Stewards*.—The Committee considered a paper on the position of stewards in public health hospital administration, forwarded for information by the National Association of Administrators of Local Government Establishments.

The Committee decided to thank the Association for giving them the opportunity of seeing this document.

(12) *Cremation*.—The Committee considered a letter from the Editor of *Pharos*, the quarterly journal of the Federation of Cremation Authorities in Great Britain. This letter stated that it was the intention in the next issue of *Pharos* to include a feature on the health aspect of cremation, and that he had sent a letter to a large number of medical officers of health inviting them to give their views on the subject. He enquired whether the Society itself would wish to make a pronouncement in regard to cremation.

The Committee decided to recommend to the Council that it be left to individual medical officers of health to express their opinion in regard to cremation.

(13) *Meat Inspection*.—The Committee considered a letter from Dr. E. K. Macdonald, M.O.H., Leicester C.B., stating that it was proposed to introduce private legislation for Leicester to deal *inter alia* with the question of meat inspection. Dr. Macdonald said that it was proposed to include powers to inspect at some central depot meat killed outside the city and brought into the city for sale, either at the market or at butchers' shops. Dr. Macdonald asked whether the Society had any suggestions to make on this or similar matters suitable for inclusion in the Leicester Bill.

The Committee instructed the Secretary to inform Dr. Macdonald that the best method of ascertaining what has been done in other local Bills would be to enquire of the Parliamentary agents, who have such information readily available.

(14) *Notification of Erysipelas*.—The Committee considered a letter from the Chief Medical Officer, Ministry of Health, enquiring, in connection with the consolidation of the Public Health Acts, the view of the Society as to whether erysipelas should continue to be a notifiable disease.

After full consideration the Committee decided to recommend the Council to reply that the Society is of opinion that erysipelas should be retained as a notifiable disease, and considers it desirable that M.O.'s H. should receive as much information as possible in regard to infections caused by organisms of the streptococcal type.

(15) *Advisory Committee on Public Health Salaries*.—Dr. G. F. Buchan reported on the meetings held by the Advisory Committee set up under Section 10 of the Askwith Memorandum, at which questions regarding salaries under the Merioneth and Cardigan C.C.'s had been settled, and a case from Northampton deferred.

(16) *Milk for School Children—Power of M.O.'s H. to act otherwise than in accordance with the instructions of their authorities*.—The Committee gave further consideration to the Counsel's opinions considered at earlier meetings (see PUBLIC HEALTH, October, 1935, p. 23) and to the suggestion made by Professor Picken at the last Council Meeting.

The Committee had the benefit of the attendance and advice of Dr. Thomas Orr, and decided to recommend that the following be set out in full in the minutes of the next Council Meeting:—

"The Council directs attention to the fact that the decision of the Milk Marketing Board to accept for rebate only milk which had been approved, as regards source and quality, by the

medical officer of health does not constitute an authorisation to that officer to act on behalf of the Board, and that any authority so to act should be obtained from the council to which he is directly responsible."

(17) *Sterilisation of Utensils in the Production of Grade A Milk*.—(See Council Minutes, PUBLIC HEALTH, June, 1935.) The Committee considered a communication from the Borough Medical Officers Committee of the Metropolitan Branch with reference to the memorandum on the above subject by Dr. Savage adopted by the Council and submitted to the Ministry of Health. The final paragraph of the memorandum read as follows:—"The Council of the Society of Medical Officers of Health are therefore strongly of the opinion that a licence for the production of Grade A milk should only be given when the applicant's equipment provides for efficient methods of steam sterilisation."

The communication from the Borough Medical Officers Committee expressed the following view:—

"That the opinion of the Council of the Society should be amplified to include the distribution, which in the metropolis, has at least as important a bearing as production in the provinces."

The Committee recommend the Council to endorse this opinion of the Borough Medical Officers Committee, and to notify the Ministry of Health that the recommendations regarding sterilisation of utensils should be held to cover retailers of Grade A milk as well as producers.

(18) *Supply of Milk to Maternity and Child Welfare Authorities*.—Dr. Thomas Orr raised the question of the delay by the Milk Marketing Board in formulating the proposed scheme for the supply of milk at a cheap rate to Maternity and Child Welfare authorities for expectant and nursing mothers and children under school age.

He urged that an expression of opinion by the Society regarding such a provision of milk would be of assistance in expediting the scheme.

After discussion the Committee agreed to recommend the following pronouncement for adoption by the Council:—

"That the Society are of the opinion that the health of expectant and nursing mothers, and children under school age, would be improved if there were more milk available for them."

(19) *Recruitment*.—The Executive Secretary reported the election of 31 Fellows and 6 Associates at the meeting of October 18th, and that 20 candidates have been nominated for election on November 22nd.

The Committee in this connection considered the wording of the circular letter which is sent to prospective members of the Society.

The Committee were of opinion that in future prospective members should be sent a shorter circular letter, together with a copy of the booklet on the Constitution and Bye-Laws of the Society.

They instructed the Executive Secretary to draft a shorter letter for consideration at its next meeting.

(20) *Official Advertisements in PUBLIC HEALTH*.—Dr. James Mair submitted the following resolution passed at the last meeting of the Yorkshire Branch:—

"Resolved that the Branch noted with pleasure in a recent number of PUBLIC HEALTH the appearance of an advertisement from a local authority

Act, it may include "any yard, garden, out-houses and appurtenances belonging thereto or usually enjoyed therewith"; all these must, therefore, be included with any unfit dwelling, whether the latter is a part or whole of the premises. This is commonly taken to mean all buildings, etc., linked together within the same curtilage, and, even though this may include a large workshop or separately used outbuilding, perhaps at some distance from the house, it is, in my opinion, technically correct for the medical officer to include all such linked buildings in his red area.

In addition it is common practice to include half the *streets* abutting on premises within the area. This, again under the 1925 Act, includes "courts, alleys, passages and squares." This "extra" red land is important as it may serve as a common link in two or more otherwise separate areas and unless geometrically accurate may lead, as I have known it do, to serious consequences at an enquiry and in the subsequently confirmed order. (Two areas may, for example, "meet" in the centre of roadways at a geometric point which, having no magnitude, does not constitute a link. On the other hand, a narrow but definite isthmus may be formed by correctly projecting the colour on the roadway at right angles to the boundary fence of a house and not parallel to its flank wall.)

At one time, a separate map and representation was made out for each technically separate portion of an area, literally correct; but for convenience and practical purposes, there is no objection to showing all the "areas" in the larger area on one map. These should be distinctly numbered and will, of course, appear as separate *orders*, on separate maps, later.

It is a rule that a single, *isolated building* cannot constitute an "area" for the purpose of a clearance area order. It is, however, justifiable and useful in any subsequent questions, to include such isolated houses on the representation map, it being made clear in the accompanying form and report that this will not be included (as "red") in the order. Evidence of its condemnation, on a par with other unfit houses, can thus be produced, and there is an assumption that it will be dealt with by, say, demolition under Section 19 as soon as opportunity arises.

The maps used represent the plans of streets, buildings, etc., as they would appear about 1 inch above the ground level, but it frequently happens that rooms of dwelling houses over- or under-lap parts of others or, commonly in London,

there is a riding floor, forming an archway over the access to other premises. A note of this should be made in the map ("floor over belongs to No. XX") and some break made in the "red" colour to show clearly which part of which property it is intended to represent. If the part over belongs to an unfit house but the way under is the access to excluded property, the "red" may be extended across the archway but a portion opposite left blank to the centre of the roadway. Conversely, access to an unfit house or court in rear but under part of "fit" property, is coloured up to the archway in rear, then left blank under the arch and continued "red" in the same width, beyond it to the centre of the road.

Similar breaks and distinctions can be made to represent unfit houses in a court which also gives the only access to excluded property. Private roads and *culs-de-sac* are normally left blank if they are solely the ways into excluded premises but the only entrance to the flank of an unfit house should be given part of such roadway or path in "red." There are other instances of abnormal planning where some ingenuity is required to make the map clear and technically correct.

In theory, any land coloured "red" is within a compulsory purchase order, and when acquired belongs, for building on or any other purpose, to the authority. In the case, therefore, of roads, pathways, etc., giving access to properties outside the order, this clear, precise colouring becomes a matter of great importance.

In clearance orders, although the representation is the same, buildings only are concerned and any colouring of roadways, etc., is usually omitted in the order maps.

A question which seems to present some difficulty and in which the Acts are not very helpful is: "When is a dwelling-house not a dwelling?" *The empty house* is met with in all stages from a definite ruin to ordinary vacancy, pending a new tenant.

A vacant or temporarily closed dwelling-house is obviously, if unfit, representable within the terms of the Act. In both the 1930 and 1935 Acts the words "of a type suitable for such use" (*i.e.*, dwelling) (Section 12, 1935 Act) occur and leave no doubt that occupation at the time is not essential. Moreover, it brings within our scope those numerous cases of original dwelling-houses now in use for business, industry or some other purpose. The medical officer has to assert only that if and when in use

as a dwelling it would be unfit, and, short of a legal undertaking, he has no guarantee that it will not be so used again. It is a potential dwelling and, ergo, a potential danger.

The only real difficulty arises when considerable structural alterations have been made to adapt the house to its present user. The question, then, is to decide whether such adaptation has rendered it unsuitable *in type* for dwelling purposes and, if so, could it be re-converted to its original purpose easily and at a reasonable, economic cost.

The same criterion may be applied to *derelict houses*, so dilapidated that they are unsuitable for dwelling purposes, without considerable repair, and may, therefore, be included if in other respects unfit. If, however, the structure is so ruinous that the necessary repairs to make it habitable are obviously so extensive as to amount to rebuilding, it cannot, as it stands, be termed a "dwelling-house," although a supreme example of "unfitness."

Ruins, as such, must be regarded as "vacant land" and cannot, therefore, be represented as "red"; it is impossible to draw the line between a few bricks, and walls with no roof or floors.

The last point in representations which I feel should be mentioned is the problem of "*other buildings*." In the second half of Section 1 of the 1930 Act it is laid down that a clearance area must not only include dwelling-houses represented as unfit but "other buildings which are for a like reason (*i.e.*, badly arranged on site) dangerous or injurious to the health of the said inhabitants" (*i.e.*, of any of the dwelling-houses in the area). In effect this relates to *obstructive buildings* which by their position and height curtail the light and ventilation to the dwellings nearby and so render them unfit. In most cases, such buildings are factories and other industrial premises built close in rear of the houses, or opposite, in a narrow street.

Under the 1930 Act, such buildings were coloured "red" in the same manner as the rest of the area. In Section 62 (1) of the new Act, however, such buildings, fit in themselves, but badly arranged *in relation to other buildings*, etc., are the subjects of a modified procedure. In the case of clearance orders, they must be excluded altogether and, in compulsory purchase orders, receive, as compensation, more than the original site value.

Note, however, the very significant words, *properly included*. It is obviously still the duty

of the medical officer to include in his representations any such buildings which come within the terms of Section 1 of the 1930 Act, but he must now indicate clearly on his maps, and in the accompanying forms, any properties included which come within this category, so that his authority may take the required action in respect of them, as laid down in the 1935 Act.

Before the Ministry issued its preliminary regulations on the new Act, I sought a method of showing such buildings clearly without introducing an unfamiliar colour. The result, a pink hatch with a deeper red verge seemed to define the premises very distinctly and almost anticipated the Ministry's "red, hatched yellow." Previously, "red, hatched yellow" on an order map indicated lands in an area to be used for rehousing development—and its repetition may lead to confusion until the new Act becomes familiar to everyone.

If these "other buildings" happen to be dwelling-houses, as well as obstructive, they must be dealt with in the same way, unless, as frequently happens, the bad arrangement is *mutual* (as in two tall buildings close together) and the obstructive building is itself obstructed and thereby rendered equally unfit or injurious to health.

Even should there be no other defects, *bad arrangement results in "lack of light and air"* to some parts of the house, and is, therefore, according to Section 62 (1) of the 1930 Act, a "sanitary defect" which may render the house "unfit" under Section 1 and, as such, can be represented and included.

It appears, therefore, that Section 62 of the new Act need not worry us unduly as any great revolution in representation. The "bad arrangement" referred to is obviously not bad *internal* planning, since this bears no "relation" to other properties, and *site-arrangement*, if bad, can always be shown to produce "sanitary defects." In any case, it is rare to find bad arrangement on site with no other defects at all.

As regards any report accompanying a representation, it should, I think, in order to help other officers concerned in preparing the area and in assisting the authority to a decision as to the best method of procedure, etc., contain, at least, information as to the history of the area (if any); the number of separate areas; the size (in acres) of the represented portions; the boundaries, and general type of properties near the area but not included, and some

indication of the neighbourhood (industrial or residential, open or shut-in, etc.), affecting the site when cleared.

Section 63 (1) of the 1935 Act, which requires a schedule of the alleged principal defects to be sent to all objectors, 14 days before an inquiry can be held, makes it quite clear that these notices relate only to the *principal grounds* on which the authority satisfied itself, at the time it resolved to declare the area, that the properties included were unfit. The schedules cannot, therefore, be taken as the final *detailed evidence* of the medical officer, although he may be the appropriate officer through whom his authority acts.

It is too early to say what points may be raised on this question, but it is possible that some evidence may be required to show that such facts were, at least, technically before the authority at the time of the declaration. It may, therefore, be more necessary than before to include in the official report on the area the principal defects or lay copies of the schedules "on the table."

The chief objection to the publication of defects some time before an inquiry, is that it may give opportunities for specific alterations and repairs which may so change the property that the evidence appears no longer to apply.

Section 54 (*et seq.*) of the 1935 Act may, I can foresee, considerably delay clearance area procedure. Any *redevelopment or reconditioning proposal*, however unsatisfactory, must be "considered" by the local authority before any further action can be taken under Part 1 of the 1930 Act. As this offers a kind of respite and additional chance, owners may put forward some such proposals in almost every case. Moreover, this may justify still greater caution in representation, as the medical officer may now have to show, before the inquiry stage possibly, that whatever alternative scheme is suggested, his recommendation for complete clearance of the area is unassailably the only satisfactory one.

It is important, however, to note that works of *reconstruction* only, and not ordinary repairs, are required. This may mean leaving to private enterprise what the authority itself intended to do, but without the latter's experience and resources.

Part II. 1930 Housing Act.

I have dealt chiefly with Part 1, 1930 Act, as the usual and, wherever possible, the most

satisfactory method, under the Housing Acts to produce in the end the desired results. There are, however, other sections of the 1930 Act, besides Section 1, which can be, and, in some cases, have to be used by the medical officer in dealing with unfit houses.

Section 17.—I have already mentioned this *repair* section in discussing mews dwelling and indicated some of its difficulties. I must again emphasise the opinion that of all section in the Act this is the most "dangerous" where "slum" clearance is anticipated, and should be used with the utmost caution.

The works specified in the notices have first to be proved capable of execution at a "reasonable cost" (a difficult matter, on which the medical officer is not an expert); secondly, the case, on appeal, must "run the gauntlet" of the county court. If these stages are successfully passed, and the works carried out satisfactorily, the authority must state that the house is rendered "*fit for habitation*." In other words documentary evidence of a *certificate of fitness*, for an indefinite period, can be produced. If such properties occur, or are ever likely to occur, in a clearance area scheme it would be very difficult, or even impossible, to include them in a representation under Section 1. Either way, there are strong arguments to be met; if included there is the glaring inconsistency of houses certified fit (by repair), under one section, and condemned as unfit and incapable of remedy, under another. On the other hand, if not included in the area, all similar houses must be omitted to meet the inevitable and logical contention that measures (*i.e.*, repairs) which rendered one or two houses fit can be applied equally to others of a like nature.

Apart from this, Section 17 is largely a palliative and temporary measure in effect but a more or less permanent one in theory. Now that we have Section 55 of the new Act, it may be found that Section 17 can be used still less frequently in favour of a less vague certificate of fitness, limited to a definite period of years.

If disrepair of an urgent nature or other nuisances must be dealt with, in these circumstances, action under the *Public Health Acts* presents none of these difficulties or after-effects.

Section 19.—There seems little doubt that demolition order procedure was intended to apply to *individual houses* and not to parts of a clearance area which, in the present or near

future, can be dealt with, as a whole, under Section 1. Piecemeal action on a recognised area is plainly unsatisfactory and should be avoided.

County court action is very different to a Ministry's public enquiry. In the one, the decision rests with a judge who, however learned, is not a housing expert, and the proceedings are apt to be based on legal theory rather than practical experience and general policy. In the other, the decision rests chiefly on confirmation of expert evidence as determined, on personal inspection by the Minister's representative, himself an expert in housing matters and *au fait* with the wider policy and needs of slum-clearance.

If, as is often the case, the order is quashed in court, not only will certain works be accepted but it follows that, when undertaken, the house will be *legally considered as fit* for an indefinite period. Thus the same difficulties of future action arise as those mentioned under Section 17.

Alternatively, if the order is confirmed and the house demolished, either a plot of vacant land will be created which, if in an area, must be excluded or acquired as "grey" (without subsidy), or the site is redeveloped by the owner as a new intrusion on the area, to be purchased, if necessary, at a much increased market value.

In practice, many such orders cannot be properly carried out with safety to adjoining properties (as in a terrace of attached houses), and the result is a dangerous nuisance in the form of a ruin or derelict house.

Apart from these objections the Section has its uses, not only in dealing with houses by agreement with owners, where extensive costly works are involved under dangerous structure notices, but as the only means of clearance of single, isolated dwellings or obstructive buildings (as defined in Section 58 of the 1935 Act).

Section 20 (*repealed*).—*Closure of parts* of dwelling-houses is a useful measure in special cases, particularly so for basements, some mews and certain "mixed" premises, but for many of the reasons mentioned above, should be cautiously used in areas ear-marked for ultimate clearance. Its form of re-enactment under Section 84 of the new Act greatly increases its scope and value, and the basement problem, so serious but hitherto neglected, can now be, I hope, effectively tackled.

The only real difficulty, even now, in closing order procedure, where it is appropriate, is the

nuisance of empty rooms and their proper protection, cleansing and upkeep. Special bye-laws for this purpose seem needed.

One interesting and important question may now arise: Is part of a house closed as *unfit* for human habitation still "of a type suitable for occupation, etc.?" "Fit" and "suitable" are not synonymous, I suggest, for the legal purposes of the Act. If I am right—the house, subject to a closing order and, therefore, partly unfit, can still be included in a clearance area under Section 1, although at one time, but *under the 1925 Act*, the Ministry advised that such properties could not be included in a clearance order.

The word "unfit" in the Acts is nowhere clearly defined, and there have always been some grounds for argument as to whether it refers to *unhealthy* conditions only, or chiefly to unfitness in a "building" or "surveying" sense, or of a type not up-to-date in its amenities or fittings. In the new Act, the word is much used, to the exclusion of any reference to "health," and a ruling will be of the greatest importance, particularly in reference to disrepair on which the new Act concentrates.

There are, of course, many points on sections of the 1935 Act which I have not discussed, but I feel that it would be useless to do so, at this early stage of its career, until we have had some experience and practice. That new problems and difficulties will arise, there is no doubt; indeed, they are already showing themselves.

Apart from new measures such as overcrowding abatement and redevelopment areas, several amendments and re-enactments may influence or modify the present procedure, but I do not think that the *principles* of clearance area procedure with which we are mostly concerned will be much affected. "Slums" can neither be created nor abolished by legislation; their fundamental causes and cure lie beyond the limited scope of formulæ and enactments. These can only lay down, in theory, the appropriate rules of procedure: they cannot alter the basic social factors of the wisdom and folly, achievements and failures of human nature.

MR. K. C. B. WEBSTER, L.D.S., R.C.S.,
Dental Officer, County Borough of Croydon,
has been appointed to a similar post under
the Hendon Borough Council.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters).

The September Council Meeting.

The agenda of the first Council meeting after the recess is usually a very heavy one, and that of September 20th was no exception. But for the efforts of the General Purposes Committee, however, it might have been heavier. This devoted body, which held meetings on June 21st and September 6th, had cleared off and up a large number of matters and thus reduced the amount of work to be done. Fortunately, one of the things they left entirely to the Council was the election of members of Council under various provisions, so that the pleasant opportunity was afforded of putting forward the name of Captain G. S. Elliston, M.P. (Consultant Secretary) as an "eminent person interested in the advancement of public health" and electing him with enthusiasm. Another matter that had to be left to the Council as a whole was the very distasteful duty of considering and adjudicating upon two cases under Article 11 of the Society's Articles of Association, the persons involved having been guilty of what the Article describes as "conduct detrimental to the honour and interests of the medical profession or the Association" in connection with the acceptance of or application for posts. As is usual in such cases, the consideration given was prolonged and full and serious, and it was only thereafter, and study as far as possible of all relevant facts, factors and features, that the decision to call for resignation was reached. As a set off to these unhappy proceedings it was a relief to the Council to be able to determine to recommend for election as fully-paid life members three fellows who had for a long period of years—thirty-one in the case of Dr. Hislop, formerly Medical Officer of Health of Tynemouth and President of the Northern Branch—given loyal and devoted adherence and service to the Society. The name of Dr. Hislop was submitted by the Northern Branch; the Yorkshire and the Welsh Branch respectively submitting those of Dr. Galbraith and Major Jackson. Not all the business done was, of course, of the type referred to. The General Purposes Committee, as a matter of fact, submitted reports upon a number of tech-

nical matters upon which the Council had to pronounce, the annual report of the Council amongst them. Reports to which the Council gave consideration included several in which milk was involved. The draft Milk (Special Designations) Order was amongst these, though in fact nothing much could be done about this since, as Dr. Fenton (Chairman of the General Purposes Committee) explained, comments upon the draft of necessity had gone forward already. As a matter of fact, the modifications that had been suggested were not drastic and looked like improving regulations which, with one or two exceptions, the Council appeared to approve. The action of the Committee was therefore confirmed, as it was also on the question of the supply of milk to school children and the possibility of extending the scheme so as to take in children under school age and mothers. What had been done by the Committee in the direction of trying to clear up any legal difficulties that may surround the refusal by a medical officer of health to accept a milk supply for school children because the milk has not been pasteurised, seemed to some not to give a sufficiently strong lead and was therefore deferred for further consideration. In this and all the other matters relating to milk the Committee and the Council, it may be noted, had the advantage of the advice of Dr. Orr and his influence with milk boards and bodies. That both the Committee and the Council valued and appreciated the assistance and services of Dr. Orr was very obvious.

Dr. Veitch Clark and the Council.

While on the subject of services and appreciation, as the Council meeting under consideration is the last at which Dr. Veitch Clark will occupy the chair, it is in order to offer praise for and to express appreciation of the manner in which he conducted the business. The Council itself in its annual report describes him as a "firm and expeditious chairman." As a fact he showed himself possessed of an immense amount of tact in relation to the business before the Council and the matters discussed, intervening only when intervention appeared essential and when

his advice and guidance, wise always, were necessary. As a result the Council meetings have run with a smoothness that has not been invariably conspicuous in the past and that it would be nice to hope might be a feature of all the Council meetings yet to be held. When the time comes for Dr. Veitch Clark finally to hand over the reins of office, he will receive many congratulations and many compliments will be paid to him. If for nothing else than his Chairmanship of the Council he will deserve every one of them.

Amending the Title "Sanitary Inspector."

The annual conference of the Sanitary Inspectors' Association at Weymouth in the first week of September proved immensely successful. For much of the success, amongst local people Dr. Oldershaw, who, always unobtrusively, took quite an interest in the proceedings exceptional for a medical officer of health on these occasions and in that capacity played host to perfection, was responsible. The subjects for discussion included a number of hardy annuals, references to the inadequacy of the salaries paid and recognition given to the sanitary inspector being perhaps rather more frequent than usual. That the discussion some of these gave rise to shows signs of continuing is noted. Also it is noted that there are those who hold that much of the failure to regard the officer properly is due to the use of the title "sanitary inspector," both the word "inspector" as well as the much maligned "sanitary" coming in for condemnation. From time to time attempts have been made to find an alternative title, and "health inspector" more frequently than any other has been suggested as suitable and acceptable. Now that the word "inspector" is objected to and is blamed for, at any rate, part of the unreadiness to afford proper recognition and remuneration, further difficulties have arisen. In one quarter at least, it is suggested that what is wanted is not only the dropping of the horrid word "sanitary" but also the substitution of something else for "inspector." Curiously (excuse the repetition) "sanitary" presents more difficulty than "inspector," for which "officer" will be accepted as a substitute. For the other word, amongst others there are offered "municipal," "technical," and "assistant medical." The

characteristic of each one of these is its modesty. Also there is clarity in the case of "municipal" and "technical." So far as "assistant medical officer" as a title for the individual now named "sanitary inspector" is concerned, there are certain difficulties in the way of its application and use. One of these is that if there is one thing that a very large number of sanitary inspectors appear to object to it is being regarded as in any shape or form an assistant to the medical officer of health. It is a detail also that the sanitary inspector is not medical in the sense that he is not medically qualified. That is merely a detail, of course, and not very important. In these days it is a fact that the most medical are those who are not qualified in medicine.

Family Meals and Catering.

For the British Medical Association's publication "Family Meals and Catering" there can be nothing but praise. Nothing, indeed, but praise is heard of it from any of the several officers—women and men—who go to the making of a public health department. The suggestions are held to be sound, sensible and practical and likely to be appreciated not only by the type of housewife—less exceptional than she is supposed to be—who knows something about cookery and catering, and is interested always in picking up hints and recipes, but also by the housewife—younger generally—who is keen to receive instruction. The great trouble is to find ways to get the hints, suggestions and knowledge contained in the publication to the persons to whom they will be most useful and by whom they will be appreciated. Sixpence is not a great price to pay for it, but it is doubtful if many housewives of the type that it is felt require education, even if they knew where to get the booklet, would be willing to expend so much. Even at three shillings per dozen also there is doubt if the majority of local authorities would care to go in for distribution free or at reduced rates. To an extent the coloured plates must add to the cost of the publication; a possibility that might be considered, therefore, is the production of an edition, suitable for distribution in welfare centres, cheapened by the omission of the pictures which, attractive as they undoubtedly are, cannot be considered essential; do little more, indeed, than add to the selling value of the booklet.

The Society.

Reports, Proceedings and Announcements.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, September 20th, at 2 p.m.

The President (Dr. R. Veitch Clark) was in the chair, and there were also present: Drs. T. W. Naylor Barlow, Vynne Borland, G. F. Buchan, J. A. Charles, James Fenton, James Ferguson, R. P. Garrow, Henry Herd, W. W. Jameson, A. Joe, R. H. H. Jolly, G. W. N. Joseph, C. Killick Millard, H. J. Milligan, R. M. F. Picken, Charles Porter, T. N. V. Potts, T. P. Puddicombe, Grantley Smith, E. H. Snell, V. F. Soothill, P. H. Stirk, E. W. C. Thomas, A. G. G. Thompson, A. A. Turner, Ernest Ward, H. Gibbons Ward and F. T. H. Wood.

Apologies for absence were received from Sir Francis Fremantle and Drs. John Buchan, Ethel Cassie, G. C. M. M'Gonigle, J. Mair, Thos. Orr, G. H. Pearce and J. A. Stirling.

Annual Dinner.—It was reported that the Minister of Health (Sir Kingsley Wood) and Sir George Newman had accepted invitations to be the Society's guests on November 22nd, and that a special reminder will be circulated to all members in the hope that there will be a specially large attendance on this occasion.

Mastery of Midwifery.—It was reported that the Society's recommendations regarding this qualification were being considered by Dr. J. S. Fairbairn of the Society of Apothecaries.

Salaried Service of Midwives.—Dr. Fenton reported verbally that the President and he had discussed the recommendations of the Joint Council of Midwifery's memorandum with a special committee of the Association of Municipal Corporations. The Society's representatives proposed to submit a detailed report in writing to the next meeting.

Report of the General Purposes Committee.—Dr. James Fenton (Chairman) presented a report of a special meeting of the General Purposes Committee, held on May 18th, to consider a scheme for the combination of "Public Health" and "The Medical Officer,"

to be issued as a weekly publication to every member of the Society.

The Committee reported that they had regretfully decided that they were not in a position to recommend the adoption of the proposed scheme by the Council. The Council received the report.

Dr. Fenton then presented a report arising from the Committee meetings held on June 21st and September 6th, as follows:—

Your General Purposes Committee beg to report that since the last meeting of the Council they have held meetings on June 21st and September 6th, at which the following members attended:—

June 21st.—Drs. Fenton (Chairman), Jolly, Joseph, Mair, Milligan, Porter, Ernest Ward, H. G. Ward and Wood.

September 6th.—Drs. Fenton (Chairman), G. F. Buchan, Jolly, Picken, Ernest Ward, H. G. Ward and Wood.

Your Committee have considered the following matters:—

1. **Housing and Administration of the Society.**—Section 4 of the Special Committee's report (dealing with the administration of the Society), which was taken back for further consideration at the last meeting of the Council, is still under your Committee's consideration.

With regard to the decision to take offices for the Society in Tavistock House North, approved by the Council in May last, we have to report that no suitable offers have as yet been received for the present offices of the Society, which must be sub-let at an annual rental of £400 before a removal to the new offices can be justified.

The maisonette formerly occupied by the Consultant Secretary has been sub-let to Messrs. Frank Bennett and Frank Roscoe, architects, at an annual rental of £175, for a term commencing on September 16th, 1935, and expiring on March 22nd, 1939. The Hon. Treasurer authorised the Executive Secretary to accept the offer made by these gentlemen and to incur an expenditure of a total of £103 15s. 0d. (including a sum of £15 for contingencies) in making repairs to and redecorating the maisonette.

We recommend the confirmation of the above actions, and of the sealing of the under-lease on behalf of the Council by the President, Hon. Treasurer and Executive Secretary.

The Council expressed their thanks to the Hon. Treasurer for his successful efforts in the above matter.

2. **Milk for School Children.**—

(a) **Observations by the Branches.**—Dr. Thomas Orr presented a report on the observations regarding the school milk scheme submitted by the East Anglian,

East Midland, Midland, Northern, North-Western, Welsh, West of England and Yorkshire Branches of the Society.

(b) **Selection of Children for Free Supply.**—We have also to present a report by Drs. G. F. Buchan, Henry Herd and Thomas Orr, who attended on June 27th as a deputation at the Board of Education to discuss the ruling contained in Circular 1437 as to the selection of children for free meals on grounds of sub-normal nutrition.

The report of the deputation to the Board of Education was to the effect that the Board could not vary the provision, set out in circular 1437, that children must be selected for free milk supply as a result of medical examination, and not on grounds of necessitous circumstances alone. The only modification obtained was that children could be given a supply of milk on the recommendation of the teacher pending medical examination at the earliest practicable opportunity.

We recommend that the above reports be received and that the Council's thanks be extended to Drs. Buchan, Herd and Orr for their services.

(c) **Power of M.O.'s H. to act otherwise than in accordance with the Instructions of their Authorities.**—The Committee considered Counsel's opinion circulated by the County Councils Association in connection with certification of the milk supplies under the school scheme. Dr. Orr also reported a further Counsel's opinion obtained by the Milk Marketing Board.

The Committee having considered Counsel's opinion circulated by the County Councils Association, and having had the benefit of consulting with Dr. Thomas Orr and of seeing the further Counsel's opinion obtained through him, felt that it would be wise for the Society to take no action, and recommend the Council to advise the British Medical Association to follow the same course.

The Council made no decision for the time being on this matter, but asked the General Purposes Committee to consider and report on a suggestion made in this connection by Professor Picken.

3. **Proposed Scheme for the supply of Milk at reduced Rates to Maternity and Child Welfare Authorities.**—On page 3 of his report (item 2a) Dr. Orr mentions a preliminary discussion with representatives of the Milk Marketing Board in regard to the above scheme. Mr. J. N. Davis, assistant marketing officer of the Board, attended the June meeting of your Committee to put before them the Board's tentative proposals. He explained that the Board was chiefly interested in obtaining a larger market for milk supplied to Maternity and Child Welfare Authorities. He had had difficulty in ascertaining what exactly was the present method of supply to these authorities and also anticipated difficulty in obtaining the co-operation of the distributors towards reducing the cost. Provisionally the Board hoped to secure a reduction of fourpence per gallon. It was proposed to hold a conference at an early date of all parties who might be interested in such a scheme.

It was pointed out by members of the Committee that, from the point of view of Maternity and Child Welfare authorities, a reduction of at least one penny

a pint would be essential in order to increase the present consumption under this heading. It was also pointed out that any ruling by the Ministry of Health that there should be medical selection of cases, similar to that imposed by the Board of Education in regard to the school milk scheme, would make the working of the projected scheme under Maternity and Child Welfare authorities difficult.

After discussion the Committee resolved that they (1) are in favour of any means which will increase the consumption of safe milk, (2) view with favour the holding of a conference in regard to the proposed supply of milk at a reduced rate to maternity and child welfare authorities, and (3) will appoint delegates to such a conference. The following were nominated as delegates:—The Chairman, Drs. Orr, Charles Porter, H. J. Milligan and F. T. H. Wood.

The Committee ask the Council to confirm the above decisions, which were made in the expectation that a conference would be summoned by the Board before the next meeting of the Council. The conference has, however, not yet been called.

4. **Sterilisation of Utensils in the Production of Grade A Milk.**—The Committee received the following reply dated June 6th from the Ministry of Health to a letter submitting the Society's memorandum on the above subject:—

June 6th, 1935.

"Sir,

I am directed by the Minister of Health to refer to your letter of May 23rd and to say that the memorandum enclosed therewith relating to the sterilisation of utensils used in the production of Grade A Milk has been read with interest.

The Society will no doubt be aware of the views expressed in paragraph 3(b) of Part IV of *Memorandum 77/Foods* (of which a copy is enclosed) upon this point, but as an appeal lies to the Minister under Article 9 of the Milk (Special Designations) Order, 1923, in the event of the refusal or revocation of a licence, he does not think that he can properly specify any arrangements for sterilisation as a general requirement without regard to the circumstances of a particular case. In the circumstances, the Minister does not think he need trouble your Society to send a deputation upon the subject.

I am, Sir,

Your obedient Servant,

(Signed) P. N. BUTCHER."

The paragraph referred to in *Memo. 77/Foods* reads:—"Experience shows that in order to ensure compliance with this condition (*i.e.*, bacteriological standard of not more than 200,000 bacteria per c.c., or any coliform bacillus in 1/100 c.c.) throughout the whole of the year it is necessary to make provision for the steam-sterilisation of all utensils and containers."

With regard to the above subject, a letter was received from the Borough Medical Officers Committee of the Metropolitan Branch urging that in the metropolis the distribution of milk was as important as production in the provinces. The Council referred

this letter for consideration by the General Purposes Committee.

5. *Draft Milk (Special Designations) Order, 1923.*—At their June meeting the Committee received a letter from the Ministry of Health requesting within 30 days the Society's observations on the above draft order. It was decided to suggest to the Ministry certain amendments (which were set out in the Committee's report).

The Committee ask the confirmation of the Council for the action taken.

6. *The Society and the Milk Problem.*—The Committee considered the following resolution submitted by the West of England Branch:—

"That in view of the importance of the milk problem at the present day, and the possibility of Government Departments taking legislative action to deal with the various aspects of this problem, it is important that the Society of Medical Officers of Health should be considered to be a leading authority in this country upon these matters; therefore, that a sub-committee of Medical Officers of Authorities having different interests in this problem be appointed by the Society to keep in close touch with Government Departments and to express clearly from time to time the views of the Society upon the milk problem."

The Committee recommend the Council to reply to the West of England Branch that the General Purposes Committee will continue to keep a close observation on matters concerned with the milk problem, calling in specialist advice when necessary, and that sub-committees will be appointed as hitherto to deal with any points that may require special consideration.

7. *Law and Practice Relating to Coroners.*—The Committee considered a memorandum prepared by Dr. W. H. Davison, H.M. Coroner for Birmingham, and a summary of the evidence to be submitted by the British Medical Association to the Departmental Committee on Coroners.

The Committee also had the advantage of the presence of Dr. E. H. Snell who explained the points to which the B.M.A. evidence would draw attention.

The Committee decided that it would not be necessary for the Society to prepare a memorandum or to give oral evidence, and instructed the Secretary to notify the Departmental Committee that the only suggestion which the Society wished to make was that improvements should be effected in the arrangements for the conduct of *post mortem* examinations and for the provision of suitably placed *post mortem* rooms.

The Committee warmly thanked Dr. Snell for his attendance and advice.

8. *Nurses in Attendance on Dental Officers.*—The Committee received from the Board of Education the following reply dated June 3rd to the resolution submitted by the Dental Officers' Group. (See Council Minutes PUBLIC HEALTH, March, 1935, p. 226.)

"Sir,

With reference to your letter of the 21st ultimo, I am directed to state that the Board are satisfied that the policy set out on page 124 of their Chief

Medical Officer's Report for 1933 will result in economy in the administration of the school medical service without loss of efficiency. They are not therefore prepared to reconsider their decision in this matter.

They have, however, recently decided to raise no objection to the appointment of trained nurses to assist school dentists provided that the whole of the additional cost of such appointments, as compared with the cost of employing dental attendants, is borne by the Local Education Authority.

I am, Sir,

Your obedient Servant,

(Signed) E. N. STRONG."

The Committee gave instructions that this information should be conveyed to the Dental Officers' Group.

9. *Co-operation between the Society and the British Medical Association.*—The Committee considered the following letter dated May 14th from the British Medical Association, which had been referred to them by the Council with power to take action thereon:—

(See Council Minutes, PUBLIC HEALTH, June, p. 335.)

"Dear Mr. Elliston,

The Public Health Committee at its meeting on Friday last had under consideration the recent activities of an independent medical association in relation to the Public Health Service. They request me to put forward for the consideration of your Council a suggestion that the Society should take steps to remind its Fellows of the nature and importance of the existing arrangements between the Society and this Association and to urge them to support the Association in its endeavours on their behalf.

Yours faithfully,

(Signed) CHARLES HILL,

Assistant Medical Secretary."

The Committee beg to report that a letter on this subject appeared in the medical journals of July 6th over the signatures of the President and Executive Secretary.

10. *Membership of the Dental Officers' Group.*—With regard to the following resolution submitted to the February Council meeting by the Dental Officers' Group and taken back for further consideration:—

"That in the opinion of the Dental Officers' Group it is desirable that future membership of the Group be limited to those holding a registrable medical or dental degree or diploma,"

the Committee received from the Group the following definition of eligibility for membership contained in the Group's original constitution:—

"1. All registered dental surgeons interested in the promotion of public health dentistry, e.g., school dental surgeons, dental surgeons attending maternity and child welfare clinics, tuberculosis centres, Poor Law Institutions, dental surgeons to dental and general hospitals and industrial clinics, or any appointment established for the benefit of the health of the people, are eligible.

2. Dental surgeons holding commissions as such in His Majesty's Services are eligible.

3. The Group shall consist of Fellows, Members, and Associates of the Society of Medical Officers of Health, who have been or who are engaged in Public Health Dentistry.

4. Other candidates for admission to the Group shall make application to the Hon. Secretary of the Group, giving names of two persons to whom they are personally known, and such applications shall be submitted to the Group Council.

5. When occasion arises that business can only be dealt with by the School Dentists' Society the Group shall resolve itself into this Society for this purpose."

11. *Appointment of Dental Officers.*—The Committee at their June meeting considered the following communication from the Dental Officers' Group:—

"It has been reported to the Council of the Dental Officers' Group that candidates for a recent dental appointment were subjected to a test of their professional skill by being required to undertake various dental operations before the interview with the Committee actually took place. This meeting instructs its representative to bring the matter before the Council of the Society, and expresses its grave disapproval of such unprecedented action."

The Committee decided to invite the observations of the M.O.H. concerned in this matter before making any recommendation.

[Copies of his reply, of a letter sent to him by the British Dental Association, and a further communication from the Dental Officers' Group, were appended.]

The Committee recommend that this matter be referred for consideration by Professors Jameson and Picken, who were asked at an earlier meeting of the Council to draw up a report in regard to the methods of making appointments in the public health service.

12. *Memorandum on Salaries of Public Health Medical Officers.*—[See PUBLIC HEALTH, June, p. 333, para 18.] The Committee considered a letter from the Deputy Medical Secretary of the British Medical Association, enclosing the following copy of a reply sent by the Board of Education regarding the attitude of the Board towards the Askwith Memorandum on Salaries of Public Health Medical Officers:—

July 19th, 1935.

M.455/10.

Sir,

With reference to your letter of May 23rd (GCA/EM) I am directed to state that the case mentioned in Captain Elliston's question to Mr. Ramsbotham was that of an Assistant School Medical Officer. The approval of the Board of Education to the appointment of such officers is not required, but they would nevertheless draw the attention of a Local Education Authority to the recommendations contained in the Askwith Memorandum in any case where the salary offered appeared so low as to be likely to endanger the efficiency of the service.

As regards School Medical Officers, their appointment is subject to the approval of the Board of Education. The great majority of these officers are also Medical Officers of Health and in

cases where his approval is required to their appointment in that capacity the Minister of Health would where necessary draw special attention to the Askwith recommendations. The Board of Education would proceed on similar lines in any cases (including those of the independent School Medical Officers) where this appears necessary.

In regard to your second question, the Board's attitude is generally as shown in the preceding paragraphs.

I am to express the Board's regret for the delay which has occurred in replying to your letter.

I am, Sir,

Your obedient Servant,

(Signed) CECIL MAUDSLAY.

13. *Salaries of Whole-Time Public Veterinary Officers.*—The Committee considered a letter from the National Veterinary Medical Association, asking that the Society should draw the attention of its members to the minimum scale of salaries which had been laid down by the Association for appointments of whole-time veterinary officers.

The Committee recommend that the Secretary be instructed to inform the Association of the machinery involved in the enforcement of the scales of salaries for medical officers, to outline the present position regarding the proposed scale of salaries for dental officers, and to enquire whether the Association has had under consideration a method of securing the application of the proposed veterinary officers' scale.

14. *Attendance of Departmental Officers at Meetings and Conferences.*—The Committee considered a letter from the Hon. Secretary of the Maternity and Child Welfare Group, requesting the Council of the Society to use their influence with Medical Officers of Health to facilitate the attendance of M. & C.W. Medical Officers at meetings of the Society and of its Branches and Groups. The Hon. Secretary concludes—"It will, I think, be agreed that it is now generally recognised that maternity and child welfare work is a speciality for the efficient performance of which it is essential that those concerned should meet and discuss their work."

The Committee decided to recommend to the Council that a letter be sent to the secretaries of Branches requesting that medical officers of health should encourage departmental and assistant medical officers on their staffs to attend conferences and meetings dealing with their specialities.

15. *Standards for Foods.*—The Committee considered a letter from the Secretary of the Association of Municipal Corporations requesting the Society's observations on a report by the City Analyst of Hull on standards for foods.

The Committee instructed the Secretary to circulate to the Council copies of the latter paragraphs of the Society's report for submission to the Departmental Committee on the Composition and Description of Food in February, 1934, and decided to recommend the Council to forward the views contained therein to the Association of Municipal Corporations (see PUBLIC HEALTH, March, 1934, p. 199).

The Council adopted the report and recommendations of the General Purposes Committee with the amendments reported above under 1, 2c and 4.

Life Memberships.—The Council decided to nominate for election under Article 12 as fully-paid life members the following Fellows: Dr. E. S. Galbraith (elected to the Society in 1909), on the recommendation of the Yorkshire Branch, Dr. J. A. Hislop (elected to the Society, 1904), on the recommendation of the Northern Branch; and Major R. W. H. Jackson, R.A.M.C. (ret.) (elected to the Society, 1905), on the recommendation of the Welsh Branch.

Domestic Use of Smokeless Fuels.—The Council received a letter from the National Smoke Abatement Society, drawing attention to the recent report of the Manchester Corporation Committee which has considered the domestic use of smokeless fuels and suggesting the promotion of similar investigation of the present position of smoke abatement in other areas.

The Council instructed the Executive Secretary to obtain copies of the Manchester report for circulation to the next Council meeting and referred the matter for consideration by the General Purposes Committee.

International Union of Local Authorities.—The Council received a letter from the International Union asking the Society to become a subscribing member but decided to take no action.

Election of Members to the Council under Articles 19 (d) (e) and (f).—The following were elected as members of the Council for 1935-36 under Article 19 (d)—Drs. T. W. Naylor Barlow, J. J. Buchan, James Ferguson, H. J. Milligan, R. M. F. Picken, E. H. Snell; and, as departmental officers, Drs. Stanley Banks, Agnes Nicoll and H. G. Trayer.

It was reported that Sir Henry Brackenbury and Dr. W. Paterson had been re-nominated by the British Medical Association under Article 19 (e).

Under Article 19 (f) Sir Francis Fremantle, M.P., and Professor W. W. Jameson were re-elected, and it was also decided to elect Captain G. S. Elliston, M.P., under this heading.

Representation of the Society, 1935-36.—The following were appointed to represent the Society in the coming session:—

British Medical Association, Public Health Committee.—Drs. G. F. Buchan and G. W. N. Joseph.

British Medical Association, Insurance Acts Committee.—Dr. J. J. Buchan.

Royal Sanitary Institute and Sanitary Inspectors Examination Joint Board (for three years from January 1st, 1936).—Dr. E. H. Snell.

Central Association for Mental Welfare.—Dr. T. P. Puddicombe.

National Smoke Abatement Society.—Drs. Cyril Banks and T. W. Naylor Barlow.

National Council of Women, Public Health and Child Welfare Committee.—Dr. Agnes Nicoll.

National Safety First Association—Home Safety Committee.—Dr. Vynne Borland.

Central Council for Health Education.—Dr. James Fenton, Professor W. W. Jameson, Drs. G. F. Buchan, Ethel Cassie, W. Allen Daley, John Macmillan, G. S. Parkinson, Charles Porter, Maitland Radford, W. G. Savage, Ernest Ward, H. Gibbons Ward, F. T. H. Wood and Captain G. S. Elliston.

National Council for Mental Hygiene—Fourth Biennial Conference, January 23rd to 25th.—Dr. G. F. Buchan.

The Council decided to take no action in regard to the invitation of the People's League of Health to appoint a representative on the Special Committee on the nutrition of expectant and nursing mothers as affecting maternal mortality and morbidity.

Draft Annual Report of Council, 1934-35.—The Council approved with certain amendments its draft annual report for 1934-35, which will be submitted to the annual general meeting of the Society on November 22nd, 1935.

The Council referred for sympathetic consideration by the General Purposes Committee a proposal by Dr. Joe that a special sub-committee should each year be responsible for making early arrangements for the ensuing sessional programme subject to the approval of the President-elect.

Appointments of Medical Officers of Health contrary to the Askwith Memorandum (see PUBLIC HEALTH, June, p. 326).—The Council again considered two cases of appoint-

ments accepted by Fellows of the Society in contravention of the policy of the British Medical Association and the Society regarding public health salaries. Enquiry into these two cases as required under Article 11 had been deferred from the previous meeting of the Council in order to give the Fellows concerned a further opportunity of attending in person, and the General Purposes Com-

mittee now presented further information and reported that they had given renewed notice to these two Fellows that the Council would consider the matter at this meeting. Neither of the two Fellows was present, and the Council after very full consideration of the circumstances of these two appointments decided to ask for the Fellows' resignations.

The meeting then adjourned.

Branch and Group Elections: Session 1935-36.

METROPOLITAN BRANCH.

President ... Dr. G. H. Dart.
Vice-Presidents ... Dr. James Fenton.
... Dr. H. W. Barnes.
Hon. Treasurer ... Dr. J. Macmillan, D.S.O.,
... M.C.
Hon. Secretary ... Dr. Vynne Borland.
Representatives
on Council of
Society ... Dr. Vynne Borland.
... Dr. James Fenton.
... Dr. A. G. G. Thompson.

WELSH BRANCH.

President ... Dr. D. Rocyn Jones,
... C.B.E., J.P.
Hon. Secretary
and Treasurer
and Representa-
tive on Council
of Society ... Dr. D. J. Thomas.

SCOTTISH BRANCH.

President ... Dr. A. S. M. Macgregor.
Vice-Presidents ... Dr. A. K. Chalmers.
... Dr. T. Adam.
Hon. Secretary
and Treasurer ... Dr. W. G. Clark.
Representative
on Council of
Society ... Dr. A. S. M. Macgregor.

NORTH-WESTERN BRANCH.

President ... Dr. W. M. Frazer.
Vice-President ... Dr. Henry Herd.
Hon. Treasurer ... Dr. G. W. N. Joseph.
Hon. Secretary ... Dr. J. E. Spence.
Representatives
on Council of
Society ... Dr. W. M. Frazer.
... Dr. G. W. N. Joseph.
... Dr. F. T. H. Wood,
... O.B.E.

YORKSHIRE BRANCH.

President ... Dr. G. C. Roe.
Vice-Presidents ... Dr. J. A. Scott.
... Dr. Gladys J. C. Russell.
Hon. Secretary
and Treasurer ... Dr. J. Mair.
Representatives
on Council of
Society ... Dr. J. Mair.
... Dr. T. N. V. Potts.

SOUTHERN BRANCH.

President ... Dr. A. B. Williamson.
Hon. Treasurer ... Dr. H. Leslie Cronk.
Hon. Secretary ... Dr. A. E. Druitt.
Representative
on Council of
Society ... Dr. R. H. Wilshaw.

EAST ANGLIAN BRANCH.

President ... Dr. L. Gibson.
Vice-President ... Dr. Irene B. M. Green.
Hon. Secretary
and Representa-
tive on Council
of Society ... Dr. V. F. Soothill.
Hon. Treasurer ... Dr. G. W. Riddell.

WEST OF ENGLAND BRANCH.

President ... Dr. L. Meredith Davies.
Vice-President ... Dr. T. Peirson.
Hon. Treasurer ... Dr. J. F. Blackett.
Hon. Secretary
and Representa-
tive on Council
of Society ... Dr. P. H. Stirk.

NORTHERN BRANCH.

President ... Dr. A. F. G. Spinks.
Hon. Secretary
and Treasurer ... Dr. J. A. Charles.
Representative
on Council of
Society ... Dr. G. C. M. M'Gonigle.

EAST MIDLAND BRANCH.

President ... Dr. W. S. H. Campbell.
 Vice-President ... Dr. J. A. Fairer.
 Hon. Secretary
 and Treasurer
 and Representa-
 tive on Council
 of Society ... Dr. J. A. Stirling, D.S.C.

MIDLAND BRANCH.

President ... Dr. P. G. Horsburgh.
 Vice-Presidents... Sir John Robertson,
 C.M.G., O.B.E.
 Dr. E. H. Snell.
 Dr. H. D'Arcy Ellis.
 Dr. G. N. Anderson.
 Dr. J. A. M. Clark.
 Hon. Treasurer... Dr. E. H. Snell.
 Hon. Secretary ... Dr. R. H. H. Jolly.
 Representatives
 on Council of
 Society ... Dr. H. Gibbons Ward.
 Dr. R. H. H. Jolly.

HOME COUNTIES BRANCH.

President ... Dr. A. W. Forrest.
 Hon. Treasurer... Dr. K. E. Tapper, O.B.E.
 Hon. Secretary ... Dr. R. P. Garrow.
 Representatives
 on Council of
 Society ... Dr. A. W. Forrest.
 Dr. A. A. Turner, M.C.
 Dr. R. P. Garrow.

COUNTY DISTRICT GROUP.

President ... Dr. C. E. Herington.
 Vice-President ... Dr. F. C. Linton.
 Hon. Secretary ... Dr. Caryl Thomas.
 Representative
 on Council of
 Society ... Dr. Caryl Thomas.

TUBERCULOSIS GROUP.

(Election pending.)

SCHOOL MEDICAL SERVICE GROUP.

(Election pending.)

FEVER HOSPITAL MEDICAL SERVICE GROUP.

President ... Dr. E. H. R. Harries.
 Vice-Presidents... Dr. H. S. Banks.
 Dr. E. W. Goodall.
 Dr. Sage Sutherland.
 Hon. Secretary
 and Representa-
 tive on Council
 of Society ... Dr. A. Joe, D.S.C.

MATERNITY AND CHILD WELFARE GROUP.

President ... Dr. G. C. M. M'Gonigle.
 Past-President ... Dr. Stella Churchill.
 Vice-Presidents... Dr. Agnes Nicoll.
 Dr. Marjorie Back.
 Dr. R. J. Maule Horne.
 Dr. Muriel Radford.
 Hon. Secretary ...
 Hon. Asst. Secre-
 tary ... Dr. Virginia Saunders-
 Jacobs.

Representative
 on Council of
 Society ... Dr. Ethel Cassie.

DENTAL OFFICERS' GROUP.

(Election pending.)

"The Housing Act, 1935" will be the subject of a discussion, to be opened by Dr. James Fenton (Medical Officer of Health, Kensington) and Mr. J. S. Wheeler (Housing Inspector, Kensington), at a meeting of the Royal Sanitary Institute to be held at 90, Buckingham Palace Road, London, S.W.1, on Tuesday, October 8th, 1935, at 5.30 p.m.

A JOINT Conference on the Welfare of Cripples and Invalid Children will be held by the Invalid Children's Aid Association and the Central Council for the Care of Cripples on November 7th and 8th, 1935, at the Drapers' Hall, Throgmorton Street, London, E.C.2. The opening address will be given by the Minister of Health (Sir Kingsley Wood). Full details of the meeting may be obtained from the Joint Secretary at Carnegie House, 117, Piccadilly, London, W.1.

A SESSIONAL MEETING of the Royal Sanitary Institute, under the chairmanship of Dr. James Fenton (Chairman of the Council), will be held in the Town Hall, Bangor, North Wales, on Friday, October 18th, at 3 p.m., in conjunction with the Welsh Branch of the Society of Medical Officers of Health. Papers will be read on "The Control of Infectious Diseases in Rural Areas," by Dr. D. E. Parry Pritchard, County Medical Officer of Health for Caernarvonshire, and on "Housing and Town Planning," by Mr. B. Price Davies, City Engineer of Bangor. On Saturday morning, October 19th, a visit will be paid to the Bangor housing schemes and Lord Penrhyn's slate quarries at Bethesda.

The Branches and the Groups.

THE METROPOLITAN BRANCH.

President : Dr. G. H. Dart, M.O.H., Hackney.

Hon. Secretary : Dr. Vynne Borland, M.O.H., Bethnal Green.

Visit to Evans' Biological Institute and Pharmaceutical Laboratories. — Demonstrations of exceptional interest and value to public health medical officers were witnessed by some thirty members of the Branch on September 27th, following the acceptance of an invitation from the Directors of Messrs. Evans Sons, Lescher & Webb, Ltd., manufacturers of biological, chemical and pharmaceutical products, to visit their establishments at Liverpool and Runcorn. The party travelled from London on the evening of September 26th, and were accommodated at the Adelphi Hotel, Liverpool, as guests of the company.

The morning of September 27th was devoted to a tour of the firm's extensive pharmaceutical works and laboratories in Liverpool, the afternoon being spent at Evans' Biological Institute, Runcorn, where the members were first taken round the well-kept stables (observing the inoculation and bleeding of horses) and the small animal house, and then conducted over the chemical works, the antitoxin department, and the physiological testing, chemical, bacteriological and ampoule laboratories.

In view of the fact that the firm's activities cover the whole field of medicine, it is impossible in a short note to give an account of the innumerable processes which the members were privileged to see under the expert guidance of members of the staff, who spared no pains to explain the work and to make the visit interesting and informative. At the Biological Institute, for example, the Medical Director, Dr. H. A. Mitchell (whose paper on "Modern Conceptions of Immunology," read at a meeting of the Northern Branch of the Society, was published in PUBLIC HEALTH for October, 1933) had arranged for various demonstrations and tests, including the Friedman test for pregnancy, to be carried out in the presence of the visitors.

Unlike the majority of meetings of this character there was on this occasion very little speech-making, the Company making it clear that it was their desire that as much as possible of the work should be seen by the visitors in the comparatively short time available. Nevertheless, the first opportunity was taken by Dr. G. H. Dart (the Branch President), Dr. Vynne Borland, Dr. A. E. Thomas and Dr. Charles Porter to express to Messrs. Evans Sons, Lescher & Webb, Ltd., the best thanks of the members for the hospitality extended to them; their admiration of the smooth-running organisation of the work, which was reflected in the extreme care and precautions taken in the laboratories at every stage in the manufacture of the firm's drugs and other products; and their appreciation of the excellent arrangements made for their comfort and convenience, and carried out so ably by the firm's London representative, Mr. L. B. Singleton, Ph.C., who accompanied the party throughout. Mr. T. E. Lescher, O.B.E., Managing Director of the Company, who had travelled a long distance to extend a personal welcome to the party, said it was a great compliment to the firm to receive representatives of the Metropolitan Public Health Service and to show them something of the work that was being done. In his brief reply, Mr. Lescher left no doubt as to the pride with which the Company regarded their entire staff.

As evidence of the thought of the firm for the visitors it may be noted that the journey from Liverpool to Runcorn was made by motor coach in order that the party might have an opportunity of passing through the new Mersey Tunnel. Also, so that the visitors might be saved the inconvenience of returning to Liverpool, special arrangements were made for the Liverpool-London express to be stopped at Runcorn.

The visit was one of outstanding interest, and provided an opportunity of great advantage and convenience to the health officer of seeing applied on a large scale the methods of producing a number of the agents and materials that more and more he is coming to employ.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

GROUP MEETINGS HELD DURING NATIONAL BABY WEEK.

Post-Graduate Course.—An extremely interesting post-graduate course was held during the week-end preceding the general meetings associated with National Baby Week, and the 70 members attending were very appreciative of the time and trouble taken by the staffs of the hospitals visited.

On Saturday morning, June 29th, a visit was paid to the London Hospital, where Dr. Kenneth Tallerman explained the workings of the Maternity and Child Welfare Department which was established in 1921. Here medical students are taught the management of the newly-born and young baby by a pediatrician, *pari passu* with their midwifery: they attend the follow-up clinic at the hospital, for babies delivered at the hospital and on its district, and for two other open weekly sessions; arrangements are also made for them to attend a neighbouring municipal infant welfare centre. Methods of feeding were discussed and a tour was made of the department. Dr. O'Donovan delivered an entertaining and instructive lecture, illustrated by an epidiascope, entitled "Skin Diseases of Mothers and Infants."

In the afternoon a visit was paid to Queen Charlotte's Hospital Research Laboratories, Ravenscourt Square, Hammersmith, where Drs. Leonard and Dora Colebrook and Dr. Hare spoke on their recent research work on "The Sources of Infection in Puerperal Fever," and Dr. Fry spoke on "Ophthalmia Neonatorum." The hospital was open to inspection and the party were entertained at tea in the garden.

On Sunday, June 30th, the party visited the British Post-Graduate Medical School and Hospital, Du Cane Road, Shepherd's Bush, where they were received by Sir Thomas Carey Evans. Professor Young, in explaining the working of the Maternity Department, stated that a large proportion of beds is kept for antenatal cases and every effort is made to prevent clean cases from coming into contact with cases which have run any risk of sepsis before or after

admission; masks are worn and the nursing staff are segregated. The party was divided into three groups and taken round the department by Drs. Young, Chassar Moir and Craig. Light refreshments were provided, and the very up-to-date X-ray department was afterwards demonstrated.

Annual General Meeting.—The annual general meeting of the Group was held at the house of the Society on July 1st, and was attended by thirty-two members. Dr. Stella Churchill was in the chair and, after the business meeting, delivered her Presidential Address, entitled "Woman and Work," which was published in full in the August number of PUBLIC HEALTH.

A vote of thanks was moved by Dr. Wattie, who referred to the address as "an able synopsis of an important problem." She paid tribute to Dr. Churchill's services as Chairman, to the wide interests and experience she brought to the office, and to the wit and humour with which she enlivened the meetings. Dr. Finlay seconded the vote of thanks and said that he had enjoyed the really interesting presidential address, which must have involved a tremendous amount of research. The vote was carried by acclamation.

Annual Dinner.—The annual dinner was held at Pagani's Restaurant, London, on July 2nd, and was greatly enjoyed by fifty-five members and guests. Following the loyal toast, that of "The Guests," was proposed by Dr. Virginia Saunders-Jacobs, who extended special greetings to Dr. Turnbull of the Ministry of Health and to Miss Halford, and grateful thanks to Professor Young and to Drs. O'Donovan and Tallerman who had generously taken so much trouble in contributing to the success and enjoyment of the post-graduate week-end, and whom the Society was delighted to welcome and honour as its guests.

Miss Halford proposed "The Maternity and Child Welfare Group," and Dr. Marjorie Back, in reply, recounted some of the early history of the Group.

In the unavoidable absence of Dr. G. C. M. M'Gonigle, Dr. Morris Jones gave the toast of "The President" and claimed that the Group was to be congratulated on the brightness infused into the meetings by their capable President during the past session. Dr. Churchill, in her reply, said how much she had enjoyed her year of office. The name of the indefatigable Group Secretary (Dr. Muriel Radford) was included in the toast.

ANNUAL REPORT, SESSION 1934-35.

The membership of the Group has increased from 250 to 280. Eight meetings were held during the session; the attendances showed a marked improvement and excellent discussions took place. The complete programme was as follows:—

*1934.

October 26th.—"Factory Girls"—Dr. Thomas Garland, Medical Officer to Carreras Arcadia Tobacco Works, London.

November 30th.—"Heredity and Mental Deficiency"—Dr. John Fraser Roberts, Principal Investigator, Burden Mental Research Trust, Stoke Park Colony.

December 14th.—Annual dinner meeting at Pagani's Restaurant, London. Subject discussed: "The Future of Voluntary and Municipal Centres." Openers: The Lady Cynthia Colville and Dr. Maitland Radford.

1935.

January 25th.—"Mental Factors in the Welfare of the Child"—Dr. Ian D. Suttie, Physician to the Institute of Medical Psychology.

February 15th.—Joint meeting with the parent Society and the Fever Hospital Medical Service Group. Subject discussed: "Puerperal Fever." Speaker for the Group, Dame Louise McIlroy; speaker for the Fever Group, Dr. Alexander Joe.

March 22nd.—"Anæmia in Infants and Young Children"—Dr. Helen Mackay.

May 23rd, 24th and 25th.—Annual provincial meeting—County of Gloucester; headquarters, Cheltenham. This was the first visit paid by the Group to a county area. The meeting was most successful, an excellent programme having been arranged by the County Medical Officer of Health (Dr. Middleton Martin), the Medical Officer of Health of Cheltenham (Dr. Morley) and the County Assistant Medical Officer for Maternity and Child Welfare (Dr. Catherine Morris Jones).

June 29th–July 3rd.—Annual general meeting, post-graduate course, and annual dinner. (*These activities are reported above.*)

Of the six papers read during the session, three and the President's address have appeared in full in PUBLIC HEALTH, and two have been noted fully in the reports of meetings.

A sub-committee was formed to consider the existing rules and regulations relating to the qualification of M.M.S.A. (Master of Midwifery of the Society of Apothecaries). Several suggestions were made and submitted by the Group to the Council of the Society and forwarded by them to the Society of Apothecaries.

Another sub-committee considered the question of treatment and the use of drugs at maternity and child welfare centres. The

findings were submitted to the Council of the Society and a recommendation made that they be sent to the Ministry of Health with the suggestion that they might form the basis of a new Ministry maternity and child welfare memorandum.

GROUP OFFICERS FOR THE SESSION 1935-36.

President: Dr. G. C. M. M'Gonigle.

Past-President: Dr. Stella Churchill.

Vice-Presidents: Drs. Agnes Nicoll, Marjorie Back, Maule Horne.

Representative on Council of Society: Dr. Ethel Cassie.

Honorary Secretary: Dr. Muriel Radford.

Honorary Assistant Secretary: Dr. Virginia Saunders-Jacobs.

Committee: Drs. Jessie Balsillie, Victor Freeman, Catherine Morris Jones, Elwin Nash, Maitland Radford, Margaret Scott-Dickson, Nora Smith, Margaret Strathie, William Wallace, Nora Wattie, Isobel Wright, Agnes Young.

DR. H. HAROLD SCOTT has been appointed Director of the Bureau of Hygiene and Tropical Diseases, in succession to Sir Arthur Bagshawe, C.M.G., who retired as from August 31st, 1935.

DR. CHARLES PORTER (Registrar of the Institute) will preside at a sessional meeting of the Royal Sanitary Institute to be held in the Town Hall, West Hartlepool, on Friday, October 25th, 1935, at 5.30 p.m., in conjunction with the Northern Branch of the Society of Medical Officers of Health, when there will be discussions on "The Treatment of Scarlet Fever in Epidemics, from the Administrative Point of View," to be opened by Dr. J. W. McKeggie (Medical Officer of Health, West Hartlepool, who is also acting as Hon. Local Secretary for the meeting), and on "The Social Services, from the Standpoint of a Financial Officer," to be opened by Mr. R. D. Lambert, O.B.E. (Borough Treasurer, West Hartlepool). The meeting will be preceded by visits to the new isolation hospital, etc., and by tea and a reception by the Mayor of West Hartlepool at 4.30 p.m. Further visits of inspection have been arranged for Saturday, October 26th.

The Literature of Preventive Medicine.

Epidemics and Crowd Diseases. By MAJOR GREENWOOD, D.S.C., F.R.C.P., F.R.S., President of the Royal Statistical Society; Professor of Epidemiology and Vital Statistics, University of London (London School of Hygiene and Tropical Medicine). London: Williams & Norgate, Ltd., 1935. pp. 409. Price 21s. net.

There is no one who writes more fascinatingly on epidemiology and statistics than Professor Major Greenwood, and this is perhaps his greatest if not his only fault, since he sends his hearers or readers out with the belief that really there is nothing in these subjects but what is of the most fascinating and interesting. This present volume is probably one of the most delightful ever written on epidemics. It is a book that every health officer should have and, having it, he will certainly read it from cover to cover at once, later keeping it by him for refreshment and to stimulate, encourage and help him.

A Short History of Talmudic Medicine. By J. SNOWMAN, M.D., M.R.C.P.LOND. London: John Bale, Sons & Danielsson, Ltd., 1935. pp. 94. Price 3s. 6d. net.

This is a useful and interesting addition to the Short History Series, and because it contains so much evidence to support the view commonly held by health officers that in and around the times of Moses there was quite an extensive knowledge and practice of hygiene, in regard to food particularly, it will be all the more highly appreciated.

A New Angle on Health. By SURGEON-CAPTAIN D. H. C. GIVEN, M.D., D.P.H., D.T.M. & H., R.N. (RETD.), late Medical Officer in Charge H.M. Naval Base, Singapore. London: John Bale, Sons & Danielsson, Ltd., 1935. pp. 160. Price 7s. 6d. net.

Though somewhat unusual, this book is one that is likely to be read with interest and to provide food for thought to its readers. According to one of the distinguished contributors of a foreword, the author has had the temerity to draw comparisons in general good health between the Asiatic and Western races, and to show that the former wins. In the preparation of his book and as the foundation of his views, Captain Given has used the experience and knowledge that he gained as a naval medical

officer of many years' standing, and by the unique opportunity he had of being in control of the health of Asiatic labourers employed in the clearing of virgin land for the Singapore naval base over a period of several years.

In the Annual Reports.

THE LORRY GIRL.—What causes such a high incidence of venereal disease among long-distance motor transport drivers? The answer is: "The Lorry Girl." For some time past I have been making inquiries from motor driver patients with regard to this matter. It appears that there has, with the development of long-distance road transport, become evolved a new and very dangerous type of prostitute. Such women, who are usually between the ages of 18 and 30 years, live a travelling life upon these vehicles. They may board a lorry in, say, Manchester, and accompany the driver on his two or three days' journey to London or Glasgow or further afield. During the daytime the girl may conceal herself beneath a tarpaulin when passing through towns. In the country, she keeps the driver company in the cab. At night, sexual intercourse takes place. These women belong to the unemployed. They seldom ask for any payment from the driver, all they expect being food and drink on the journey. Certain roadside cafes frequented by lorry drivers, who park their vehicles there for the night, have become quite notorious. The arrival of a lorry attracts these women, and too often does the driver succumb. The same drama is now being played on the road as was at one time so common with respect to docks, ships and sailors. The lorry girl is spreading venereal disease throughout the length and breadth of the land; and her nefarious activities require the urgent attention of the police and of the Ministry of Transport.—*Dr. E. Tytler Burke, Venereal Diseases Medical Officer, Salford.*

AN OUTBREAK OF SOMNAMBULISTIC FITS.—In the middle of July a number of boys at a residential industrial school in the town showed symptoms of an epileptiform type of illness. In all, 18 boys were removed to hospital and sporadic cases arose up till about October. The first child affected appears to have had a definite epileptic attack. In the early stages, in the absence of a definite diagnosis, the possibility of botulism was considered, but this was soon removed by the fact that faecal swabs gave negative results. Neurological and psychological consultants were called in by the Home Office and the school authorities. It was considered that the first cases showed purposely simulated fits followed by a general outbreak of somnambulistic fits. The state of apprehension affected a group of boys peculiarly susceptible to the emotional influences surrounding them, with the result that the resulting individual reactions were somnambulistic manifestations of the state they feared. Adequate treatment was initiated largely on psychotherapeutic lines with the result that no further trouble occurred after October.—*Dr. A. T. W. Powell, Walthamstow.*

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Editorial.

**Dr. W. G. Savage, President,
Session 1935-36.**

ALL the formalities of selection and election having been completed and complied with, Dr. W. G. Savage, Medical Officer of Health of the County of Somerset, was installed President of the Society of Medical Officers of Health at the meeting of the Society on Friday, October 18th, 1935. In installing him, Dr. Veitch Clark, the retiring President, offered him on behalf of the Fellows a warm welcome and an assurance of full and loyal support throughout the term of his office. This he could very safely do since, apart altogether from the claim possessed as President to these things, Dr. Savage enjoys and has enjoyed for long enough, on account

of the almost exceptional qualifications that he holds, the highest esteem, respect and admiration of the public health service as a whole. A skilled laboratory worker and researcher as well as a notable administrator—a rather unusual combination—Dr. Savage has made contributions in both regards of value and importance sufficient not only to earn for himself a great reputation wherever preventive medicine is practised but to add also to the prestige of the Society and of the public health service of this country. Of his research work most has been bacteriological and has had reference to food and food hygiene, and even in the earlier days while he was still Medical Officer of Health of Colchester was of such noteworthy quality

that quite frequently he was called upon to carry out special investigations on behalf of the central health department. Even after his appointment as Medical Officer of Health of Somerset, a position for which his skill and experience as an administrator well fitted him, he still continued to devote himself to laboratory work, making contributions of real scientific value to the store of knowledge on, amongst other matters, the bacteriology of milk and canned foods, work that led to his being called to the United States. As keen and distinguished as he has been on the laboratory side, on matters calling for organising and administrative ability he has been no less successful and very many health officers have looked to him for example and suggestion in connection with the preparation of schemes of various kinds. In commending Dr. Savage to the Society at his installation, it was to things such as these Dr. Veitch Clark made reference and largely it was because of them that the Fellows were proud to welcome him and to indicate so very clearly how very great a pleasure it would be to serve under him. Himself a loyal Fellow of the Society, active in its service as a member of Branches, as a contributor to its proceedings and on occasions when special service was required before departmental committees and elsewhere, it is right that he should receive loyalty in return. That he will do so and that there is absolute belief that it is merited he may rest assured. In accepting office the new President declared that his aim would be to uphold the high tradition set by some of his predecessors in office. That he will achieve that aim and that during the term of his Presidency the Society will grow in honour and prestige there is none who doubts.

* * * * *

Public Health in 1934.

THE Annual Report of the Chief Medical Officer of the Ministry of Health for the year 1934* is the sixteenth of the series, and in it Dr. Arthur MacNalty, whose first it is since his appointment, takes the opportunity of setting out what the Ministry of Health stands for. Rightly, the aim he regards as being the securing of co-operation not only with other departments concerned with public health, but with the people as well, with whom it rests to participate in the work of the

Ministry in order to make it effective. "No exhortations, no regulations, no schemes, however ably planned, can make a healthy nation unless the force of public opinion is behind them. . . . The individual must pay the price of health in temperance, in self-control, in regular habits and in hygiene of mind and body." That the public are alive to their responsibility in this matter there is evidence in the report to show. The vital statistics of 1934 support the belief. The birth-rate was higher and the death-rate and the infant mortality rate low. The number of births was 17,229 more than in 1933, constituting a rise of 0.4 per 1,000 living above the 1933 rate, which was the lowest recorded. The deaths were fewer by 19,655, an improvement of 0.5 per 1,000 over the 1933 rate; and the infant mortality figure fell from 64 to 59 (the lowest on record) representing a saving of 2,000 infant lives. The five principal certified causes of deaths at all ages arranged in order of magnitude were:—

- (1) Diseases of the heart and circulatory system.
- (2) Cancer.
- (3) Respiratory diseases.
- (4) Diseases of the nervous system.
- (5) Tuberculosis (all forms).

In a special note on unemployment and national health reference is made to the investigations in Durham county, the conclusion based upon the results of these being that "the evidence contained in the report, evidence which is congruent with much other information available to the medical department, shows that even in the most distressed areas of the country the measures taken by the public authorities and the generous efforts of individuals have, so far as the usual indices of health can be trusted, largely held in check the deleterious influences of unemployment and reduced income. At the same time the report gives no grounds for complacency. No enquiry can accurately evaluate the grave, indirect dangers to health of mind and body which prolonged unemployment involves, and the position is being closely watched."

In regard to epidemic diseases it is noted that the incidence of influenza was slight; and claim is made that smallpox has ceased for the moment to be a cause of anxiety. Since 1927 when cases numbered 14,767, there has been a steady decline, and only 179 cases were notified in 1934. It is now nearly a year

since the last authenticated case was notified. The number of cases of enteric fever was the lowest on record (1,213 with 160 deaths as compared with 1,758 with 222 deaths in 1933). Epidemic diseases of the nervous system, including encephalitis lethargica, acute poliomyelitis and allied conditions, showed a slight decline on the previous year. Of the commoner infections, both scarlet fever and diphtheria showed an increased incidence.

As regards scarlet fever it is noted that there were 152,063 notifications—more than 20,000 above 1933 and the largest number since 1914. There is no evidence, however, that the type of disease is more fatal, the deaths during 1934 numbering 963. Timely reference is made to the changing views with regard to this condition, the summary given of the relations of scarlet fever to other streptococcal infections being of particular interest.

Of diphtheria 68,759 cases were notified in England and Wales in 1934, as against 47,435 in 1933, and the fatality rate was 5.9 per cent. as against 5.5 per cent. in 1933. The prospects of reducing the incidence of the disease by artificial immunisation and the effects of recent work in regard to *gravis* and *mitis* forms of the causative organism are most interestingly discussed.

In regard to other epidemic diseases it is shown that there was a marked fall in the incidence of pneumonic diseases during 1934; and that the decline in incidence of encephalitis lethargica has continued though at a diminished rate. There were ten cases of Weil's disease among sewer workers in London, and one case of psittacosis.

Maternal mortality and morbidity and child welfare naturally receive extended reference. The increase in the maternal death-rate is mentioned and the fact that there have been many improvements in provision for maternal care during the year. The report describes the measures which have been and are being taken by the Ministry to grapple with this problem. The interest aroused in the subject of maternal mortality is claimed as valuable; at the same time, however, it is pointed out that this interest is detrimental if the public attention drawn to the matter arouses undue anxiety in expectant mothers.

In the section dealing with the insurance medical service it is set out that 15,865,000 persons were in 1934 entitled to the benefits

of these services in England and Wales, being a decrease of 206,000 on the number for 1933, while the number of insurance practitioners was 16,500—the same as for the previous year. The total cost of medical benefit, exclusive of administration costs, was £9,030,550, of which £6,853,000 represented the remuneration of doctors and £2,176,750 the cost of medicines and appliances. Also, during 1934, a sum of £3,240,000 or £60,000 less than in 1933, was allocated for additional treatment benefits (dental, ophthalmic, etc.) by approved societies out of their disposable surpluses. Details are also given of the regional medical service and the insurance dental service.

To tuberculosis and venereal disease special sections, as usual, are devoted. The decline in mortality from all forms of tuberculosis has been continuous since the decennium 1851-60, and the death-rates for 1934 are the lowest ever recorded. The number of new cases of tuberculosis added to the notification registers in England and Wales during 1934 was 64,230, a decline of 2,121 from the 1933 number. The number of new cases dealt with by the dispensary service reached its maximum in 1931, when 97,364 new cases were examined for the first time. Since that year the number has declined annually to 90,384 in 1934, and the decline is probably fairly proportional to the fall in the incidence of the disease. Amongst other interesting matters discussed mention may be made of what is said as to the increasing use of X-rays in diagnosis; observation and treatment in residential institutions—approximately 17,300 adults and 6,200 children are, on average, in residential institutions at any one time; prevention of spread of infection and inter-conjugal infection.

In regard to venereal diseases the report submits evidence of a decline in the incidence of syphilis due in the main to the greater efficiency and speed of modern methods of treatment. In the case of gonorrhoea there is no significant decline in the number of cases.

To the discussion of various matters connected with cancer, the usual considerable amount of space is devoted. The number of deaths certified as due to malignant disease during the year was 63,263, of which 29,777 occurred in males and 33,486 in females. Compared with the previous year these figures show an increase of 940 for males and 751 for females. In noting this

* H.M. Stationery Office. Price 3s. net.

continued increase in recorded mortality due to cancer, Dr. MacNalty finds it possible to give support to the view that some at least of the increase is apparent rather than real, and to state further that it is possible a peak or plateau of mortality is being approached "on the reasonable assumptions that the actual number of deaths due to cancer has always exceeded the number certified, and that there is little or no increased prevalence of the disease." On an examination of current cancer research the conclusion is reached that steady progress is being made though "it may well be that the practical application of the results of such researches is far distant; any hopes based on them should not interfere with the pursuit of investigation in the clinical field."

As usual, very much interesting matter is contained in the section dealing with the relation of food to health and disease. Here an account is given of the administration of the Milk (Special Designations) Order, 1923, in England. Because of the confusion that exists between the two and that is "made use of by those who for one reason or another desire to minimise the dangers associated with the consumption of raw milk" the distinction between "clean milk" and "safe milk" is clearly drawn. "Clean milk," according to the report, is milk which has been produced and distributed with the minimum amount of extraneous contamination from the cow's udder and flanks, dust from the cowshed and dairy, and dirt from the milker's hands, utensils and milk containers. "Safe milk" is milk which contains no pathogenic organisms. Mere cleanliness, therefore, by no means connotes safety and, while cleanliness is desirable, cleanliness is not enough. The conclusion is drawn that the ordinary raw milk supply can, in present circumstances, never be regarded as safe. To ensure safety, that is freedom from pathogenic organisms, suitable heat treatment such as pasteurisation is essential. In fact, in the opinion of those responsible for this section of the report "it has become evident that it is by the development of this process (of pasteurisation) that the safety of the general milk supply of the country is to be secured." In this section there is an interesting and valuable note on undulant fever, the series of well-authenticated cases in England and Wales now amounting to 261, though "this number probably repre-

sents only a fraction of the cases actually occurring." Food poisoning also comes in for full reference, 58 outbreaks having been recorded during the year. In ten of these no bacteriological explanation could be suggested. The "toxin" type of outbreaks numbered 26. Of these rather more than half (14) were ascribed to canned or potted products, and twelve to pressed beef, tongue or ham. The remaining outbreaks were nearly all small, though one, due to a fish paste, comprised 40 cases and three others averaged 20 cases each.

Of the remaining sections, that (Section X) dealing with surveys of the health services and Section XI in which medical research and international health, amongst other matters, are discussed are of chief public interest. Co-ordination of health services, the use of films in the teaching of medicine, the work of the Ministry's pathological laboratory, research work in malaria and the therapeutic use of induced malaria, the uses of insulin in diseases other than diabetes, and the question of water supplies are some of the more interesting items considered in these two sections.

At the close of the report, Dr. MacNalty has reference to the retirement of Sir George Newman, whose "work for the public health and education is chronicled not only in his annual reports to the Ministry and the Board of Education, but also in many other reports, books and papers, both official and unofficial." Actually the work recorded in the report now reviewed was carried out under the direction of Sir George Newman: at the same time, however, Dr. MacNalty deserves praise and congratulation on the great part he himself must have played in securing that, while one of the most valuable contributions to the literature of preventive medicine, the report remained one that it was a real pleasure to read.

The Housing Act, 1935—Memoranda, etc.

IN a circular (1500A) addressed to the London County Council, county borough councils, metropolitan borough councils, town councils and urban district councils, and recently issued, the Minister of Health refers to circular 1493 on the Housing Act, 1935, issued on August 8th last, and directs attention to certain memoranda now issued in

accordance with a promise given in that circular. By way of comment upon the memoranda, it is pointed out that although the Housing Act, 1935, imposes new duties on local authorities, it is essential that in the carrying out of those duties the arrangements made by each local authority should ensure that the task which is now in progress of ridding the country of its slums should in no way be hindered. The Minister sees no reason why, in most areas, the work of slum clearance and the work of abating overcrowding should not proceed simultaneously, but if by reason of local circumstances it is necessary to give priority to one of these tasks, the priority should be given to slum clearance.

Memorandum A incorporates all the matters dealt with in the memorandum (Hou. 2) which was enclosed with circular 1493 and accordingly that memorandum is to be regarded as superseded.

Memorandum B deals with the provisions of the Act relating to the abatement of overcrowding and details the steps which it is suggested local authorities should take in the execution of the duties imposed on them by section 1 of the Act to inspect their district, to prepare a report on that inspection and to submit housing proposals to the Minister based on that report. The Minister hopes to issue a further communication in the near future specifying the dates which he proposes to fix under section 1 for the completion by local authorities of each of these duties. Hopes are expressed, however, that each authority, without waiting for this further communication, will at once take the necessary steps to commence or at least prepare for the survey of overcrowding in their area. Provisional regulations prescribing the various forms referred to in the memorandum have been issued.

Memorandum C, which deals with redevelopment areas, will be mainly of interest to the larger urban authorities.

Memorandum D explains the financial provisions of the new Act, including the new forms of subsidy available to local authorities providing new accommodation for the abatement of overcrowding. It is only necessary here to add that any application which an authority may desire to make for financial assistance under the Act will not be prejudiced by reason of the fact that the building of the houses has been commenced before a

decision on such application has been obtained.

Memorandum E explains the new provisions for the consolidation of housing accounts and the new rent conditions which are made applicable to all post-War houses belonging to a local authority in place of the special conditions imposed by the various Housing Acts of the past. These provisions are operative at once and the new housing revenue account to be set up under the Act must be set up in relation to the accounts for the year commencing April 1st, 1935. Provisional regulations dealing with the equalisation account have been prepared.

Health in Factories and Workshops in 1934.

AS usual, in the annual report of the Chief Inspector of Factories and Workshops for 1934 there appears a chapter on "Health," contributed by the Senior Medical Inspector (Dr. John C. Bridge, C.B.E.). In this, again as usual, the main reference is to the industrial diseases and the action taken in respect of them and the effects thereby produced, and to first-aid and the work of certifying surgeons. In addition, however, Dr. Bridge finds, as he commonly does find, space for introductory remarks and comment upon some matter affecting industrial hygiene and medicine that have peculiar value since they come from one particularly experienced and skilled in observation.

Especially interesting on this occasion is what he has to say on the difficulty of assessing the responsibility of industry and industrial conditions for the production of ill-health in the industrially employed. Not surprisingly, perhaps, without any hesitation at all he announces that it is not within but outside the factory where most of the ill-health detected arises. This is not, however, a reason for belittling the value of medical supervision in combating sickness amongst employees and he is all for the continuance and extension of this service since it possesses advantages both for the employers and the employed. Also he is anxious to see closer co-operation between the medical practitioner and the Factory Department, though he recognises as one of the difficulties in the way that few practitioners appear to know that there, in fact, exists such a department. It

is the view of Dr. Bridge that the medical curriculum should include a lecture or lectures on factory legislation and diseases of industry.

Another thing that might help, though Dr. Bridge does not mention it, would be to make industrial hygiene and medicine part of the duty of the health authorities—central and local—rather than of the Home Office. The possibility must not be overlooked that the medical practitioner may feel that there is nothing more than a factory side to such conditions as lead poisoning, anthrax, epitheliomatous ulceration, etc., and nothing of a medical or hygienic, because his notification is to the Chief Inspector of Factories and not to the local medical officer of health. As a result of the almost complete exclusion of the health departments from all participation in works connected with industrial hygiene and medicine, is the loss to the industrially employed of the vast amount of propaganda and educative work that the Ministry of Health and the medical officer of health and the health department does and can do amongst medical practitioners as well as the general population. Even such a matter as hours of employment, to which Dr. Bridge also makes reference, could be made much more medical and less purely industrial, and greater benefit secured for those affected, if the health department and health officers, and not the Home Office and the Factory Department and officers whose title identifies them so definitely with the factory and so little with health, were indicated as those concerned. With the opinion of Dr. Bridge that much benefit would result if hours of work were shortened in the heavy industries all health officers will agree. They will agree also that, in the case of young workers especially, the tendency to employ them to the full limit of the legal hours is a short-sighted policy. With the extended influence that specific identification with industrial hygiene and medicine would give, they could render great assistance in securing the improvements in this as in other connections that Dr. Bridge properly considers necessary.

So far as industrial diseases are concerned the report submitted shows that in general the year did not produce much that was surprising. Lead poisoning cases were more numerous than in any year since 1930, a remark which applies also in the case of chrome ulceration and epitheliomatous ulcera-

tion. Further, the number of cases of dermatitis referred to the Department during the year was higher than in other years. The increase in the case of lead poisoning was foreshadowed in Dr. Bridge's report for last year and is due to increase in the building trade which has led to a big demand for glazed tiles. The number of cases of chrome ulceration increased because of further extended use of the process of chromium plating. In the case of epitheliomatous ulceration the numbers both of cases and of deaths showed a distinct increase over those of the previous year. According to Dr. Bridge there is "a direct relation between the percentage of deaths and the existence of a periodic medical examination." He notes also that, with one or two notable exceptions, in the cotton industry medical examinations have never been instituted. This is all the more distressing since from a table submitted showing crude death-rates from industrial skin cancer from 1920-1934, it appears that the contribution of mule spinning both of cases and deaths is far in excess of any of the other industries in which this condition constitutes a risk. In his note upon dermatitis, Dr. Bridge explains that the increase in the number of cases reported is not to be taken as evidence of increased prevalence in any of the several industries with which the condition is associated. In regard to this association and allegations as to causative agents, the fact that there is a tendency to blame these in any case of dermatitis in an employed person is one worth mentioning. That it is often difficult to be quite sure as to what to blame, Dr. Bridge admits, as he admits also that it is not easy to suggest preventive measures for adoption other than very general recommendations to avoid contact as far as possible with suspected agents and take great care of the skin. Alkalies, sugar, oil, dyes, chrome and dough are amongst the causative agents mentioned, the occupations in which these are used being those that appear most prominently in a table dealing with occupations found to have been involved each year since 1930.

In reference to dust as a hazard it is noted that 57 deaths from silicosis and 50 from silicosis with tuberculosis came to the notice of the Department during the year, together with six deaths from asbestosis and eight from asbestosis with tuberculosis. As regards

silicosis it is pointed out that to substitute steel grit or shot in sand-blasting and to obtain a satisfactory result requires in some instances considerable thought and time, both as regards the grade of grit or shot and pressures to be used: which is unfortunate as the provision of some non-siliceous abrasive is the preventive measure necessary. In relation to asbestosis it is noted that experience of the regulated trades in the asbestos industry increases belief in the value of safeguards, chiefly efficient exhaust ventilation, directed towards the suppression and removal of dust. The adoption of such methods as a means of dust suppression makes little headway. Other dusts to which reference is made are French chalk, and those generated in maltheuses and from feathers.

Of fumes and gases Dr. Bridge treats at some length, making special reference to carbon monoxide—more in evidence in 1934 than previously; nitrous fumes, five cases of gassing having arisen from vats used for de-brassing; ammonia, 18 cases of gassing, 13 in an open-air refrigerator plant; and phosgene, gassing in three cases attributable to the use of a Pyrene extinguisher for putting out a fire. Hydrocyanic acid is particularly referred to in order apparently to impress the necessity, having regard to the increased demand for the acid in connection with vermin destruction, of ensuring that the process of manufacture shall be prevented from falling into the hands of inexperienced persons.

In his note on certifying factory surgeons it is interesting to find Dr. Bridge making mention of the fact that certifying factory surgeons have wonderful opportunities of "observing conditions which would not only be of interest but also of value in estimating general conditions of fitness for employment exhibited from year to year by those entering industry," and regretting that the practice of supplementing their annual returns by personal observations is only rarely adopted. As sources of information the certifying surgeons would probably be unequalled, and if Dr. Bridge only could secure reports from them his own would probably be longer and possibly even more fascinating than it is at present. This would be a splendid thing, though so far as interest and fascination go there is no ground for complaint with the report as it stands.

Iodine in Biological Substances.

IT is well known that the element iodine plays a very important part in the metabolism of the body, and particularly in relation to the functions of the thyroid gland. The quantities involved are nevertheless exceedingly minute, and study of the subject is hampered by the difficulty of estimating them with accuracy in complex biological substances. The chief need is for a reliable method of chemical analysis for the purpose, and to meet this the Medical Research Council, having secured the co-operation of the Government Chemist, Sir Robert Robertson, F.R.S., and a donation towards the expenses, arranged that special investigations should be carried out by Mr. C. O. Harvey, B.Sc., A.R.C.S., A.I.C., a member of Sir Robert Robertson's staff.

In a report recently issued by the Medical Research Council* Mr. Harvey gives the results of his work and describes the methods he has devised for determining small quantities of iodine in biological substances. Following practical trial by other workers, the method is shown to be capable of giving consistent results when parts of the same specimen are tested by independent analysts. Promotion of further work on iodine in relation to the nutrition and health of man and animals, in which Mr. Harvey's method is likely to prove useful, has been entrusted to a new committee on iodine deficiency and thyroid disease, appointed jointly by the Medical Research Council and the Agricultural Research Council. Further, since it is now known not only that iodine plays an important rôle both physiologically and therapeutically in hyperthyroidism, but that the blood content of iodine in hyperthyroidism is very high as compared with the normal, a reliable method of estimating the iodine content of the blood such as this, it is believed, may permit a new kind of attack to be made by persons engaged in the investigation of hyperthyroidism.

* * * * *

Papworth Village Settlement.

PAPWORTH Village Settlement has received so much, though not undeserved, publicity that the Report of the Committee

*THE DETERMINATION OF IODINE IN BIOLOGICAL SUBSTANCES. Special Reports Series, No. 201. H.M. Stationery Office, 1935. Price 1s. net.

of Management and Medical Director (Sir Pendrill Varrier-Jones) for 1934 will be read widely, and with interest, by many outside the medical profession.

The brief historical survey and statement of the Director of the motives which led to the foundation of the settlement in 1914 form an excellent opening to the report. It was because he was impressed with the futility of advising ex-sanatorium patients to find a light open-air job, and with the short duration of philanthropical employment under normal labour conditions, that he concluded that the tuberculosis institution must become itself a benign employer of labour. The problem was not only to deal with the tuberculous expatient, but also with his family, and, moreover, it seemed useless to aim at the production of individual craftsmen whose individual and perhaps clumsily produced articles would find a limited market at charity sales and bazaars. The successful craftsman is usually a born genius and the utmost capacity of most patients seeking work is to become good machinists. So workshops stocked with modern machinery were erected at Papworth, and it is largely to the foresight of this step that the success of the colony is due. Products to the value of £100,000 were placed on the market last year.

The medical officer in charge of the patients (Dr. Stott) gives an interesting review of work at the hospital, the out-patients' department, and in the clinics, while a wide field of research is being covered by Dr. W. Pagel who deals with pathology and bacteriology, and by Dr. B. Cruikshank in chemical pathology and biochemistry. So many subjects have been attacked by these workers that the reader is left a little uncertain as to how far they can have progressed in each direction. Six subjects are being investigated by Dr. Pagel:—

(1) The investigation of an inactive and pleomorphic tuberculous virus (a somewhat intriguing subject).

(2) Histological investigations of the appearances of cultures.

(3) Determination of a special type of hæmatogenous pulmonary tuberculosis in the adult, with special reference to endogenous reinfection.

(4) The pathogenesis of pulmonary tuberculosis in the adult.

(5) Histological studies of chronic hæmatogenous tuberculosis.

(6) Experimental studies of allergy and immunity.

Dr. Cruikshank in his turn is pursuing four lines of research:—

(1) A preliminary survey of the literature on the biology of zinc with special reference to its importance in tuberculosis.

(2) An investigation of the value of Triboulet's test in intestinal tuberculosis.

(3) A study of the value of autogenous protein injections in human tuberculosis.

(4) An analysis of the factors governing the increased lability of blood proteins in tuberculosis.

These researches, in addition to their routine work, must occupy the time of Drs. Pagel and Cruikshank quite fully.

The Papworth Report is most welcome, and it is generally recognised that the initiation and success of this experiment is owed almost entirely to the personality, the business ability, the energy and the foresight of Sir Pendrill Varrier-Jones.

Diagnosis and Treatment of Venereal Diseases.

IN a memorandum (190/V) addressed to the authorities of treatment centres approved by the Minister of Health under the Public Health (Venereal Diseases) Regulations, 1916, the Ministry of Health draws attention to a revision made in the personal card (form V.15) at present in use for the purpose in certain cases of providing a brief record of the diagnosis of the patient's case and of the treatment given, with a view to securing that the particulars of each case, and of the various treatments given, are recorded in a more uniform manner than hitherto and on a clearly defined basis according to the instructions which are contained on the card. The new card (form V.15—revised) it is suggested should be used in order to secure continuity of treatment in the case of patients removing from one area to another, and particularly in the case of patients whose occupations render it necessary for them to travel about the country and who are consequently unable to attend regularly at the same treatment centre. The particulars indicated in the card should be filled up by the medical officer of the treatment centre and the card handed to the patient with directions to present it to the medical officer of the treatment centre which the patient will next attend. Provision is

made in the new card for the systematic noting, during each course of treatment, of the medical officers' findings on the stage of the disease, the nature and localisation of the lesions and any complications or symptoms of intolerance to treatment, etc. In this way, the work of successive medical officers dealing with a case and the choice of suitable courses of treatment should be facilitated.

Obituary.

LEWIS MORGAN, M.B., CH.B.

THE Society records with regret the death of Dr. Lewis Morgan, an Assistant Tuber-

THE ROYAL SANITARY INSTITUTE.

THE Royal Sanitary Institute have accepted an invitation to hold the next Health Congress at Southport from July 6th to 11th, 1935.

"THE Cause and Modern Treatment of Speech Disorders" will be discussed by Dr. E. J. Boome, Divisional Medical Officer, Public Health Department, London County Council, at a meeting of the Royal Sanitary Institute to be held at 90, Buckingham Palace Road, London, S.W.1, on December 10th, 1935, at 5.30 p.m.

THE Benjamin Ward Richardson Lecture (founded by the Model Abattoir Society) will be delivered at the Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1, on November 12th, 1935, at 5.30 p.m., by Dr. M. T. Morgan, M.C., Medical Officer, Ministry of Health. The title of the lecture will be: "Some Details of the System of Health Inspection of Meat and Meat Products destined for export, in the great abattoirs of South America." Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P., will preside.

A SESSIONAL Meeting of the Royal Sanitary Institute, under the Chairmanship of Dr. James Fenton (Chairman of Council), will be held at Leamington on Friday and Saturday, November 15th and 16th, 1935. On Friday, at 4 p.m., in the Town Hall, the Mayor will entertain the members at tea, followed by discussions on "Medicine at Health Resorts," to be opened by Dr. Frank Clayton, and on "The Effects of Gas Works Liquors on Sewage and its Treatment," to be opened by Dr. A. Key, Chief Research Chemist, Institute of Gas Engineers. On Saturday, at 10 a.m., visits will be made to the medical treatment baths, the Royal Pump Room, the swimming baths, etc.

culosis Officer in the Durham County Health Department. Born in 1899, and educated at Durham School, Dr. Lewis joined the Army at the age of 17 and served during the Great War with distinction, being awarded the Military Cross for maintaining his guns in action in a concentrated bombardment. After he had graduated at Aberdeen University in 1925 he was appointed House Surgeon at Sunderland Royal Infirmary, and later held a similar position in Sherburn Hospital. This was followed by his appointment to Durham where he remained up to the time of his death. Dr. Morgan was a Fellow of the Society of Medical Officers of Health, attached to the Northern Branch.

IN conjunction with the Yorkshire Branch of the Society of Medical Officers of Health, a meeting of the Royal Sanitary Institute will be held at Barnsley on November 29th, 1935, under the chairmanship of Dr. J. Macmillan, D.S.O., M.C. (Member of the Council of the Institute). At 2.30 p.m. members will meet at the Town Hall for visits to (a) the Central Medical Services Clinic, and the rehousing estate, (b) the disinfecting station and the Kendray infectious diseases hospital, and (c) the Co-operative Society's pasteurisation plant. At 4.15 p.m. the Mayor will receive the members and tea will be provided. At 5 p.m., in the Town Hall, papers will be submitted on "Diphtheria Immunisation," by Dr. J. A. Scott, Medical Officer of Health, Fulham; on "The Disinfection of Slum Houses and Furniture," by Mr. J. W. Mellor, Chief Sanitary Inspector, Barnsley; and on "Some Notes on Water Supply," by Mr. J. R. Fox, M.INST.C.E., Waterworks Engineer, Barnsley.

A SOUTH African Health Congress will be held at the University Buildings, Cape Town, from February 2nd to 8th, 1936. The Right Hon. Lord Balfour of Burleigh is President of the Congress, which is convened by the South African Branch of the Royal Sanitary Institute, in association with the South African Society of Medical Officers of Health and the South African Health Officials Association. Other representatives of the Royal Sanitary Institute attending include Dr. James Fenton (Chairman of Council) and Dr. J. W. Dudley Robinson (Secretary of the Institute). The opening address will be delivered by the Hon. J. H. Hofmeyr, M.P., Minister for Public Health. The Christmas excursions of the shipping companies at reduced fares will be available for Congress members from Great Britain, and those interested are invited to apply for full particulars to the Secretary, Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1.

Our Future.

By WILLIAM G. SAVAGE, M.D., B.SC., LOND., M.R.C.S., L.R.C.P., D.P.H., County Medical Officer of Health, Somerset.

Presidential Address to the Society of Medical Officers of Health, Friday, October 18th, 1935.

I SHOULD be failing to express my deep convictions if I omitted at the outset of my presidential address to mention my appreciation of the great honour you have conferred upon me to-day. When I review the long roll of my distinguished predecessors who have not only played, and played worthily, their part in raising our Society to the important position which it justly holds but who have also when in office filled the presidential chair with distinction, I can only endeavour to uphold the high tradition which they have set. It is no easy task to keep so high a standard but I can but do my best.

In this year of Jubilee it would be natural in a presidential address to contrast, as was very properly done in many journals for various subjects, public health in 1910 and in 1935. It is a story of which we can be proud. Perhaps because it is so satisfactory it has been done so often that to repeat it here would be wearisome.

I hope I am still young enough to be what I still sometimes hear said in my county, "a right forward looking fellow," and I prefer to invite your consideration to our future rather than indulge in retrospection.

I took up public health when it was far from popular and not esteemed very highly because I believed in preventive medicine, and after well over 30 years in the service my convictions are unshaken. You must pardon this personal note, but I am going to criticise some present tendencies and criticism comes best from the true believer. It is easy to cast aspersions on the things we dislike.

My title refers to the future of the health service, particularly of those eligible to belong to our Society, but it is obviously impossible to discuss this without discussing public health developments.

When we compare the public health service of to-day with that of before the War I venture to think that many medical officers of health of experience will support me in my belief that on the whole the work is less interesting and less stimulating. I further suggest that it is likely to become even less so if developments take place along the lines which experience suggests as probable. I cannot shut my eyes to the fact

that there appears to be a considerable measure of dissatisfaction amongst not a few of those who enter the public health services with high hopes of its scientific opportunities and these some of the most promising material. It may therefore be worth while to discuss our future from a constructive rather than from a critical angle.

As regards the senior men, those who have attained to being the heads of their department, the tendency is for us to become more and more administrators, purely administrators. A powerful impetus to this tendency has been the developments under the Local Government Act, 1929. While its aims, and many of its methods, commend themselves as aiding the correct development of public health, there is an undesirable side from the point of view of our duties. It accentuates the pre-existing and ever-pressing tendency to deflect too much of our time to curative and remedial work and away from preventive work. We become administrators of beds largely occupied by the end products of disease and supervisors of defectives; in a word, largely enmeshed in functions which are not our proper business.

In the larger areas the medical officer of health will soon be forced to be almost entirely a pure administrator; a master of experts in all subjects but expert in nothing himself. I do not regard with equanimity becoming a mere conduit pipe to transmit and make administratively practicable the technical ideas of other people.

This inevitable tendency is fairly obvious. It is noticeable, for example, in our discussions. We can and do discuss with zeal and enthusiasm administrative problems but when it is a matter of the scientific basis of our work we have more and more to rely on special workers in those fields and few of us have the time or equipment to make original contributions. In pre-War days many of our members did do real scientific work and the names of medical officers of health who were experts in water supplies, sewage disposal, epidemiology of infectious disease, river pollution problems and the like will be familiar to all.

I have tried to acquaint myself with the reasons of the undoubted dissatisfaction which exists amongst not a few who have entered the public health service and fail to find that satisfaction with the work itself, the hope of which was their stimulus to joining that service. One factor is that the actual duties of the junior member seem to bear but little relationship to the larger problems of public health which he studied for the D.P.H. Particularly in counties and the very large towns the work is mainly routine school medical inspection and attendance at infant welfare clinics. The academic answer always given, that these services call for the highest medical skill and allow great scope, merely exacerbates the discontent. The retort is that so many routine examinations of healthy children in a specifically prescribed fashion have to be done that those doing the work have neither the time, opportunity and, later, the desire specially to devote themselves to the rare special cases. Their remarks on attending infant welfare clinics to see long processions of children for whom they can only give advice merely and not treatment are equally to the point.

Another definite objection is the present very haphazard method of promotion and its dependence upon factors which are outside, and which at times outweigh ability, efficiency and experience.

These tendencies and objections are matters which I regard with some apprehension as affecting the future of public health work in this country. There is sufficient basis of fact behind them to make them of interest to our Society and therefore proper subjects for our consideration. I should not, however, mention them if I thought they were insoluble, but this involves consideration of some public health problems.

It is a commonplace that the function of public health is prevention. Nevertheless, we have to resist constantly the tendency to neglect the preventive side and to develop the curative and the administrative control of the physical and mental defectives in the community. It would not be quite so difficult if it was frankly recognised that while this was useful work which we ought to perform it was not preventing disease. The difficulty goes deeper because those in authority think all this is preventive work and in consequence fail to realise that they are doing comparatively little to forward an object to which they pay so much lip service.

The late Dr. Wynne of Sheffield envisaged this tendency years ago and in 1922, in a paper

with the arresting title "The Wrong Turning in Public Health," discussed some of these problems.

Personally, I do not suggest that we have taken the wrong turning but rather that while we have our feet well set on the broad road of preventive medicine, we are being induced and officially directed to squander our energies by incursions into side roads which, while occasionally profitable and sometimes interesting, prevent progress to our real goal being other than deplorably slow.

One of the difficulties in putting preventive medicine into practice is its necessary relationship to the inflexibility of the law. It is often made a ground of reproach that the findings of science are not made more quickly applicable to public health practice and that the lag period between ascertainment and enforcement is too long. If it involves legal action I hold just the opposite view and believe that as laws are now made, the tendency is to apply findings before we know they are really applicable. The point is important enough to elaborate. Scientific study, possibly epidemiological, more often laboratory in nature, suggests that certain beneficial results would seem to follow if a particular course of action is made operative. A law is passed and a statutory obligation comes into being. The observations may be correct enough but the interpretation wrong or, what is much more usual, incomplete and not taking into consideration all possible factors. But the law still stands and embodying half a truth is most difficult to alter, whereas if the full facts had been known it would never have been passed in the form taken.

An excellent example is in regard to isolation hospitals. Vast sums have been spent on isolation hospitals which would never have been spent in the form it was spent if our present knowledge had been available. Not only is the law the law and no one gains votes by altering it but a definite vested interest springs up around it with a strong bias to perpetuate what exists. Other examples will spring to our minds and this legal inflexibility makes it extremely difficult to retrieve our mistakes.

Hypotheses are the breath of life to science. They are the framework bringing into harmony, or attempting to bring into harmony, the facts of the problem. No scientist believes in the complete truth of any hypothesis; he knows that truth has many facets and not all are seen at once. No scientist would go to the stake for a hypothesis. Hypotheses are equally valuable in

the science of preventive medicine but we run the risk, when we enshrine them in the inflexibility of a law, of perpetuating something which is shown later to be even less true than we believed. To wed dynamic and fluid science to static law is to risk the imprisonment of progress and the inducement of immobility. That we have some scientific outlook is illustrated by the fact that it is laymen who are usually the strongest and bitterest opponents of any changes in a public health law which no longer is in harmony with the known facts.

Of course, the difficulty in public health practice is that to try out the suggested boon we need the law to make things administratively possible. One remedy is the valuable practice of making these innovations permissible and adoptive. Two factors are, however, requisite. One is that the areas chosen must be suitable for what is after all an experiment; the other and more important is that the findings must be studied and tested in a research spirit with proper controls. The latter is rarely done. Some authority adopts the permissive Act or Section, thinks it is useful and booms its advantages, without any real critical study of its utility.

I believe in adoptive powers but the approval of the Ministry of Health should only be given provided adequate steps are taken by the local authority to test and control the utility of the measure. We should then have reliable data and ought to know and not merely to think that the measure is worth while.

Many, I am sure, will agree with me that one urgent need is adequate scientific controls in our work and that means an adequate staff. The extra work involved is quite considerable and that is why we all have constantly to employ administrative procedures, the utility of which we really are not in a position to assess. For example, before I used iodine as a preventative for thyroid enlargement on school children, three years of rather elaborate work with full controls had to be carried out. It meant a great deal of extra work but we obtained results which were scientifically tested and did demonstrate a moderate but definite utility for iodine therapy. Then we dropped the scientific controls and now simply give iodine in suitable cases, but I can no longer test any results and my present records are valueless as regards any estimate as to the utility of iodine.

While peering into our future it will be seen that I am trying to enumerate the obstacles which prevent us fulfilling our ideal destiny, *i.e.*

to be scientific experts preventing disease and promoting health. This enmeshment in mere administration and our close relationship to rigid legal requirements are very definite obstacles.

If we were in a position to develop the practice of public health along lines we collectively thought advantageous I fancy we should arrive at considerable variations from present practice. Our stock of scientific knowledge is quite good but some of our activities would be dropped or materially modified, some would be extended, some new ideas would be tried out scientifically.

One long overdue development is a detailed study of morbidity. While we can offer congratulations—taking some credit ourselves—for the remarkable fall in the death rate we are still only on the fringes of preventive medicine while such an immense mass of ill health remains—remains while much of it is preventable. This is all very much a problem of public health and we know so little.

We need to emphasise the importance of morbidity. We require statistics of disease as much as we need mortality statistics. Hopes were entertained that the panel practitioners' returns would be available and helpful. The Insurance Act had as one of its motives this prevention of disease and the collection of data to enable it to result. Those of us who have tried to use these figures realise that they are worthless. Yet if we are to fulfil our mission in life we must get such figures and use them and all germane information. I look for a wide extension of compulsory notification, in selected areas under control conditions, of all sorts of morbid conditions so that we can learn something about their distribution, age onset, incidence upon various sections of the community, and relationship to other morbid factors. Then we may hope to know something as to their origins and devise means of prevention.

I know of no more chastening practice than to select a dozen chronic diseases and consult the standard text books as to their causation, discount the speculative and tabulate the accurately ascertained facts and then ponder on the mass of ignorance which enshrines their causation. What do we know of diseases that only death-rates know?

Another of our great functions is the liquefaction of ignorance. H. G. Wells, in his autobiography, puts this rather well. "The main battle is an educational battle, a battle to make the knowledge that already exists accessible and

assimilable and effective. The world has moved from the horse-cart and the windmill to the aeroplane and dynamo but education has made no equivalent advance. The new brains that are pouring into the world are being caught by incompetent and unenlightened teachers; they are being waylaid by the marshalled misconceptions of the past, and imprisoned in rigid, narrow historical and political falsifications. We cannot do with such a world population. We cannot build a new civilization out of two thousand million pot-bound minds. It is all poor damaged material we have to deal with."

Our greatest hope for the reduction of ill health is the liquefaction of this ignorance as applied to healthy living.

Incidentally, in this health education we need to devote more attention to the problems of the dysgenic birth rate. Much of our efforts to teach and to obtain for the taught a higher standard of living and of environment will be nullified by the increase in the strata which produce the highest proportion of mental defectives. I feel we are not nearly active enough in stressing the dysgenic argument and enforcing the claim for a considerable extension of sterilisation and any other proved methods to counteract this disability.

It will be obvious that I do not hold the view that medical officers of health are but passive instruments to carry out policies initiated in Parliament or Whitehall under the direction of their respective authorities. They have this to do but I believe their special training and wide experience entitles them to, and should compel them to, survey the whole sphere of preventive medicine and to express their views and to exert their influence in making the practice of public health more scientific in outlook and more effective in operation.

How are we in practice to fulfil this exalted aim? We need more time to think and more knowledge to oil our thinking. We need to attract first-class men into the service who have something to think with and not reduce that thinking ability with excess of mere routine work.

The question of skilled lay assistance to us in our work is one of great importance. Most of us who are old in administrative experience have spent large portions of our time dealing with all sorts of problems, such as the proper laying out of a clinic, including the exact types of sinks and minor equipment, for which we were never trained and upon which we never ought to waste our time. Much hard work has made

us rather skilful in these problems; nevertheless I contend they are not our problems and not our proper functions. We have been, or should have been, trained for more *significant* matters and to immerse ourselves in them simply leaves us inadequate time for our essential functions.

I am by no means unmindful of the drawbacks of what may be called lay administrators. The most important, since it is so rarely realised, is inelasticity. If we possess a scientific outlook we should never be satisfied with any one of our schemes, be always reviewing it and be ever ready to modify it in the light of experience and additions to scientific knowledge. Incidentally I would remark that this is the real *raison d'être* of our annual reports. Invariably each year when, for example, I compile my Annual Report as School Medical Officer, I make it an occasion for considering item by item (but not all each year) whether the procedure requires modification or amendment.

With lay administration this attitude is usually conspicuously absent. The tendency is to accept the existing procedure as the settled procedure and to run it without variation. "This" is the way it has been done and it works so "that" is the way it is done year after year. Obviously this marked tendency can only be overcome by placing any lay administrator in a definitely subordinate position to the medical officer of health, but the latter must be imbued with a zeal for efficiency. When in Detroit a few years ago I was interested to observe that the centralisation of all their clinical activities— isolation hospital, maternity and child welfare, venereal diseases and part of their tuberculosis work, was associated with a lay administrator—responsible to the Health Commissioner—who dealt with the purely administrative questions of staff, food and general management. This left the various clinical chiefs free to devote their activities to their own specialities. I was not there long enough to discover the defects (if any) of this plan but the various clinical officers made no complaint as to interference or the like.

If the present tendency to make heads of large health departments primarily administrative officers continues it is logical that we should add a training in scientific administration to our other studies, instead of as at present acquiring this knowledge by the method of trial and error. I hold the view, however, that in some way or other we must shed a good deal of the present burden of pure administration to enable us to carry out the functions which I have indicated

as our life work. This can only be done by the use of a new and different kind of lay administrator other than any of us now possess on our staff, responsible but strictly subordinate to the head.

As regards the junior members of our service I have considerable sympathy with certain grounds of dissatisfaction. The developments of the past 25 years have flooded the service with junior officers who presumably enter that service in order that they should practise the science of preventive medicine. Actually, for a great many years, they do nothing of the sort. In the main their duties are confined to clinical work—chiefly school medical inspection and attendances at maternity and child welfare clinics. The inclusion of such work is part of preventive medicine but the actual carrying out of the work itself is clinical work deprived of the interest and stimulus of treatment for all but a very restricted group of conditions. In the large cities and certainly in most counties the work of these newly appointed officers is almost entirely dissociated from preventive medicine proper and without any opportunity to take part in its broader activities.

This work has to be carried on but I hope we shall see extensive modifications, for I cannot regard years of this work at the most useful age period as the best training and equipment for the future medical officer of health as I envisage the functions of that officer. It is one of the valid arguments for the transfer of much of this work to the private practitioner that it will tend to shorten that long road from the D.P.H. to the M.O.H.

An alternative possibility is to alter materially the basis of some of the work, especially school medical inspection and maternity and child welfare work. I was delighted at the Royal Sanitary Institute Congress at Bournemouth this summer to find such a widespread feeling and unanimity as to the need for extensive alterations in our existing methods of conducting school work. Not the least utility of a thorough reorganisation would be the benefit which should result in the outlook and interest of the school medical officer.

I have never been a strong advocate of the infant welfare centre as we know it, while our advances have made the old type of centre still less useful. Indeed, this is an excellent example of my contention earlier in this address that every service requires constant revision. In the old days with a high infant mortality, gross parental ignorance and very imperfectly

equipped infant visitors it was proper enough to put the burden of advice largely upon the only person able to give it—the trained medical man, and he did this work at the centres. With adequately trained, competent infant visitors most of this work should be done by them in the homes and the medical officer can restrict his activities to specially selected cases. The boredom and waste of time in seeing whole strings of infants with nothing much wrong with them to give advice, which can equally be given by a competent nurse, can then be eliminated and attention concentrated on the cases which do need medical advice.

Developments along these two lines should improve materially the interest in the work of our junior members and preserve that freshness of outlook which should constantly vivify the older men inclined with the inevitable tendency of age to sink into ruts.

I would add one further alteration. One of the advantages of our branch over private practice is the opportunity it offers, or should offer, for the study of the underlying factors of disease. This is difficult to do effectively unless time is available apart from routine duties and unless the knowledge and equipment are there to exploit the opportunities. The staff must be adequate while it should be the normal in every health department for six months' study leave to be given on full pay to every officer who completes a given number of years service. This, of course, requires proper safeguards as to the use of that study leave. It should then be expected as the normal that every junior member should carry out some definite investigation bearing upon our work, both for the sake of his own development and as a contribution to the stock of facts upon which a fresh signpost of achievement is erected.

While it may appear to my patient hearers that I have been discursive, I submit there are two threads running through the web of my remarks. One is that the tendency of developments as regards the duties and functions of the medical officers of the public health service is along lines which I do not think we should regard with equanimity. I discuss them because I do not regard either present conditions or the future tendencies as inevitable and inescapable but as capable of modification along lines which should restore to us and retain for us those functions for which we have been trained and which are in the best interests of preventive medicine.

The other thread is my insistence upon the

fluid and dynamic nature of our work and its preventive outlook. There is so strong a tendency to imprison the ever-expanding basis of preventive medicine in a fixed administrative framework and a settled routine that we must constantly review our procedures; cling not

unduly to what has served its turn however outstanding the services rendered, and be ever eager to try out under proper research conditions everything that promises to strengthen our primary function—the prevention of ill-health and its results.

THE REGISTRAR-GENERAL'S STATISTICAL REVIEW, 1934.

In Part I of his statistical review for 1934, which contains in particular what are described as "Tables, Medical," the Registrar-General provides a volume of information of outstanding importance.

The number of live births registered in the year was 597,642, giving a birth-rate of 14.8 per 1,000 persons living. This rate was 0.4 above that for 1933, which was the lowest ever recorded. The county distinguished by having the highest rate was Durham with 18.1, followed by the East Riding of Yorkshire with 17.0. The counties showing the lowest rates were the Isle of Wight, 11.4, and Cambridgeshire, 11.9.

The death-rate was 11.8 per 1,000 persons living, 0.5 below the rate for 1933. When allowance is made for the fact that the average age of the living population is increasing every year, the resulting corrected or standardised death-rate was the lowest ever recorded both for men and for women, the rates for the sexes together being just half of the corresponding rate in 1881-90.

The survival rate of infants was also greater than in any previous year, only 59 dying before their first birthday to each 1,000 born alive, compared with 64 in 1933, 65 in 1932 and 128 in the first decade of the century.

Mortality from infectious and parasitic diseases in general reached a low record of 1.3 per 1,000, notwithstanding increases for scarlet fever and diphtheria, and the tuberculosis rate declined once again to a new low record of 76.3 per million. Pneumonia gave the lowest rate save in 1930, which was also a very healthy year.

The cancer rate, corrected for the increasing age of the population, rose slightly to 1,003 per million, but was still below the levels reached in 1928 and 1929.

Deaths of women attributed to complications of childbearing numbered 1.95 from septic causes and 2.46 from "other accidents"

to each 1,000 live and still births, compared with rates of 1.75 and 2.57 respectively in 1933. The lack of improvement in this rate was offset, however, by reduction in other risks of death, so that the death-rates for women from all causes combined were the lowest ever recorded at every period of life from age 20 onwards. The total rate of dying for women aged 25-35, for example, was only 3 in each 1,000 living, compared with 5 in 1901-5 and 8 in 1876-80.

A new feature of the review is the tabulation of a "comparability factor" for each separate town and rural district, which shows at a glance whether the distribution of persons by age and sex in the population of that area would lead to the expectation of a death-rate above or below that of the country as a whole, and makes it possible to correct the death-rate by a simple multiplication for valid comparison with that of any other area similarly corrected. Of the county boroughs, Hastings is distinguished by having a population most favourable to producing a high death-rate on account of the high proportion of elderly people living there, and only two-thirds of its death-rate must be taken for fair comparison with the death-rate of the whole country. St. Helens, on the other hand, is in the most advantageous position owing to the youthfulness of its population and is, therefore, given the highest handicap. After correcting in this way for the proportions of young and old in their populations, the county boroughs showing the most satisfactory rates of mortality were Oxford with a rate of 82 per cent. of that for England and Wales, Canterbury with 84 per cent., and Bournemouth with 85 per cent.

The report, priced at 6s., is obtainable from H.M. Stationery Office, and it is a volume in which every member of the health service will find information both interesting and helpful.

*Ut Ita Dicam.**(Being Comments, apropos and otherwise, on Sundry Matters).***The Presidential Address:
"Our Future."**

In the opening sentence of his presidential address, Dr. Savage claimed himself to be what in Somerset is called "a right forward looking fellow." If that address be studied, it will be accepted that this is a true description. Indeed, so forward looking was he that in the glimpses he took into the future he saw several things a description of which gave rise to a certain amount of perturbation in the minds of some of his hearers. With the changes that have taken place in relation to public health work and more particularly that for which the medical officer of health is responsible, since the War, the President expressed himself as not at all pleased. On the whole it is much less interesting and less stimulating he thinks. Largely this is because it has become more administrative in character: a business involving office chairs and conferences, supervision of defectives and hospital beds "occupied by the end products of disease." Preventive officers concerned with and interested in preventive medicine, he finds medical officers of health being more and more deprived of any opportunity of acting preventively. The reason for this is that there are so many other things to do that no time remains for the study and application of prevention and the methods of preventive medicine. In order to secure that, duties that can be performed by persons less highly qualified than medical health officers, at infant welfare centres and in the office and hospitals and institutions, should be transferred to health visitors, lay administrators and such like. The time thus saved might be devoted to "study leave," the suggestion in this connection being that there should be allowed six months in every so many years. This idea met with much more of approval, it must be confessed, than did that relating to lay administrators. This latter Dr. Savage himself seemed to like very much, and in the future of the health officer, as he envisaged it, the lay administrator appeared to play a rather large part. The address was one of the prophetic type which, in general, do better than other types what a presidential address

should do in the way of providing interest, stimulation and suggestion. That it was very much to the liking of the meeting was shown by the attention and reception given to it, and the readiness of the response to the invitation of Professor Jameson to accord thanks to the President for having delivered it.

Sir Arthur Newsholme's Fifty Years in Public Health.

Fascinating as looking forward and discussing the future can be, the act of looking back and what is revealed at a backward glance is not without its attractions and fascination either. And because one does look back now and then and record what one sees does not make one any the less of a right forward looking fellow. At any rate, neither Sir Arthur Newsholme nor Dr. G. F. McCleary can be said to have lost the right to be counted such merely because in books they have published recently they have turned around for a little and looked back over the road they have travelled, and along which have come many of the movements with which they themselves in their day had concern or actually initiated. The field surveyed in retrospect by the two writers is only in a very limited degree similar. Sir Arthur Newsholme takes a period of fifty years (the title of his book is "Fifty Years in Public Health"*) and largely by talk of this and that great one and their work, and mere occasional and definitely too meagre references to himself and his experiences and contributions to the science and practice of preventive medicine, shows how interesting the period was and how magnificent the progress made has been. It is most unfortunate that Sir Arthur has been so self-denying, and to all those who urged him to write recollections it will be a great disappointment that he has not seen fit to talk and tell more of himself. Certainly of all chapters in the book there is none more interesting than the all too short first and second in which matters personal and familial are discussed and he tells of how he prepared himself and was prepared for the career in medicine that has

*London: George Allen & Unwin, Ltd. Price 15s. net.

been so full and so brilliant and so productive of benefit for public health.

From General Practitioner to Chief Medical Officer.

Very characteristically modest so far as references to himself and his work are concerned, Sir Arthur is no niggard of gratitude to those who he believes have taught and helped him or of appreciation of the efforts and contributions of those who were colleagues and fellow workers. It is fascinating to have his point of view on men and women whose names are those for health officers to conjure with: Bristowe and Murchison; Lister and Florence Nightingale; Simon and Chadwick; Farr, Richardson and von Pettenkofer; all of these and more he knew, and of them he has things, many of them new and surprising, to tell. Of days in private practice—most promising they looked too—of how he came into public health and of happenings and experiences in both spheres he has interesting and, at times, amusing things to say. From his point of view, and probably from the purely historical of preventive medicine and public health, greatest importance attaches to the parts of the volume in which, under the heads of Control of Infectious Diseases, Vital Statistics as a Basis of Public Health Work, and the Safeguarding of Development and Growth, he discusses methods of coping with diphtheria, tuberculosis, rheumatic fever, and shows how, as a result of perfecting of schemes—many of which he himself inspired or devised—improvements have taken place. That these chapters are full of interest, information and inspiration cannot be denied; but then so is the whole book.

The Maternity and Child Welfare Movement.

Like Sir Arthur Newsholme, who only just mentions the fact in his preface, Dr. McCleary was for some years Editor of PUBLIC HEALTH, which is another reason for taking pleasure in making reference to these writings. It is a reason as well for pride on the part of the successors of Sir Arthur Newsholme and Dr. McCleary in the editorship of the journal, in the excellence of these contributions to the literature of public health and the distinction attained by the authors. Dr. McCleary's book ("The Maternity and Child Welfare

Movement"*) in a sense is a sequel and a carrying on of the story that he told in his "Early History of the Infant Welfare Movement," which was reviewed here a little time ago. In this he set out to deal with the welfare movement as a whole, to tell of its beginnings and its transformation into the wonderfully complete, smooth-working and successful organisation existing to-day. As in the case of the earlier book, Dr. McCleary makes a delightful story, and though he has aimed at brevity he has succeeded in providing a description clear, readable and informative.

Dr. McCleary, Pioneer of the Movement.

Perhaps the only fault is that he has said nothing about his own work in securing that there should be a movement of this kind at all and his contribution to the wonderful progress obtained as a result of the operation of the schemes within the movement. That he was himself a pioneer is something that must not be forgotten. Particular note may be made of the fact that there is included an account of how the State recognition of midwives was secured. An historical note, this has particular value, but of no less value are the notes with regard to the development of other activities connected with maternity and child welfare: health visiting, ante-natal care, the problems of the unmarried mother and the unwanted child, and so on. Brief as are the descriptions that he gives, Dr. McCleary still finds room for personal and human touches. Many personalities and incidents that have influenced and played a part in the progress of the movement are most graphically described and help to an understanding and appreciation of the account given of the more official and practical aspects of the subject, the administration of maternity and child welfare schemes, and the attack upon the problem of maternal mortality of which Dr. McCleary refuses to take so pessimistic a view as that so commonly held. The reasons for the faith in this regard that is in him he gives most convincingly. They provide encouragement and constitute one of the many features that make the book so important and so definitely one that should be read.

P.

*London: P. S. King & Son, Ltd. Price 7s. 6d. net.

Overcrowding and the Housing Act, 1935.

By W. M. FRAZER, M.D., M.Sc., D.P.H., Medical Officer of Health, City and Port of Liverpool; Professor of Hygiene, University of Liverpool.

Because it was practical and helpful, this Presidential Address of Dr. W. M. Frazer received a particularly warm welcome at the opening meeting of the session of the North-Western Branch on October 11th, 1935. To the wider audience to whom it is now submitted it will be no less welcome, dealing as it does with a subject much in the mind of every health officer in the country.

ALTHOUGH the question of overcrowding has come prominently before the attention of local authorities during the period since the War it has, in fact, been of importance to social reformers and to those interested in the health of the community ever since the dawn of the industrial era towards the end of the eighteenth century. Since I decided upon this title for my paper I have been looking over some of the records of the Liverpool Public Health Department which was established, under the Liverpool Sanitary Act of 1846, by the appointment of Dr. W. H. Duncan as Medical Officer of Health—the first in this country; and his first reports as the occupant of that office are still available amongst the departmental records. At that time the first duty of the medical officer of health, and indeed the justification for his appointment, was to search out cases of infectious disease and by ascertaining the causes of outbreaks to attempt to control the epidemics which were so prevalent within the City at that time as to occasion—when they reached the better class quarters—widespread alarm.

Dr. Duncan in his annual report for the years 1847-50—a slim volume of 104 pages—refers repeatedly to the outbreaks of cholera, typhus and smallpox which were occurring each year, and emphasises again and again the relationship which appeared to exist between the rapidity of spread of infection and the appalling conditions of overcrowding prevalent in the poorer parts of the town. In spite of his ignorance of any of the causal agents of the infectious diseases with which he was attempting to deal or of modes of infection, Duncan observed that infection spread rapidly in the thickly congested quarters of the town and slowly in those parts where houses were adequately spaced and thinly tenanted, and he emphasised on many occasions the dangers to health of overcrowding.

Incidentally, and quite apart from my subject, Duncan, at the end of his first three years' experience of grappling with the public health problems of a large town made some comments with which most of us will be in agreement on the subject of his tenure of office. He said in the concluding sentence of the report referred to: "In conclusion, the experience of the last three years has shown the wisdom of the Sanitary Commissioners and of the Secretary of State in recommending that the appointment which I have the honour to hold should be placed on an independent footing; for the duties, if faithfully discharged, are of such a nature as inevitably to bring the officer of health into collision with those whose private interests they may affect, and some of whom might feel disposed to exercise any power they possessed to injure him in his professional capacity." This must surely be the first occasion on which the question of the medical officer of health's security of tenure of office was raised.

General legislation on the subject of overcrowding, as far as I am aware, commenced with the Nuisances Removal Act for England, 1855, which authorised the medical officer of health or, if none, two medical practitioners, to certify to the local authority any house so overcrowded as to be dangerous or prejudicial to the health of the inhabitants if such inhabitants consisted of members of more than one family. This restriction existed until the Sanitary Act, 1866, removed it by enacting that the word "nuisance" in the Act of 1855 should include "any house, or part of a house, so overcrowded as to be dangerous to the health of the inmates."

That this legislation and much besides of a later date, including the famous Cross and Torrens Acts, was ineffective is amply shown by the observations of the Royal Commission on the Housing of the Working Classes reporting in 1885. The Commissioners after reviewing the legislation then in force express

the opinion that "the evils of overcrowding, especially in London, were still a public scandal and were becoming in certain localities more serious than they ever were." They also say that "there was much legislation designed to meet these evils, yet the existing laws were not put into force, some of them having remained a dead letter from the date when they first found place on the statute book."

It need hardly be said that a similar fate has befallen much of the legislation which has been passed since the date of the Commissioners' Report, and the history of the organised attempts to improve the housing of the working-classes either from the standpoint of slum clearance or the abolition of overcrowding has been one of short-lived spasmodic drives, marked by the dozens of abortive Acts of Parliament relating to the subject which cumber the statute book. This is certainly true of the period until the end of the War; it is, perhaps, less true of the period commencing with the Wheatley Act of 1924 and culminating with the Housing Act, 1935. The relative success of the Housing Act, 1930, is certainly not due to its intrinsic merits. Certain parts of it, notably the "Improvement Areas" section, have been conspicuously unsuccessful in actual working throughout the country. Where, however, housing legislation after the War has attained results markedly superior to that passed during the preceding 60 years it has been due, not to any theories about houses fit for heroes, but to the financial inducement to local authorities which have been a feature of post-War enactments. All the older Acts threw the financial burden on local authorities and progress was wholly incommensurate with the scope of the problem. With the advent of subsidies and under the stimulus of a definite programme laid down in 1933 by the Minister of Health, the problem of slum clearance is being energetically tackled by the majority of local authorities.

The remaining problem is overcrowding. At first sight it might appear that overcrowding and insanitary property are merely two aspects of the same question—that the majority of the houses dealt with under the slum clearance schemes would be found to be overcrowded, and that on the contrary, houses in a satisfactory state of repair and of a sanitary character would be found to contain

adequate accommodation for the number of persons residing in them. Surprisingly enough there appears to be little relation between the sanitary state of a house—at least in Liverpool—and its state in regard to overcrowding. The small house is sometimes overcrowded; much more frequently it is not. In this connection it is interesting to note the varying percentages of overcrowding according to the standards of the Housing Act, 1935, in different sized houses recently inspected in Liverpool:—

55.5% of houses consisting of 2 rooms were overcrowded.
30.7% of houses consisting of 3 rooms were overcrowded.
12.4% of houses consisting of 4 rooms were overcrowded.
2.7% of houses consisting of 5 rooms were overcrowded.

What the condition of the rather better kinds of cottage property is we are not yet in a position to know, but what evidence we have seems to indicate that there is a considerable amount of overcrowding. The problem of re-housing, therefore, is not likely to be a simple one, since from now onwards local authorities will be required to build both for the purpose of replacing dwelling-houses demolished under clearance schemes and also to conform to the requirements of the Housing Act, 1935, in regard to overcrowding found in property of a satisfactory character. If nearly all overcrowding were fortunately to be found in insanitary property dealt with under Section 1 of the Housing Act, 1930, the problem would resolve itself into the relatively simple one of providing a rather larger amount of accommodation for each overcrowded family in the newly constructed houses and tenements, with some further provision for the occupants of the proportionately few larger sub-let houses; but if, as appears to be the case, there is a considerable amount of overcrowding in houses of a satisfactory sanitary character, local authorities' building programmes will be materially increased. Measures taken to abolish the slum and to deal with overcrowding will therefore overlap in cases where these evils are co-existent, but there is, I think, a wide field in which they are separate in most areas.

The main purpose of the Housing Act, 1935, is to make further and better provision

for the abatement and prevention of overcrowding. As an administrative measure the Act is revolutionary, as compared with the mass of previous legislation, since under certain conditions it makes overcrowding an offence punishable by fine, in the case of both the occupier and the landlord, and it provides effective machinery for the enforcement of this provision by local authorities. Further, unlike previous legislation, this Act lays down a definite standard below which overcrowding is presumed to exist, which applies to the whole country. The standard as given in the first Table is derived from the Manchester standard, but it will be noted that two standards are laid down, the first dealing with persons per room and the second relating the floor area of rooms to the number of inhabitants. The number of persons permitted to use a house for sleeping is the lesser of the figures obtained by using both bases of calculation. I do not desire to be unduly critical of these fundamental standards on which the overcrowding sections of the Act have been based, because certain medical officers of health were consulted in regard to the two tables in Schedule 1 and it was agreed that they represented the best obtainable in the present circumstances. It may, perhaps, be permissible to make two comments of a general character. In the first place the standards are too low, especially when it is remembered that living rooms are counted in the total of accommodation available. If we consider the case of a three-bedroomed house, with kitchen, scullery and living room, such as is found in thousands in large urban areas, and refer to Table 1 it will be found that the number of "units" constituting the "permitted number of persons" authorised to use the house for sleeping purposes is ten. Even assuming that the application of Table 2 produces some slight reduction in this total, and a further reduction takes place on the operation of Section 2 (1) (a), nevertheless the number of persons legally permitted to occupy this relatively small dwelling appears alarmingly large. In the second place, the comment may be made that Table 2 takes no account of rooms which are larger than 110 square feet, and this may prove to be a disadvantage in connection with some of the older houses with large bedrooms.

In regard to the administration of the Act a rather ingenious use is to be made of the

two tables in Schedule 1. Obviously the first table is easy to apply and the work can readily be performed by relatively inexperienced persons; the second table, involving measurements of floor area in all the differing conditions which may be found, under rules to be prescribed by the Ministry of Health, is considerably more complicated in its application. Any census of all dwelling-houses in an area undertaken for the purposes of the Act will therefore be materially facilitated if Table 1 is used for a rapid survey for the purpose of disclosing those houses which are overcrowded or near to the overcrowding point or for any reason doubtful, while Table 2, involving measurement of rooms, will be employed on a second survey to obtain exact information as to the amount of overcrowding in the relatively small proportion of houses referred from the first inspection. Acting on these lines the Ministry propose to employ two forms in the survey—Form A on the preliminary canvass and Form B in connection with the houses referred from the first rough inspection as being overcrowded, near to the overcrowding point or doubtful. Form A, derived from Table 1 in the Schedule, requires the following information: address of house, names of occupier and of tenants, number of habitable rooms, and number of persons normally sleeping therein over the age of ten and under the age of ten. Form B asks for details of persons sleeping in the house, such as the number of males and females, married couples and the number and ages of children under the age of ten, together with particulars of the size of the floor space in each room. It is a complicated form and it is unlikely that any inspector whose whole time is engaged in this work will be able to deal with more than 15 houses in a working day unless the obtaining of measurements is facilitated by the fact that numbers of houses may be of exactly the same size and type, as, of course, frequently happens in connection with houses in the same street or row. Details of persons will have to be obtained in each house, and as the Act involves penalties in regard to overcrowding it is evident that this kind of inspection will require careful scrutiny. Form B, when completed, will therefore contain complete information on the subject of occupancy of the house to which it relates at the date on which the inspection takes place. It may become incomplete or

inaccurate at any time afterwards for any of the following reasons:—

- (1) Change of tenancy.
- (2) Birth of additional children.
- (3) Addition to the number of persons in occupation.

As time goes on one or more of the children living in the house will reach the age of ten years when, instead of counting as one-half, they will count as one in the statistics of occupation; but a change of this kind is provided for in Form B in the columns relating to the ages of children under ten years. Additions to the number of persons in occupation, *i.e.*, sub-letting, providing accommodation for relatives, will after the appointed day become illegal if their result is that the house then becomes overcrowded. The birth of additional children will not immediately affect the question of overcrowding since, until they reach the age of one year, they are not counted in the total of occupants. Unless further inspections take place from time to time to supplement the original survey there will be no readily available means for ascertaining children born unless use is made of schedules obtainable from the local registrars of births. In any case it is an obligation on the landlord to inform the local authority of overcrowding in a dwelling-house belonging to him. (Sec. 8.)

I have mentioned and discussed the fundamental basis of the Act in regard to overcrowding in the first place in this paper because I understand that the surveys required by Section 1 will have to be undertaken towards the end of the present year and it is certain that returns will be desired by the Ministry with the minimum of delay. This being so, the question of the surveys and the methods by which they can be undertaken are of first importance to medical officers of health and their staffs. It is desirable that preliminary arrangements should be made so that the surveys can be commenced as soon as the Ministry's forms and circulars are received. This is the first time that a survey of this kind has been undertaken by local authorities and it is a task of some magnitude, especially in large areas where some temporary increase in the sanitary staff will probably be essential in all cases. As the amount of work necessary to survey the housing accommodation in any area is a fixed and definite quantity it is obviously desirable,

in order to proceed with the necessary expedition, that sufficient additional staff is engaged on the preliminary survey to cover the ground required in a strictly limited period. Probably a period of two months will be all the time allowed even in the largest areas for the preliminary survey and this should, I think, be regarded as a maximum and curtailed as much as possible in view of the second survey under Form B and the delays inseparable from local authorities' administrative procedure.

As regards the staff required to complete Form A it appears unnecessary to insist upon a high standard of qualification as no measurements will be required in the preliminary survey. The Ministry's term applied to such officers is, in fact, enumerators and the view is held that any trustworthy persons capable of elementary clerical duties would be suitable for this work. Persons employed should, however, be accurate and painstaking; should be expected to perform a reasonable day's work and not dawdle, and should be carefully instructed in their duties beforehand. The general supervision of these temporary employes during the preliminary canvass will no doubt be the duty of the district sanitary inspector in each part of the local authority's area under the superintendence of the chief sanitary inspector or chief housing inspector. After the preliminary survey the residuum of houses which appear to be overcrowded or doubtful will be inspected under Form B, and for this purpose men with sufficient skill and training to undertake measurements of rooms under the rules compiled by the Ministry of Health will be necessary. Possibly in many cases sanitary inspectors will be deputed to carry out this important survey. It is a responsible duty, since the authority's programme for decrowding and all subsequent legal procedures in connection with infringement of the overcrowding sections of the Act will be based upon information thus obtained.

One question which will arise during the later stages of the two surveys discussed above will be the exact form in which all the information in respect of thousands of houses obtained from the house-to-house inspections then proceeding, as contained in the files of forms filed in the public health departments' offices, shall be presented. One hopes that the Ministry of Health will prescribe a form of return to be used by all local authorities for this purpose. Many dwellings occupied

by single families—and this is still the rule even in the central and populous areas of the large towns—will be but slightly overcrowded; some only to the extent of half a unit. What is to be done in connection with cases of this kind? Theoretically, the proper procedure would be to re-distribute the population amongst all the sanitary houses in each area, remove overcrowding in slum districts by demolitions and re-building, and thus solve the whole problem of overcrowding without any extensive programme of construction planned especially for this purpose. Undoubtedly many houses are under-occupied, and disregarding convenience and amenity and proximity to work it would be practicable to abolish a large amount of overcrowding by re-distributions alone. But the Act confers no powers of this kind, and for political and social reasons any organised re-distributions of population are impracticable as a solution of the problem of overcrowding. In actual practice it is thought that the mere operation of the relevant sections of the Act will conduce over a period of years to a re-distribution of population so that the size of the family will tend more and more as time goes on to correspond to the accommodation of the house. This appears certain to occur, as after the appointed day any transfer of a family from one house to another can only be allowed if the accommodation provided by the second house is sufficient to give each member the space required by the First Schedule to the Act. Landlords will soon learn the provisions of the Act and may be expected to institute enquiry into the size of a family, before letting a house. All movements of population from one set of houses to another will therefore facilitate a reduction in overcrowding, as each family by leaving the premises in which it was resident on the appointed day will lose the protection afforded by Section 3 and be subject to the full provisions of the Act. I am emphasising this likelihood that the operation of the Housing Act will, in the course of a few years, tend to re-distribute the working-class population into houses of dimensions appropriate to the size of the family because I am convinced that this will be found to be one of its most beneficial effects. Custom will soon dictate both to landlords and tenants. As the provisions of the Act become better known there will be less and less necessity for the officers of the

local authorities to interfere in regard to private lettings; landlords will realise that they are responsible for the avoidance of overcrowding in the houses belonging to them, and the evils associated with sub-letting will be greatly reduced.

So much for the general tendencies of the Act towards the abatement of overcrowding apart from any action of the local authority in regard to re-housing. As I have hinted before, I do not think that local authorities will be able or willing to pay much attention to minor degrees of overcrowding or, at least for many years, to offer alternative accommodation under Section 3 to families whose capacity for increase brings them slightly to the wrong side of the Schedule. Further, as I have suggested before, it is unlikely that many small houses inhabited by members of one family will be found to be overcrowded on the standards contained in Schedule 1. The greater proportion of cases of overcrowding are associated with sub-letting—one of the worst of urban evils. Fortunately, action in regard to several families living in one house is as administratively easy as it is hygienically necessary. All that is required is to provide sufficient additional houses or flats to accommodate the separate families surplus to each sub-let house and by the use of the powers conferred by the Act to prevent further illicit use of the de-crowded dwelling. That, while troublesome in detail, is simple enough in principle. Relatives living together and thereby overcrowding a house present a rather more difficult problem. There is the excessively common case of the son or daughter of the family who marries and brings his (or her) marital partner to live under the—probably leaky—family roof. In the course of a few years a second family appears and the house becomes badly overcrowded. Frequently the mere presence of the new husband or wife converts a house originally suitable as regards size into an overcrowded one, and this is especially so in view of the provision of Section 2 (1) (a) relating to persons of the opposite sex above the age of ten years, except persons living together as husband and wife, sleeping in the same room. One likely effect of the Act, therefore, will be to prohibit or discourage the prevalent practice of the son or daughter of the family marrying and continuing to live in the same house. Few working-class cot-

tages will contain sufficient accommodation to enable this practice to continue in face of the provisions of the Act, but to compensate much provision will have to be made by local authorities for newly-married couples.

Where a daughter has an illegitimate child and does not marry the difficulty referred to is not so serious. Here, of course, no additional trouble arises in regard to the mixing of the sexes. Until the baby reaches the age of one year he counts as nothing—at least for the purposes of the Act; but over the age of twelve months he technically adds to the overcrowding. There would be no useful purpose served by the local authority taking any action in such circumstances; in fact, no action would be legally possible.

I suggest, therefore, that the case of the sub-let house should be dealt with by local authorities as the first step in their re-housing programme under the Act. It is the most urgent problem and it is the easiest of solution. Later, the problem of the cottage type of house, inhabited by members of one family, should be dealt with in cases where the amount of overcrowding has assumed serious proportions as the size of the family increases. If the provisions of Section 3 are properly administered in the area there will be no danger of overcrowding when such a house, vacated by a family removing into accommodation provided by the local authority, is re-let to a suitable applicant by the landlord. It will be the latter's duty to ensure that the new family is of such a size and age and sex distribution as not to overcrowd the house.

Lastly, attention should be given to those houses which are but slightly overcrowded according to standards laid down in the Schedule. Assuming that the house is sanitary there appears to be no great public health disadvantage in allowing the minor degree of overcrowding which exists to continue until, in the course of the authority's building programme, the more serious cases are dealt with. Much can be done by the sanitary inspector in the direction of advising the occupants of a house overcrowded in a minor degree as to the proper use of the sleeping accommodation available. It does not appear, however, that any powers are conferred by the Act authorising local authorities or their officials to take any proceedings in regard to the use of any rooms in a house for sleeping purposes as long as the number

available—apart from their allocation—is such as to conform to the definition contained in Section 2. If, to take an example, two children of opposite sexes over the age of ten years are allowed to sleep in the same bedroom no offence under the Act is created if there is, in fact, sufficient accommodation to enable them to sleep in separate rooms. Fortunately, it is not the intention of the legislature to allow night inspections of dwelling-houses. All that the Act aims at is to require local authorities to provide sufficient accommodation in accordance with the prescribed standards and to trust to the good sense of members of the community to utilise to the best advantage the housing facilities placed at their disposal.

My last comment on the overcrowding sections of the new Act is in reference to Section 5, which gives local authorities the power to authorise by licence the temporary use of a house by persons in excess of the number permitted, in exceptional circumstances. Only one exceptional circumstance is mentioned in the section, *viz.*, a seasonal increase in population, and this example appears to be the principal justification for the inclusion of the section. One hopes that, except in seaside towns and health resorts, the discretionary powers thus conferred on local authorities will be sparingly used and that their views as to the meaning of the term "exceptional conditions" will not be such as to lead to wide use of these powers.

A large part of the new Act is concerned with matters, such as finance, which are not directly within the province of the medical officer of health. He is mainly concerned with the powers relating to overcrowding and the duty of inspecting the area and, if necessary, re-inspecting from time to time under the provisions contained in Section 1, which form a valuable feature of the Act and which will require careful consideration and appropriate action in the years to come. Evidently the results of the first inspection of any areas, highly interesting and important as such a procedure may be as pioneer work in a direction previously unexplored by public health departments, can only form the beginning of a series of such surveys conducted from time to time on such occasions as the local authority may decide or the Minister directs for the purpose of ascertaining how conditions have changed in regard to overcrowding since the

original survey. Populations vary considerably in their nomadic propensities. In a seaside town, a port such as Liverpool, or in any area where rapid expansion or contraction of industry is taking place—expansion as in Coventry and in certain districts around London, contraction in the distressed areas—conditions will be such that the original survey will become quickly out of date and relatively frequent re-inspections of the district, or parts of the district, will be essential. Apart, however, from the larger movements of population there is, in most areas, a considerable number of removals from one house to another within the same district, sometimes merely to another street close at hand, frequently from the centre of a town to the outskirts and back again. Difficulties in regard to the payment of rent, quarrels with neighbours and similar social reasons lead to movements of which the public health depart-

ments receive no notice and which therefore cannot be readily supervised. The landlord's responsibility for preventing his houses from being let to tenants the size of whose families is such that their occupancy will lead to overcrowding must be strictly enforced.

It is certain that re-surveys of the whole area will be essential at no distant dates from the original one; and that, apart from such a procedure, a watchful eye should be kept on the occupancy of houses by the district inspector. Surveys of a limited character, involving areas which are known to be especially overcrowded, may be desirable at intervals of two or three years. The census, due to take place in 1941, will provide an opportunity for a further survey, and the operations of the Housing Act, 1935, might well be used as an additional reason, if one were needed, for a quinquennial instead of a decennial enumeration of the population.

AN AMERICAN LETTER.

Our Correspondent speaks of the Eastern States Outbreak of Infantile Paralysis—the Use of Vaccines against the Disease—a House-to-House Investigation into the Prevalence of Chronic Diseases—and Changes in Personnel of Various Institutions.

The Infantile Paralysis Epidemic.

The chief prevalence of infantile paralysis this year is in the Eastern States, and especially in North Carolina and Virginia. In Virginia the cases are confined largely to the southern part of the state in counties contiguous to North Carolina. The City of Richmond, the capital of the state, has been one of the spots in which a large number of cases have occurred. From May 1st to August 1st, 285 cases have been reported in the entire state. In North Carolina, from January 1st to August 1st, there have been reported 456 cases, of which only 15 occurred before May. The outbreak has been chiefly in the central part of the state, although scattered cases have occurred in other areas. There has not been a noticeable spread of the disease from the counties where it has been more prevalent. While some cases have occurred in Maryland and the District of Columbia, in no other part of the East has any unusual number of cases been reported. The appearance of infantile paralysis has caused a great deal of concern for many health resorts and holiday

spots in North Carolina, prospective guests having cancelled their reservations. From another point of view, the outbreak has attracted a great deal of attention, since it was proposed to hold a "Jamboree" of the Boy Scouts of America in Washington, D.C., for ten days, commencing August 21st, at which about 2,500 Boy Scouts were expected to attend. The situation seemed so serious that the national executives of the Boy Scouts asked for a conference, which was called by the Surgeon-General of the Public Health Service, and met on July 31st. The question of calling off the meeting was discussed and it was decided not to do so. Later the matter was brought up on the floor of Congress, and again the Surgeon-General said that there was no good reason to cancel the meeting. Now the President has ordered the meeting to be abandoned after consultation with the Surgeon-General and others.

Vaccines against Infantile Paralysis.

In previous letters reference has been made to the vaccines produced in the Laboratory of the City of New York and by Dr. John H.

Kolmer of Philadelphia. The vaccine developed by Dr. William H. Park and Dr. Maurice Brodie, both of New York, is made from the crushed spinal cords of Rhesus monkeys infected with the disease. All trace of the virus which causes infantile paralysis is killed in the cord-substance by treating it with formalin (*vide Am. Jour. Public Health, January, 1935*). The vaccine produced by Dr. Kolmer has gone back to the method first tried out by Dr. Larson of Minnesota twelve years ago, in which the virus was modified by treating it with sodium ricinoleate. Large quantities of the two vaccines are being used. For some time past the vaccine of Drs. Park and Brodie has been employed in Kern County, California, with apparently successful results. However, infantile paralysis has been endemic in that area for a long time. Already more than 3,000 doses have been given to children in the epidemic areas in North Carolina. At present the Laboratories in New York are able to handle only some 350 monkeys per month, but contracts have been made for shipments of 500 monkeys a month, so that the facilities of the laboratory will be increased to 15,000 doses per month. While we all wish the greatest success for these vaccines, it is evident that a long time must elapse before their value can be determined. From clinical observations it can be said that the disease has a low infectivity and, under any circumstances, vaccination of children believed to be susceptible will show a high percentage of apparent protection. Several men qualified to speak have publicly expressed disapproval of wholesale attempts at immunising young children, some holding that the tendency to infection may be inherited, an idea based on studies of family histories. Dr. J. C. Geiger, the Director of Health of the City and County of San Francisco, appointed a committee on which a number of well-known men served. They have declared against the use of this vaccine except under well-controlled conditions. They advise that its administration be restricted to properly qualified research institutions, and do not believe that the harmlessness of the preparations containing living virus of poliomyelitis has been proved.

Health Surveys.

The interest shown by the President (Mr. Roosevelt) in health matters has been noted. One of the projects which has just been

authorised has been made possible by a \$3,450,000 grant, which is to come from the Work Fund. A house-to-house canvass will be made to make records of the prevalence of chronic diseases and those of long duration. Physical examinations will be made and a survey of medical facilities for the chronically ill will be included. The capacity of these ill people to remain self-supporting will be investigated. Special studies are being made of Bright's disease, infantile paralysis, arthritis, deafness, blindness and other such maladies. The object of this investigation seems largely to give employment to some who need it, though the information, as far as it is correct, will be useful. So much depends on the personnel selected that the result will be watched with interest.

Approaching Retirement of Dr. W. H. Park.

Numerous changes have come about in some of our institutions. Dr. Simon Flexner, Director of the Rockefeller Institute for Medical Research for 23 years, has resigned, with the expressed intention of writing a biography of Dr. William Henry Welch. Dr. Herbert Spencer Gasser is to fill the place of Dr. Flexner. He is a graduate of the University of Wisconsin. Dr. William H. Park is soon to be retired from his position as head of the Laboratories of New York City. His normal term has already expired, but two years in addition were allowed to him. He will be succeeded by Dr. Ralph Stewart Muckenfuss, now of Washington University, St. Louis. Already Dr. Muckenfuss has been invited to go to New York as an understudy of Dr. Park until he can pass the Civil Service examinations and succeed to the position of Director. Dr. Park's accomplishments are too well known to need much comment. He has been Director of the Bacteriological Laboratories of New York City since 1894.

MAZYCK P. RAVENEL, M.D.

THE Joint Tuberculosis Council announce that a post-graduate course on tuberculosis will be given by the medical and surgical staff of the Brompton Hospital for Consumption and Diseases of the Chest from November 4th to 9th, 1935. Programmes and other particulars may be obtained from Dr. William Brand (Hon. Secretary for Post-Graduate Courses, Joint Tuberculosis Council), 8, Christchurch Place, Epsom, Surrey.

The Prevention of Dental Caries.

By GEORGE THOMSON, L.D.S., R.C.S., Hon. Dental Surgeon, St. Pancras School for Mothers.

In this carefully prepared summary of views on the subject of dental caries, Mr. Thomson provided a number of excellent openings for those who desired to follow him in the very full discussion which took place at the meeting of the Dental Officers' Group at which the paper was read.

PERSONAL hygiene is by far the most important consideration in public health, and personal hygiene commences with oral hygiene. While admitting the triumphs of modern preventive medicine, there remains the fact, noted by Dr. Harry Campbell, that "we have the worst teeth of any nation. The state of our teeth beggars description. It is a national disgrace which should excite a feeling of shame and humiliation."

Study of earlier literature shows that certain enlightened people were alive to the appalling state of affairs in 1919. In the report of that year of the Departmental Committee on the Dentists' Act, 1878, we find that "having regard to the large amount of preventable sickness and chronic invalidity terminating in many instances in premature death which results from the effect of oral sepsis and decayed teeth, the committee view the facts which have been brought to their notice with the gravest concern. They are of the opinion that the state of affairs revealed should receive early attention with a view to the improvement of the health of the nation and an increase in its industrial efficiency."

Dr. Wheatley (Medical Officer of Health, Shropshire) stated that "the need for a campaign to prevent the condition (dental caries) is most urgent. Each year of delay means that another 1,200 children in the county of Shropshire will have at the age of five, ten or more decayed teeth, and about 1,800 children will have five to ten decayed teeth. It is quite impossible by treatment afterwards to remedy this most disastrous start in life."

Following some correspondence with the Dental Board in 1924, as President of the Dental Officers' Group, I indicated to the Board that the considered views of the Group regarding the prevention of dental caries were compiled in a leaflet issued by the Society. It was further pointed out to the Board that propaganda should rather be on the lines of prevention than treatment. Later the Board, in publishing a brochure on Hygiene of the

Mouth and Teeth, intended chiefly for school teachers, wandered away from the original teaching and informed all and sundry that the causes of dental caries were obscure, but that the chief way to prevent its onset was to produce teeth, which would be "immune" from the attacks of micro-organisms and acids, by the administration of the fat-soluble vitamins contained in milk, butter, eggs and cod-liver oil. Lately a remarkable change has again occurred in the Board's demeanour towards this subject, and once again they are seeing the light and returning to the old truths as found in the teachings of the School Dentists' Society. The Dental Board, however, being a mixed body, is not a learned society, and it does appear to me that the dissemination of propaganda would best come from other sources, although the Board are capable of financing such work.

Sir George Newman has repeatedly stated that one of the chief, if not the chief, cause of ill-health among children is dental disease. This statement is either an exaggeration or is a fact based on a wide experience through acquaintance with statistics and the obvious conclusion that no child can enjoy health with decaying teeth and poor masticatory power. This opinion is not his alone, as it is found everywhere in dental and medical literature. How then may we discover some method whereby this calamitous disease may be checked so that girls and boys may reach maturity with complete natural dentitions?

I do not propose to discuss the ætiology of dental caries, as members of the Group are familiar with the beliefs so long accepted by us and embodied in a leaflet upon which medical and dental officers have based their lectures and instructions on preventive dentistry for many years. No contributions to research have proved that this teaching is untrue or incomplete or that in practice it is unsuccessful. The scientific mind is often so clouded by ponderous problems that the simple explanation does not appeal. Thus we

have students being taught that dental caries is a mysterious process associated with the degeneration of the glandular system with a resultant interference with hormones; the inability of the body to bear deprivation of vitamins; together with certain psychoneuroses and disturbances of constitutional katabolism, whereas the plain facts are ever before us that the children of the uncivilised do not suffer from dental caries nor do animals in their natural surroundings. Again and again proof is forthcoming that, where life is lived simply and frugally, there is less dental caries. As an example, in the Hebrides decay is found only where there are sweet-shops.

It is now 14 years since this Society agreed on the question of propaganda for the prevention of dental caries, and if this propaganda had been vigorously acted upon by school dental surgeons far and wide, its truth would not have been assailed as has been done, as results would have proved too conclusive. I assert most emphatically that no theories were ever more clearly proved and demonstrated in fact than the researches of Sim Wallace. Data previously ascertained by honoured members such as Miller, Tomes, Black, Leon Williams and others were compiled, difficulties and mistakes were elucidated and the whole embodied so simply and without fear of contradiction. The truth of this theory is not damaged by individual exceptions which are brought up from time to time, as every case with which I have come in contact can be explained after careful enquiry. The simple unvarnished truth is that modern highly refined carbohydrate foods which need no chewing deny the surfaces of the teeth the friction so vitally necessary, thus allowing plaques to form in retention areas with resultant dental caries.

Unfortunately, medical men in their efforts for nutrition at the expense of sound teeth and alimentary hygiene are inclined to overlook the deleterious qualities of marketed sugar in any form, and often appear to regard carious teeth as a trivial matter. This attitude is undoubtedly lessening amongst the profession as a whole, but sugar is still glossed over as a necessary article of diet.

I will set out in order the various opinions of eminent and learned men with practical experience extending over many years both in this country, in Australia and in America. Such a wealth of considered opinion cannot

be lightly disregarded by modern scientists seeking enamel immunity, and cannot be suppressed as was so disgracefully done to the utterances of Leon Williams by the Vitamin School.

Colonel Hunter of New Zealand says: "One of our greatest enemies is the sweet-shop, the consumption of sugar *per capita* being even greater with us than in England. In adjacent islands among the natives where sugar in the form of sweets and refined flour products, such as biscuits, were readily obtainable, the percentage of dental caries was greatly in excess of that in more remote parts where these luxuries were difficult to obtain."

Percy Proud said: "The so-called craving by children for sugar is not a natural one; one might as well say that adults had a natural craving for alcohol. In nature it is impossible to obtain sugar in the highly concentrated form in which it is consumed by civilised man. It is nonsense to say that sugar, as popularly known and consumed, is a necessity of life. It may physiologically be fat-producing, but fat is not the only requirement in building up the frame and body. All the sugar required by nature is contained in bread and potatoes, etc., in the form of starch, which is converted by natural physiological processes."

Mr. J. Howard Mummery, in his presidential address at the Sixth International Congress in London, said: "Whatever difficulty there may be in attaining to a clear understanding of all the predisposing causes of caries of the teeth, there is no doubt that the determining cause is carbohydrate stagnation; the fermentation which takes place in retained particles of food by the agency of bacteria present. As repeatedly pointed out by Dr. Sim Wallace, food containing its fibrous constituents favours efficient mastication and has a direct cleansing effect on the teeth."

Mr. J. H. Gibbs, F.R.C.S., L.D.S., late Dental Surgeon to the King in Scotland; Dental Examiner, R.C.S., Edin., says in the *Edinburgh Medical Journal*, 1917: "Of great interest to us who are seeking a solution of the problem of dental caries in the children of the masses, is the fact that a sufficiently large number of children have been brought up on the lines laid down by Sim Wallace to prove that, under modern civilised conditions, dental caries can easily be entirely prevented or almost entirely prevented."

Professor H. C. Sherman Mitchell, Professor of Chemistry of Columbia University, states in *Food and Health*, 1934: "Many fruits and vegetables have also another valuable property, especially when eaten raw, in that the chewing of their fibre, in the presence of the mild acids which the fruits and vegetables naturally contain, is extremely effective in preventing the retention of pasty particles or mucus on the teeth, while the acid also stimulates the flow of the saliva and of the gastric juice. Thus the digestive process is helped and the mouth is left in the best possible condition. Hence the great wholesomeness of raw fruit or fruit salad as a dessert, or of the eating of some celery or raw apple at the very end of, or directly after, a meal."

Graham Macphree in *Studies in the Etiology of Dental Caries*, says: "A factor of some importance was noted by Breese in 1913, and he reported the observation 'that the mouths of some children were self cleansing, while others remained dirty after a meal, with food clinging about the teeth.'"

Sir George Newman reported in 1919: "A suitable and sufficient diet is one of the most pressing requirements in relation to the national health." Quoting from Sir Norman Bennett he adds: "A great amount of dental caries in children might be prevented by more rational methods of feeding from 18 months onwards. The custom so widely prevalent of giving children up to five and six years of age nothing but soft and pappy food—bread and milk, bread puddings, finely minced meat and mashed and pounded potatoes—is responsible for a vast amount of caries. A child of two-and-a-half years with a full deciduous dentition is equipped with a masticatory apparatus at least as efficient in proportion to its size and weight as that of an adult, and it is only by use of the teeth on the kind of food which requires chewing that they are kept clean and functional. The eruption of the first molars at about 15 months is an indication that solid food should be given and the milk diet reduced. A healthy child of 18 months should be eating bread and butter, potatoes broken but not mashed, toast, biscuits, fish and, as soon as he has acquired the habit of mastication, also meat. At three years of age a child's diet should consist of all ordinary wholesome foodstuffs (including vegetables and suet puddings) properly

cooked, but given as far as possible in a solid form and separately instead of all mashed up together in the way so commonly practised. Fruits, especially good ripe apples, at the conclusion of a meal help to keep the teeth clean. It has been proved that children fed in this way on rational lines remain almost, if not quite, free from caries and that the deciduous teeth are succeeded by the permanent teeth in a normal and orderly manner. Furthermore, the growth of the jaws is stimulated by use, and fermentation in the stomach is reduced or obviated by the trituration and insalivation of the food."

T. D. Campbell of Adelaide University says: "Certain investigators endeavour to postulate a close relation between the vitamin content of foods and the occurrence of dental caries. It would not, however, be easy to attempt any definite statement on the vitamin values of the aboriginal's diet. He seemed capable of devouring anything which was possibly edible, but preferably and actually his diet consisted largely of flesh food. It may be assumed, however, that such food preparations as were adopted would be unlikely to destroy the vitamin value it possessed. We do know for certain that his food was rudely prepared, and of a coarse, tough nature, thus stimulating a vigorous mastication and an active salivary secretion; and it seems probable that a definite relation exists between these physical characteristics of his dietary and the comparatively low percentage in the incidence of carious teeth. It may be stated that in general these natives showed well-formed dental arches with strong appreciably worn teeth. Their gums were generally firm and healthy. Still more striking, perhaps, is the lesson modern civilised people have to learn from a study of the teeth of primitive races relative to their dental diseases, everywhere so persistent and ravaging, which civilisation and its diet habits have produced. . . . Either through exalted racial pride or sheer negligence, both the laity and the professions concerned—whose duty it is to acquaint themselves with and teach these things—are slow to learn the lessons to be gleaned from our so-called savage fellow human beings."

Campbell says further: "The marked immunity from dental diseases would seem to be very closely related with the coarse, tough food which formed their diet and the crude

methods of preparation and cooking when such were utilised. The observations show in every respect a marked difference between the well-formed Australian dentition and the ill-formed, disease-stricken masticatory outfit with which most modern civilised people are burdened. Probably the chief benefit derived from such a study as has been attempted is the great lesson to be learned, namely, that if modern civilised races are to preserve strength and contour in the lower architecture of the face, to make the masticatory organs a physiologically functioning unit, to diminish the awful present-day ravages of dental disease and their concomitant systemic disturbances, and through all these to assist in building up sounder and healthier conditions, then there will have to be some drastic changes in the present-day dietary and method of food preparations."

Dr. Leon Williams wrote a letter to the *New York Times*, shortly before his death, protesting against the vitamin theory of dental caries, and his letter was suppressed by the influence of certain dentists. I would here quote briefly his view of so-called resistance to decay, sometimes called immunity: "As an illustration of this mental confusion, mention may be made of the expression 'resistance to decay' in daily use among dentists. The implication, of course, is that some teeth resist decay and others do not. Resistance to decay means resistance to the action of lactic acid, and the term has no other legitimate meaning. Do those teeth which do not decay 'resist' the action of lactic acid, or do they remain sound because the destructive lactic acid is not present? Has anyone ever found a tooth so 'resistant' that lactic acid would not rapidly destroy the surface exposed to its action? Has anyone any evidence that the 'least resistant' tooth would ever decay in the complete absence of acids? It seems most unfortunate to me that it is necessary to state and restate over and over again these fundamental truths about caries of enamel."

[Mr. Thomson also quoted an extract from a summary of the Bacteriological, Chemical, and Nutritional Studies of Dental Caries by the Michigan Research Group, which was published in a casual communication by Dr. J. Sim Wallace in *PUBLIC HEALTH*, September, 1935, p. 422.—*Ed., P.H.*]

These excerpts merely serve to emphasise the truths ever urged by Sim Wallace and

embodied in this Society's leaflet on the prevention of dental caries. I have repeatedly suggested for many years to all people, both lay and medical, that the fancy sugar and sweet-shop menace was a direct attack on the dental health of the nation, but because the majority of these views require merely a modicum of common sense to grasp, the scientific research brain appears to soar above and around them.

DISCUSSION.

Mr. Jeffrey Fletcher (West Riding County Council) congratulated Mr. Thomson on so ably putting forward the views held by almost all the members of the Group. Every time a filling was inserted it was a testimony to the belief that caries was of chemico-parasitical origin. The theories of Sim Wallace had been emphasised by the many children brought up in the manner recommended, and proving to be caries-free at school-leaving age.

Mr. Frederick Breese (London) said the attempted suppression of Leon William's letter attacking the vitamin theories some time ago was a deplorable matter, and against all the good principles recognised by scientists and professional men.

Mr. C. Doswell Wallis (West Sussex County Council) drew upon his wide experience to illustrate the value of school teachers who take a real interest in the preservation of children's teeth. Children attending schools in which active propaganda had been carried out reaped the benefit at school-leaving age. The exercising of oral hygiene and the habitual use of the toothbrush went far towards preventing the onset of dental caries.

Mr. Grantley Smith (Bermondsey) expressed admiration for the great efforts made by Sim Wallace, F. Breese and George Thomson for many years towards a solution of the caries problem. Although the Society were agreed with the teachings of Sim Wallace, however, the delineation of sugar as a food commodity would present a vast problem, both industrial and economic. Also, it surely would not become the Group to disregard all researches on caries other than that performed by members of the Group. Although agreeing with the main principles of the speaker, the Mellanby theory held good before the eruption of the teeth, even in the ante-natal period. Thus it was at least possible for both theories to be compatible and not necessarily conflicting.

Mr. K. C. B. Webster (Croydon) supported Mr. Grantley Smith in pleading for more breadth of view in the Group's attitude towards dental caries. While agreeing that the Sim Wallace theory accounted for the bulk of dental caries and that propaganda on such lines could not fail to be successful, the theory could not be the beginning and the end of the whole problem. It had repeatedly been proved in many diseased conditions that the causes were multiple, one unnatural process not being sufficient to break down the body's well-ordered defence. If, however, conditions were disastrous in two or more ways, the combined attack proved overpowering and a break-

down occurred. It might even be possible in unfavourable circumstances to find evidence of caries even when the principles of Sim Wallace had been followed up to the hilt. The teeth were particularly vulnerable and often bore the first brunt of any weakness in the defences, as could be seen in the pregnant woman, who undoubtedly showed a lessened resistance to dental caries, regardless of her sugar intake. Broderick's theories of alkalosis and acidosis might be untenable, but the fact that caries was noticed in all sorts of other morbid conditions proved that forces other than those masticatory were at work. The majority of dental surgeons could bring patients to prove any of the most popular theories. Unfortunately so many individual cases presented themselves showing no improvement whatever after being first of all flooded with cod-liver oil and then dieted to a point bordering on misery, but the vitamin theory had been practically exploded by Robert Weaver in the *British Dental Journal* a short time ago. A broadening of outlook was essential in the successful prevention or treatment of any deviation from the considered normal, and the Group should ride more on an even keel in the dissertation on the caries question.

Mr. A. Gordon Taylor (London) supported Mr. Webster in the possibility of strain of various kinds lessening the resistance to caries, either in the process of alkalosis or acidosis described by Broderick or in some as yet unrecognised manner. Many cases of caries could be easily traced to a simple cause, as described by Mr. Thomson, but the majority of cases were better considered individually. Patent medicines, so beloved of the working-class for their children, contained many chemicals injurious to the enamel. Caries was often attributable to lack of sleep and other strains put upon the child of poor parents. The pregnant woman was a signal example of the draining of the body's resources lessening the resistance to caries of the teeth. Mr. Thomson's paper was a direct challenge to the mode of living of the present day, and any frontal attack on the use of sweetstuffs at a time when they were viewed as part and parcel of the nation's life would prove unsuccessful. Flank attacks, usually of an unintentional type, however, were daily being made. Children to-day were spending their money on the cinema instead of sweetstuffs, and although many viewed such a tendency with the gravest misapprehensions of a psychological character, there was no doubt that the teeth would benefit at the expense of the mind.

Mr. Thomson, in reply, said he had little faith in the brushing of the teeth. Many children who had never seen a toothbrush had excellent teeth. A raw apple after meals was a certain way to ensure oral cleanliness. He had a high regard for the scientific character of Mr. Broderick's theories, but considered the assumption that dental disease was caused by either a generalised acidosis or alkalosis as hardly credible. Constitutional defect did not enter into the matter as many people of most excellent health suffered from caries in equal proportion to those of a weakly type. Heredity played no part as 99 per cent. of teeth erupted perfect in structure. The Mellanby theories had been passed over as quite untenable by the majority of investigators for a long time. As one who had attempted to force the issue on the

sweets danger for many years, he had been the subject of many attacks from the sweet trade, but experience proved the ideals strived for by Sim Wallace to be so correct when acted upon that, while other schools of thought might come into fashion and go out again, such principles had stood now for over a generation.

Mr. Reginald Chase, the Group President, expressed the hope that in view of the very interesting paper and discussion, it would be possible to arrange a meeting in the next session when workers in other camps might be invited to express their views. As a Group whose interests were devoted to the prevention of dental ill-health, no channel of investigation should be lightly passed over without fair and just consideration.

THE Health and Cleanliness Council have issued a new poster designed for use in swimming baths. Its object is to impress upon people using public and other swimming baths the necessity for scrupulous cleanliness of person before entering the bath. Requests for copies of the poster should be addressed to the Council at 5, Tavistock Square, London, W.C.1.

THE Fifteenth Winter School for Health Visitors and School Nurses will be held at Bedford College for Women (University of London), Regent's Park, London, N.W.1, from December 30th, 1935, to January 10th, 1936. Copies of the syllabus and other particulars may be obtained from the organisers, The Women Public Health Officers' Association, 7, Victoria Street, London, S.W.1.

"THE Improvement of Native Agriculture in relation to Population and Public Health" is the title of the Heath Clark Lectures to be given, under the auspices of the University of London, by Sir Daniel Hall, K.C.B., LL.D., F.R.S. (Director of the John Innes Horticultural Institution), at the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, London, W.C.1, at 5 p.m. on November 6th, 11th, 13th, 18th and 20th, 1935. The course of five lectures will deal, respectively, with soil exhaustion; regenerative systems of farming; the improvement of native agriculture; overstocking and soil erosion; and the national dietary. At the first lecture the chair will be taken by the Right Hon. Walter Elliot, M.C., LL.D., D.Sc., Minister of Agriculture and Fisheries. The lectures are open to the public, and admission is free, without ticket.

The Society. Reports, Proceedings and Announcements.

ORDINARY MEETING.

An Ordinary Meeting was held at the house of the Society on Friday, October 18th, at 5 p.m. At the commencement of the meeting the retiring President (Dr. R. Veitch Clark) took the chair. The minutes of the last meeting were confirmed and a number of apologies for absence received.

Dr. Veitch Clark then proceeded to the installation of Dr. W. G. Savage as President of the Society for 1935-36. Before investing Dr. Savage with the presidential badge, Dr. Veitch Clark said that the Society desired to offer to him a sincere and hearty welcome to the office. Dr. Savage was sufficiently well known to the Fellows to need no commendation. He was a distinguished man in quite a unique way amongst medical officers of health, as in addition to being one of the foremost administrators in the service he had given a large proportion of his professional life to scientific investigations associated with food supplies. If the Society had honoured him by election on no other ground, that would have been sufficient to justify his selection for the important office of President of the Society.

Dr. Savage, in returning thanks, said that the Presidency carried with it a weighty responsibility, and he would do his best to be worthy of the honour conferred upon him.

The next business of the meeting was the unanimous election of the following under Article 12 as fully-paid Life Fellows of the Society: Dr. E. S. Galbraith (on the recommendation of the Yorkshire Branch); Dr. J. A. Hislop (on the recommendation of the Northern Branch); and Major R. W. H. Jackson (on the recommendation of the Welsh Branch).

The following candidates, having been duly proposed and seconded, were elected to membership of the Society:—

As Fellows:—

Adams, Mary Irene, M.D., CH.B. (BELF.); Adler, Laurence David, B.Sc., M.B., CH.B., D.P.H.; C. O. S. B. Brooke, L.R.C.P., M.R.C.S., D.P.H.; Browell, Ethel, M.D. (DUNELM.); Brown, Douglas Latham, M.D., CH.B. (SHEFF.), D.P.H.; Browne, J. C. H., L.R.C.P., M.R.C.S.; Carruthers, Norman Stuart, F.R.C.S.(E), D.L.O., M.R.C.S. (ENG.), L.R.C.P. (LOND.); Clark, Arnold, M.D., M.R.C.P. (LOND.); Davies, John Owen Fisher, M.B., B.S. (LOND.);

M.R.C.S., L.R.C.P., D.P.H.; Day, Francis Montagu, M.R.C.S., L.R.C.P., D.T.M., D.P.H.; Doyle, William J., B.Sc., M.B., B.Ch. (IRE.), D.P.H.; Evans, David Gareth, M.R.C.S., L.R.C.P., D.P.H.; Goodwill, Sibyl Dorothy, M.B., B.S. (LOND.), M.R.C.S., L.R.C.P., D.P.H.; Hogg, William, M.B., B.S. (LOND.), M.R.C.S., L.R.C.P., D.P.H.; Joscelyne, Muriel Vivian, M.B., CH.B. (BRIST.), D.P.H.; Kennedy, Joseph Morrow, M.B., CH.B. (BELF.), D.P.H.; Marr, Janet, M.B., CH.B. (ABER.); Mizen, Violet, M.B., B.S. (LOND.), M.R.C.S., L.R.C.P.; Midgley, Roy Lee, M.D., B.S. (LOND.), M.R.C.S., M.R.C.P.; Nerurker, Janardan Shanker, B.Sc., L.M. & S. (BOM.) (CANTAB.), F.R.S.N.I. (LOND.); Onions, Doris, M.R.C.S., L.R.C.P.; Robertson, Thomas Russell, M.B., CH.B., D.P.H. (LIV.); Russell, Alexander Wilson, M.D. (GLAS.), D.P.H.; Savage, Sidney Wilson, M.A., M.D. (CAMB.), M.R.C.S., L.R.C.P., D.P.H.; Smith, Charles Milliken, M.A., M.D. (GLAS.), D.P.H.; Stevens, Harley Edward, M.B., CH.M. (SYDNEY), M.R.C.P. (LOND.); Sutcliffe, Mary, M.R.C.S., L.R.C.P., M.A., B.Ch., D.P.H.; Walker, Joseph Viccars, M.B., CH.B. (BIRM.), M.R.C.P., D.P.H.; Ward, Eric, M.R.C.S., L.R.C.P., D.P.H.; Ward, Ernest Milford, M.B., B.S. (LOND.), M.R.C.S., L.R.C.P.

As Associates:—

Copeland, Percy Denis, B.D.S.; Grimshaw, Hubert Lawrence, L.D.S. (LIV.); Jones, Henry Francis, L.D.S. (LIV.); Knowles, Charles Reginald, L.D.S. (LEEDS); Metcalf, Harold Frederick, L.D.S., R.C.S. (ENG.); Wood, George Oliver, L.D.S. (LEEDS), B.Sc.

A number of nominations were received for the next election of members.

A vote of thanks to the retiring President was then moved by Dr. Charles Porter, who said that, having been responsible for installing Dr. Veitch Clark in the presidential chair last year, he held that it was right and proper that he should have the privilege of proposing a vote of thanks to the retiring President. Dr. Veitch Clark had proved himself as good a President as any Society could possibly have. He moved that the best thanks of the Society be accorded to him for having occupied the Presidency with such distinction during the session 1934-35.

Dr. E. W. Goodall, O.B.E., warmly seconded and, the President having added his personal expression of appreciation of the services rendered by Dr. Veitch Clark as President, the vote of thanks was passed with enthusiasm.

Dr. Veitch Clark, in acknowledgment, took the opportunity of voicing his gratitude to the Fellows, both in Council and in general meeting, for the great assistance he had received,

and his indebtedness to the Executive Secretary during his term of office.

Dr. W. G. Savage then delivered his Presidential Address on "Our Future," which was heard with the greatest interest and appreciation by the meeting. [The Address appears on p. 42 of this issue.]

Professor W. W. Jameson moved a hearty vote of thanks to Dr. Savage for his Address, in which dissatisfaction had been expressed

with a number of matters. That the health services were being criticised at the present time he considered to be a healthy sign, and it was not unlikely that many of the ideas that had been outlined in the Address would, to some extent, become realities in the near future. In movements of that nature the Society could play an important part.

The vote of thanks was accorded by acclamation, and the President briefly replied.

Annual Report of the Council, 1934-35.

For submission to the Annual General Meeting of the Society, November 22nd, 1935.

Your Council report:—

1. That 125 candidates have been elected as Fellows or Associates of the Society during the session. In the last three preceding sessions the numbers of new members have been 70 (1933-34), 76 (1932-33) and 96 (1931-32). During the session under review, 106 resignations have been accepted from members who are retiring from active practice or who have decided to relinquish membership for other reasons. (Resignations during preceding sessions numbered 57 (1933-34), 73 (1932-33) and 96 (1931-32).)

2. That the Society has to mourn the loss by death of Drs. H. Draper Bishop (Guernsey), P. J. Bodington (Romsley Hill Sanatorium), C. A. Brigstocke (Haverfordwest), F. Dittmar (Scottish Board of Health), E. A. Farr (Andover), T. W. H. Garstang (formerly M.O.H., Knutsford and Winsford U.D.'s, Bucklow and Northwich R.D.'s), J. E. Knox (East Molesey), D. C. Lloyd, T.O. (Welsh National Memorial), D. J. Micah (Llansilin R.D.), Herbert Peck, President, North-Western Branch, 1909-10 (Chesterfield R.D.), T. C. Penfold (Chester-le-Street R.D.), S. Noy Scott, President, West of England Branch, 1926-27 (Plympton St. Mary R.D.), John Sorley (T.O., Essex), B. D. Z. Wright (formerly M.O.H., Smallburgh R.D.), and of Messrs. S. F. Rose, M.R.C.S., L.D.S. (formerly D.O., Central London Schools) and J. G. Ross, M.R.C.V.S. (Veterinary Inspector, West Riding C.C.).

3. That allowing for these losses the membership of the Society shows a net increase of 3 as compared with decreases of 7 in 1933-34 and of 19 in 1932-33. Although the session 1934-35 has been the best year for the recruitment of new members since 1930-31, it has coincided with an unusually large number of resignations

due to retirement. It is evident, however, that in any circumstances the Society must aim at securing at least 120 new members in each session in order to attain the strength of 2,000 which it is reasonable to hope for. Hitherto, many new entrants into the public health service have delayed applying for membership of the Society while enjoying benefits in conditions of service which have only been attained through the past and present initiative of the Society. Moreover, the representation of departmental medical officers on the Council has now been definitely increased, the Branches and Groups cater for the interests of all types of medical officer, and the annual subscription has been adjusted to the resources of junior members. We trust that the continued efforts of the Branches, Groups and individual members will secure the support of an increasing number of those municipal medical and dental officers who still remain outside the Society's ranks.

4. That Dr. R. Veitch Clark delivered his Presidential Address at the Annual Meeting of the Society on October 19th, 1934, on "Imagination in Public Health." The President arranged the following discussions for the general meetings of the session, and followed the precedent established by Dr. Charles Porter by inviting the attendance as vice-chairmen at two of these meetings of the Presidents of the Maternity and Child Welfare, Fever Hospitals and Dental Officers' Groups.

"Organisation of the Domiciliary Medical Service," opened by Dr. J. A. Charles, Medical Officer of Health, City of Newcastle-on-Tyne.

"The School Dental Service," opened by Dr. Andrew Davidson, Deputy County Medical Officer of Health, Surrey.

"The Maternal Morbidities which follow upon Puerperal Fever," opened by Dr. A. Joe, Medical

Superintendent, North-Western Hospital, L.C.C., and Dame Louise McIlroy, D.B.E., M.D., D.Sc.

"Nutrition and Public Health," opened by Prof. E. P. Cathcart, C.B.E., M.D., D.Sc., F.R.S., Professor of Physiology, University of Glasgow, and Dr. Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond Street.

A discussion on "Respiratory Conditions in Childhood" had unfortunately to be cancelled owing to difficulties in connection with securing an opening speaker.

In addition, a joint meeting was held with the Epidemiological and Pædiatrics Sections of the Royal Society of Medicine on "The Problem of Prophylaxis in Pulmonary Tuberculosis," when Dr. D. A. Powell, Chief M.O., Welsh National Memorial Association, represented the Society among the opening speakers.

5. That Dr. Charles V. Chapin, formerly Medical Officer of Health of the City of Providence, Rhode Island, U.S.A., was unanimously elected to be an Honorary Fellow of the Society, in recognition of his great services in the advancement of public health. Dr. Chapin had been a subscribing Fellow of the Society since 1905.

6. That a further Extraordinary General Meeting was held on February 15th, 1935, at which the revisions in the Society's Articles of Association which had been under discussion for the past three sessions were unanimously adopted. The new version of Article 19 (d) will ensure the election to the Council of at least three Departmental Officers (*i.e.*, medical officers, not being medical officers of health, engaged in specialist or clinical appointments in public health) in addition to the Group representatives already included under Article 19 (c). The revised constitution came into operation on October 1st, 1935, and the opportunity has been taken of issuing to every member of the Society a booklet setting out the Memorandum and Articles of Association and the Bye-Laws of the Society.

7. That the Council held four meetings, the General Purposes Committee nine meetings (including one special meeting to consider the Housing Bill, 1935) and Sub-Committees eight meetings during the session. The proceedings of the Council have been fully recorded in PUBLIC HEALTH for the information of members.

8. That the special Sub-Committee appointed to consider questions relating to the housing and general administration of the Society held five meetings and finally recommended that the Society should take offices in Tavistock House

North, where the rooms of the British Medical Association will be available for the Society's meetings. This recommendation followed a careful examination of a number of premises suggested as suitable for the Society; the actual date of removal is dependent upon the finding of suitable sub-tenants for the present house during the remainder of the lease, which extends until March, 1939. Recommendations in regard to the administration of the Society's business are still under consideration.

9. That they have had official communication with the Ministry of Health, the Board of Education, the Home Office, the Ministry of Agriculture and Fisheries, the Milk Marketing Board and other Government Departments and public offices.

10. That they have been in communication with a number of representative bodies concerning the principles and details of public health teaching and administration, including the British Medical Association, the Royal Sanitary Institute, the British Dental Association, the Association of Municipal Corporations, the National Association of Local Government Officers, the National Veterinary Medical Association, the Association of County Medical Officers of Health, the College of Nursing, the Sanitary Inspectors' Association, the Central Midwives Board, the Joint Council of Midwifery, the National Council for Maternity and Child Welfare, the British Social Hygiene Council and the Anti-Noise League.

11. That representatives of the Society have served on the Council or Committees of the British Medical Association, the Central Midwives Board, the Joint Council of Midwifery, the Joint Tuberculosis Council, the Central Council for Health Education, the Central Association for Mental Welfare, the National Milk Publicity Council, the National Baby Week Council, the British Social Hygiene Council, the Queen's Institute of District Nursing, the People's League of Health and other bodies dealing with matters affecting public health administration.

12. That they have continued to watch the operation of the Askwith Memorandum on the salaries of public health medical officers, and have been in especially close co-operation with the British Medical Association in this connection. The benefits of this co-operation in many directions were recalled by a letter which appeared in the medical press at the beginning of July over the signatures of the President and the Executive Secretary. Professor R. M. F. Picken and Drs. G. F. Buchan and H. J.

Milligan, who are members of your Council' attended meetings of the Advisory Committee as representatives of the Association. Many local authorities which had hitherto failed to apply the recommendations of the Memorandum to their existing medical officers have done so during the past session, and there is hope that the time is not far off when all the larger authorities will have given recognition to the agreement. The Society once more owes its thanks to *The British Medical Journal*, *The Lancet* and *The Medical Officer* for their generous co-operation in forwarding the salaries campaign.

13. That the grateful thanks of the Society are due to Dr. R. Veitch Clark for his tenure of the Presidency during the session. Dr. Veitch Clark's year of office has been a busy one; he has shown himself to be a firm and expeditious chairman of Council, and a President whose inaugural address and speeches on other occasions have inspired and stimulated his listeners, and have more than sustained the dignity of his office.

REPORT OF THE HONORARY EDITOR OF "PUBLIC HEALTH" FOR 1934-35.

For submission to the Annual General Meeting of the Society, November 22nd, 1935.

In the September number of PUBLIC HEALTH, reference was made to certain of the difficulties with which the Editor of the official organ of the Society has to contend so far as papers for publication are concerned. This difficulty is very real, and in submitting this report, I desire to impress upon the officers of Branches and Groups the need for having in mind the demands of the journal in preparing programmes for the session. Actually not very much trouble was experienced in the last session, a record number of pages, so far as the period of my editorship is concerned, having, in fact, been set up. The total for the volume was 428 as against the next highest, 408, the number in 1933-34 and in 1932-33. To an extent the reason for the increase was the necessity for printing such lengthy documents as the Memorandum on the Cost of Hospitals and Other Institutions.

For the contributions submitted through Branches and Groups appearing in the journal

14. That grateful thanks are also due to the Society's other officers, Dr. G. F. Buchan (Hon. Treasurer) and Dr. Charles Porter (Hon. Editor) and to Dr. James Fenton (Chairman of the General Purposes Committee) and Dr. F. T. H. Wood (Chairman of the Sub-Committee on the Housing and Administration of the Society).

15. That the annual exchange of officers and the election of the Council involve the retirement of Drs. C. Killick Millard, Henry Herd and Thomas Orr. We recommend that the thanks of the Society be accorded to these representatives for their services as members of the Council.

16. That they desire to express once again their appreciation of the ability with which the Executive Secretary has discharged his duties at all times, having particular regard to the interests and prestige of the Society, and to put on record their indebtedness to the Consultant Secretary for having placed at their disposal his valuable advice and experience on all matters which have been referred to him.

I have nothing but praise. The excellence so far as standard is concerned has been well maintained, a fact which to a very large extent accounts for the steady increase in the prestige which the journal and, it may be claimed, the Society itself, through it, enjoy.

No matter of special note, apart from those already mentioned, in relation to the journal arose during the year, and it is because they helped so much to make the work of editing so very pleasant I desire to thank Branch and Group Secretaries, the contributors of papers and editorial and other notes. The Executive Secretary and Mr. James, as Assistant Editor, both rendered me very valuable assistance for which I wish to make acknowledgment.

CHARLES PORTER.

October 15th, 1935.

REPORT OF THE AUDITOR.

For submission to the Annual General Meeting of the Society, November 22nd, 1935.

I have to report that I have closed the audit of the Society's accounts for the year ended September 30th, 1935.

Great praise is due to your Treasurer,

1935.

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Secretary and clerical staff for the excellent results accruing from the past year's work.

The floating balance of your reserves at September 30th, 1934, has been fully and satisfactorily invested. Arrears of subscriptions have been considerably reduced.

Expenses being maintained at a normal figure enables me to advise the transfer of a further £250 to the "Lease Redemption Reserve," which is, in effect, a provision for meeting the expenses of re-housing on the expiration of the lease of your present offices.

The accounts have been presented to me in a clear form showing accurate and careful book-keeping.

I have to express my appreciation of the courtesy and promptitude with which all queries have been dealt with by your Bankers, Secretary and staff.

J. T. HARRIS.

Rayleigh Drive,
Leigh-on-Sea,
Essex.

October 17th, 1935.

REPORT OF THE HONORARY TREASURER.

For submission to the Annual General Meeting of the Society, November 22nd, 1935.

I beg to submit my report for the year 1934-35.

Revenue Account.

It is satisfactory to record a credit balance of £332 5s. 3d. on the year's working as compared with a credit balance of £185 6s. 6d. in the previous year. The increased balance mainly results from an increase in subscriptions due to the fact that special efforts have been made during the year to collect arrears.

During the year the Society has had the matter of reorganisation under careful consideration by a Sub-Committee presided over by Dr. F. T. H. Wood of Bootle. The recommendations of this Sub-Committee when finally in operation will enable the Secretary to devote more time to recruitment so that the membership of the Society may be increased having regard to the large number of medical officers who are now employed in public health departments.

I would like to take this opportunity of urging upon every member of the Society the importance of getting his colleagues to become members.

Balance Sheet.

The balance sheet discloses the substantial financial position of the Society at the present time. The total amount which has been invested is £6,400, the present value of which is £5,663 3s. 4d. This represents a depreciation of investments during the year of £205 15s. 1d.

Apart from these investments the balance sheet shows liabilities amounting to £1,317 2s. 10d. made up of:—

	£	s.	d.
Furniture and Library ...	451	10	0
Provision for doubtful debts ...	25	0	0
Uninvested lease redemption ...	150	0	0
Sundry Creditors ...	177	0	0
Accrued credit balances from the Revenue Accounts ...	513	12	10
	£1,317	2	10

This sum of £1,317 2s. 10d. is represented in the Society's assets by:—

	£	s.	d.
Sundry Debtors ...	115	14	4
Telephone ...	1	0	0
Furniture and Library ...	165	0	0
Purchase of unexpired lease ...	523	14	8
Cash in hand ...	511	13	10
	£1,317	2	10

It will therefore be observed that the total assets of the Society are the market value of the investments £5,663 3s. 4d. and assets of £1,317 2s. 10d. less £177 owing to sundry creditors, making a total of £6,803 6s. 2d.

I desire to record my great appreciation of the manner in which the Executive Secretary, Mr. Elliston, has assisted me on all occasions during the year in the discharge of my duties as Treasurer.

GEORGE F. BUCHAN.

October 23rd, 1935.

The Branches and the Groups.

THE MIDLAND BRANCH.

President: Dr. P. G. Horsburgh, M.O.H., Nuneaton.
Hon. Secretary: Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

The first meeting of the session of this Branch was held at the Medical Institute, 154, Great Charles Street, Birmingham, on October 3rd, 1935. The President (Dr. J. A. M. Clark) and thirty-six members were present. Apologies for non-attendance were received from seven members.

The retiring President, Dr. Clark, introduced the new President, Dr. Horsburgh, and offered him the congratulations of the Branch on his election. Dr. Horsburgh thanked the members for the honour which they had bestowed upon him, and proposed a very hearty vote of thanks to Dr. Clark for a successful year of office. Dr. Clark replied in suitable terms.

Dr. Horsburgh delivered his presidential address on "**A Municipal Midwifery Service.**" After referring to some of the defects of the present system of midwifery in this country, the President proceeded to deal with a municipal midwifery service from the midwife's point of view. He considered that it would be quite feasible for maternity and child welfare authorities to inaugurate such a service. It must offer a reasonable standard of remuneration to all midwives and it would probably be desirable to grade them, the more highly paid undertaking a greater number of deliveries and less of the routine after-care work. Local authorities should be permitted to operate their schemes through existing voluntary associations if they so desired. Dr. Horsburgh said that one argument advanced against a municipal midwifery service was that the patient would be denied free choice of midwife. He did not consider this a sufficient reason for deciding against such a service, and made suggestions for meeting any hardships which might arise. Midwives unwilling to enter the municipal scheme should be at liberty to remain outside it, but this class would be mainly employed as maternity nurses to private cases. A municipal midwifery service could not be entirely self-supporting, but it would have to be carried out through local authorities on a national basis and with uniform arrangements for fees,

compensation, etc. Among the advantages of such a service would be the increase in co-operation between the midwives and antenatal clinics; the elimination of the bad midwives; an improvement in the quality of midwifery and a cessation of the over-booking of cases which occurred so frequently. Dr. Horsburgh finally suggested that with the advent of the municipal midwifery service it might be possible to combine the post of midwife and health visitor, thus eliminating overlapping, fostering the spirit of prevention and facilitating proper nutrition of the infant from its earliest days.

A hearty vote of thanks to the President was moved by the Hon. Secretary, seconded by Dr. Blaker and carried by acclamation.

A recommendation was put forward from the Branch Council that Drs. T. R. Elliott and Gordon-Smith be nominated as the Midland Branch representatives on the Tuberculosis Group Committee for the session 1935-36. This was approved.

The congratulations of the Branch were offered to Dr. J. Yule on his appointment as Medical Officer of Health of Stockport.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.
Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at the Guildhall, Portsmouth, on October 4th, 1935, the President occupying the chair.

Dr. H. D. Kelf, the retiring President, invested his successor, Dr. A. B. Williamson, with the badge of office as President of the Branch for the session 1935-36, and offered him the best wishes of the members during his tenure of office. Dr. Williamson then took the chair and thanked Dr. Kelf for his efficient services to the Branch during his two years of office.

Dr. Williamson delivered his presidential address on "**The Development and Future of the Public Health Service.**" Dr. H. Leslie Cronk proposed and Dr. H. C. Maurice Williams seconded a hearty vote of thanks to the President for his address, which will appear in an early number of PUBLIC HEALTH.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.
Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

The opening meeting of the session of this Branch was held at the Public Health Laboratory, York Place, Manchester, on October 11th, 1935, the President occupying the chair. Seventeen members were present and apologies were received from eleven members.

It was resolved that a letter from the Executive Secretary, relating to the attendance of assistant and specialist medical officers at conferences and meetings, be circulated to all members of the Branch.

Reference was made to the long and valuable services rendered by Dr. T. W. Naylor Barlow, O.B.E., to the Branch and the Society, and it was unanimously resolved that the Branch recommend the Council to elect Dr. Barlow an Honorary Life Member of the Society.

Dr. Herd, the retiring President, inducted the President-elect to the chair and invested him with the badge of office. Dr. Frazer briefly thanked the members for his election. Dr. Lissant Cox, seconded by Dr. H. G. Trayer and supported by Dr. G. W. N. Joseph, proposed a sincere vote of thanks to the retiring President, which was carried by acclamation. Dr. Herd responded.

Dr. Frazer delivered his presidential address on "**Overcrowding and the Housing Act, 1935.**" Dr. F. T. H. Wood, seconded by Dr. Morley Mathieson, proposed a vote of thanks to the President for his most interesting and informative address, which appears elsewhere in this issue.

THE HOME COUNTIES BRANCH.

President: Dr. A. W. Forrest, M.O.H., Leyton.
Hon. Secretary: Dr. R. P. Garrow, M.O.H., Hornsey.

On October 4th, 1935, a visit was paid by members of this Branch to the **Pioneer Health Centre, Peckham**, on the kind invitation of Drs. Scott Williamson and Innes Pearce. The President and 14 members were present.

Dr. Scott Williamson gave an interesting address on the origin and aims of the scheme, and answered questions put to him by the visitors.

Thereafter an inspection was made, first of the "biological department" where very

complete and exhaustive examinations are made of the families who are members of the Centre, and subsequently of the other departments, including the swimming pool, gymnasium, refectory and library.

The President thanked Drs. Scott Williamson and Innes Pearce for their interesting demonstration of this unique experiment in social medicine.

At the meeting of the Branch to be held at the Society's house on December 6th, 1935, Dr. E. H. T. Nash will speak on the Heston and Isleworth Orthodontic Scheme.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.
Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

A meeting of this Group was held at the house of the Society on October 18th, 1935. In the absence of the President the chair was taken by Dr. Agnes Nicoll. Twenty-eight members and visitors were present.

Dr. W. H. S. Wallace, Assistant Medical Officer of Health (Maternity and Child Welfare) Metropolitan Borough of St. Marylebone, read a paper entitled "**The Place of Sugar in the National Diet.**"

In the discussion which followed, Drs. Back, Maitland Radford, Cassie, Anderson, Saunders-Jacobs, N. F. Smith, Wattie and the Chairman took part. The points raised included the relative merits of a ketogenic diet and of glucose for asthmatic and eczematous children; the place of sweets in the life of children in this and in other countries; and the practicability of a sugar-free diet.

A hearty vote of thanks, moved by Dr. Charles Porter and seconded by Dr. Scott-Dickson, was accorded to Dr. Wallace for his excellent and informative paper, which will be published in an early number of PUBLIC HEALTH.

National Conference on Maternity and Child Welfare.—The Wednesday morning session of this Conference was organised by the Group and was very well attended. The subject for debate was "**The Care of the Child in the Pre-School Period as reflected in the Findings at the First Routine School Medical**

Inspection. The President (Dr. Stella Churchill) was in the chair and, in her introductory remarks, held that the debate might well have been entitled "Reflecting the absence of care for the pre-school child." She drew attention to the lack of sufficient nursery schools, home nursing arrangements, domiciliary and medical treatment, and convalescent treatment, for the pre-school child, and expressed the belief that much more could yet be done by local authorities under existing powers.

Dr. Ethel Cassie (Senior Assistant Medical Officer of Health for Maternity and Child Welfare, Birmingham) read an illuminating paper entitled "**Disabilities following Infections.**" She pointed out that in the Annual Report of the Chief Medical Officer of the Board of Education for 1933, no special information was given as to the defects found in school entrants. Of the defects reported as requiring observation or treatment, a proportion will have appeared quite late in school life and from the tables given there are no means of ascertaining what proportion were present at the commencement of school life.

She said that an application to the Birmingham Education Department was met by regrets that defects were now recorded without reference to age-groups, but Dr. G. A. Auden, the Chief School Medical Officer, kindly let her have some earlier forms relating mainly to entrants, the information from which was worth considering, and had been embodied in the following table. The impression left, after a preliminary study of the table and of the tables given by Sir George Newman, might not seem to support the suggestion that infective conditions played an important part in these defect records, but this impression would be fallacious.

It was found that 28 per cent. of the children (391) in Dr. Auden's table, mainly school entrants, suffered from some defect requiring treatment, the defects amounting to 605. Of these defects no less than 34 per cent. were dental conditions and 11 per cent. eye conditions, mainly squints.

Enlarged tonsils and adenoids gave about 20 per cent. of the defects. Diagnosed as they are in school examinations, these cases may mean much or little. The proportion requiring operation is a better index of their importance. There is no record of age-groups in the Birmingham school medical inspection report for 1934, but we are told 1,307 children

Defects.	Requiring Treatment.		Requiring to be kept under Observation.	
	No. of Defects.	Per cent.	No. of Defects.	Per cent.
Malnutrition ...	15	2.4	13	9
Uncleanliness ...	4	0.6	15	10.4
Skin conditions ...	36	5.9	1	0.7
Eye conditions ...	67	11.6	5	3.5
Ear conditions ...	Nil	—	Nil	—
Nose and throat conditions (mainly tonsils and adenoids)...	137	22.6	67	46.5
Enlarged cervical glands (non-tuberculous) ...	1	0.2	14	9.7
Defective speech ...	5	0.8	3	2.1
Teeth ...	207	34.2	1	0.7
Heart and circulation—				
Heart disease—				
Organic ...	2	0.3	2	1.4
Functional ...	1	0.2	1	0.7
Anæmia ...	17	2.7	2	1.4
Lungs—				
Bronchitis ...	38	6.1	3	2.1
Other non-tuberculous diseases ...	3	0.5	1	0.7
Tuberculosis—				
Pulmonary, definite ...	2	0.3	Nil	Nil
Pulmonary, suspected ...	2	0.3	Nil	Nil
Non-Pulmonary ...	Nil	Nil	Nil	Nil
Nervous system—				
Chorea ...	1	0.16	Nil	Nil
Other conditions ...	2	0.24	2	1.3
Deformities—				
Rickets ...	6	0.9	7	4.8
Spinal curvature ...	6	0.9	5	3.5
Other forms ...	18	3.1	1	0.7
Other defects and diseases ...	35	5.7	1	0.7
	605	—	144	—

No. of Children Inspected.		No. Requiring Treatment.	
Entrants ...	1,214	344 (28.3 per cent.)	
Intermediates ...	136	28 (21.4 per cent.)	
Leavers ...	41	19 (46.3 per cent.)	
Total ...	1,391	391 (28.8 per cent.)	

had tonsils and adenoids removed, out of a total of 2,148 children in the schools reported as having chronic tonsillitis and enlarged tonsils and adenoids requiring treatment. Sixty per cent. were therefore sufficiently serious as to need operative interference. Presumably, this proportion will hold good for the entrants, so that one-third of the cases need not be considered as very serious.

Adding these groups of dental defects, squints and the slighter tonsil and adenoid cases, we have about 50 per cent. of recorded defects, apparently of a minor character. These figures suggest that, on the whole, the school entrants are not as seriously defective as is sometimes believed.

In the Birmingham school table, given above, the infective conditions are sufficiently important, the largest group being the pulmonary conditions, 41 in number, while there are two definite cases of tuberculosis, one of chorea, and two of organic heart disease, the last three probably originating in rheumatic fever. There are also infective conditions of the skin, eyes and ears which, while less serious on the whole, are none the less troublesome.

A clearer picture of the health of the child from four to five can be obtained from health visitors' records where these are available for this age-period. In January, 1935, the Birmingham health visitors were asked to scrutinise the cards of all the children born in 1930, of whom they had complete records, and returns were available in 13,355 cases. Of these, no less than 10,289 (76 per cent.) were quite well throughout the year (1934), while 40 died (0.29 per cent.), and 731 (5 per cent.) suffered from acute illness. In 2,295 cases (17 per cent.) the child suffered from some chronic defect or disability. The complete figures are given in the accompanying table.

It is possible from these figures to estimate the influence of infective conditions on the health of the child, and from a consideration of these to decide how far health will be permanently damaged.

Less stress need be laid on conditions which do not materially affect the physique or interfere with education and mental health.

Among the acute illnesses, tuberculosis, pulmonary infections, mastoid disease and rheumatism are the most important infective conditions from this point of view, and in the chronic defects this group, with the addition of the defects following acute infantile paralysis (poliomyelitis), and chronic otorrhœa with its effect on hearing, are again met with as the main causes of chronic disability from infections.

The same fact is emphasised if the special group of defective five-year-olds is studied. Birmingham health visitors are required to

CHILDREN BORN IN 1930.

Total number, 13,355.

Well and healthy all the year, 10,289.

Died during 1934=40 :—

Causes—	
Pneumonia ...	5
Pneumococcal peritonitis ...	3
Accidents ...	5
Otitis media ...	2
Appendix abscess ...	1
Arthritis of hip ...	1
Meningitis ...	2
Tuberculosis ...	3
Tubercular meningitis ...	3
Infectious diseases ...	8
Tonsillitis ...	2
Gastro-enteritis ...	2
Congenital heart ...	1
Hypernephroma of kidney ...	1
Acute fibrous pericarditis ...	1
	40=2 per cent.

Number acutely ill=731.

Causes—	
Acute peritonitis ...	3
Tuberculosis ...	3
Lung conditions ...	122
Infectious diseases ...	429
Appendicitis ...	9
Accidents (scalds, motor, etc.)	22
Tonsillitis ...	18
Jaundice ...	7
Kidney conditions ...	13
Mastoid ...	26
Dysentery and enteritis ...	8
Rheumatism ...	14
Other conditions ...	50
Not known ...	7
	731=5 per cent.

Number suffering from—

Orthopædic effects (including infantile paralysis)—	
(a) Treated ...	285
(b) Untreated ...	166
(c) Not known ...	4
Otorrhœa (chronic) ...	89
Enlarged tonsils and adenoids...	657
Asthma ...	30
Lung conditions ...	248
Mental defect ...	54
Squint—	
(a) Treated ...	202
(b) Untreated ...	94
Tubercular conditions ...	14
Skin conditions ...	5
Congenital defects ...	29
Ear, nose and throat ...	48
Other conditions ...	370
	2,295=17 per cent.

hand in separately the record cards of the children suffering from major defects when they reach the age of five years, and below is a record of 111 such cases taken consecutively.

CHILDREN REACHING THE AGE OF FIVE YEARS
WITH MAJOR DEFECTS.

Infective conditions—				
Chronic pulmonary conditions	...	...	...	15
Rheumatic heart disease	...	...	...	3
Chorea	...	...	...	7
Chronic otorrhœa	...	...	...	5
Chronic otorrhœa and deafness	...	...	...	3
Mastoid disease	...	...	...	3
Infantile paralysis (poliomyelitis)	...	...	...	3
Pulmonary tuberculosis	...	...	...	3
Surgical tuberculosis	...	...	...	1
				43
Non-infective conditions—				
Mental defects	...	...	...	11
Squint	...	...	...	13
Old rickety deformities	...	...	...	6
Congenital defects—				
Heart...	5			18
Hip	2			
Cleft palate	2	...	...	
Talipes	3			
Others	6			
Other conditions	...	...	...	20
				68
Total	...	...	...	111

Dr. Cassie maintained that while the infective conditions were numerically less impressive than the non-infective conditions, their far-reaching importance, owing to their chronicity and their evil effect on health, happiness and education, could not be exaggerated. Children suffering from these conditions would be a charge on the community throughout their lives, for, with rare exceptions, they seldom recovered entirely.

The chronic lung conditions of childhood, originating in broncho-pneumonia, often manifested as asthma or bronchitis, were almost invariably associated finally with some degree of pulmonary fibrosis or bronchiectasis, conditions incapable of complete resolution. Without intensive care, mastoid disease and chronic otorrhœa meant defective hearing, and rheumatic infection in the child might mean a damaged heart. She did not need to emphasise the significance of tuberculosis. Its prevalence among young children is not fully realised. With infantile paralysis much more help is now being given, and to-day there is less danger of neglect than

there was in the past. But this could hardly be said of the other conditions.

Home visiting helps to find these defective children, medical inspection will make the diagnoses clear, but what is required is early and prolonged treatment.

As long as young children suffering from broncho-pneumonia are sent out of hospital, after two to four weeks' treatment, back to a crowded home, with a defective diet, and insufficient rest and sunlight, chronic lung conditions must occur. It is not surprising that we have them; it is surprising we have so few. It takes many weeks for the lung tissue to recover, and unless recovery is encouraged a fresh attack follows. We all know the child who has had pneumonia "three times." Such a child requires long periods in good surroundings, till the lungs are clear not only clinically, but radiographically. It may be said that even under present conditions the great majority of children suffering from broncho-pneumonia do ultimately make a good recovery. The minority, however, become a serious charge on the community, appearing again and again in hospital and in school returns until an early death finally ends their sufferings or they reach adolescence as permanent weaklings.

Rheumatic infection is not uncommon in young children, and, as in the previous condition, prolonged treatment is required. The same can be said for the chronic otorrhœa and sinus infections which are only now being recognised as the cause of so much acute and chronic ill-health in childhood. Sufficient hospital beds are not available for the investigation and treatment of these conditions.

For the child in the tubercular home surely the time has come when we should act on the evidence of all the more recent investigators and take the child out of danger. At present we can offer no real help, even when the parents are willing. We should also consider whether the parent has the right to endanger the life of a young child by exposing him at the most susceptible age to intensive infection.

In conclusion, Dr. Cassie emphasised that the children for whom this plea was made were suffering from pain and prolonged disability to an extent unrealised by the community as a whole. They were undoubtedly a small proportion of the total child population, but none the less they were worthy of

consideration from those who wished to give help and comfort to children who could do nothing to help themselves. This help, if it is to be efficient, is costly, but she believed that it was a lack of realisation of its importance which hampered progress.

Dr. William Moodie (Director of the London Child Guidance Clinic) read a most interesting paper entitled "**Results of Psychological Trauma.**" He said that when dealing with children who are fearful or nervous one is struck with the number of cases in which their nervousness is said to have been caused by some particular shock or fright. On further investigating these cases, however, one was often not convinced that the shock was actually the beginning of the trouble. It was now generally believed that such experiences were seldom actually the cause, and that they caused fear far more because of the individual's attitude towards them than on account of their intrinsic value. On the other hand, cases were often met where a child had passed through very severe shock and no apparent effect had resulted. He cited a number of illustrative cases and referred to the common desire to find an underlying cause for a symptom and the satisfaction derived from some explanation even if it is not very convincing. In conclusion he said that the effects of trauma could be vastly exaggerated as a direct cause of underlying instability, but not as a danger signal pointing to its presence.

The discussion was opened by Miss J. M. Calder (Superintendent Health Visitor, Manchester), who admitted that in the present position the needs of the toddler were not adequately met, but denied that taking the toddler out of his home earlier and earlier was a solution of the problem. She advocated the development of the facilities existing in the child welfare centres for increasing the toddler's clinics and play hours.

Dr. Arbuckle Brown (Deputy Medical Officer of Health, Glasgow) quoted figures from Glasgow school entry examinations which demonstrated that the great majority of the defects of school entrants were minor ailments, which might be readily remedied if taken earlier. He was anxious that in all districts the child welfare and school medical services should be a uniform service and an integral part of the public health service.

Dr. David Nabarro (British Social Hygiene Council) pleaded with doctors to refresh their

knowledge of congenital syphilis, which was often masked by previous treatment of the parents.

Dr. James Stephen (Maternity and Child Welfare Medical Officer, Aberdeen) had been glad to find that there was not a big proportion of children of the unemployed in Aberdeen suffering from malnutrition. He urged women health visitors and others to help mothers to cook food properly.

Dr. Clara Stewart (Leeds Babies' Welfare Association) pointed out that many mothers' and children's problems resolved themselves and disappeared altogether with right handling.

Councillors Mrs. H. Cobbett, Mrs. F. Walton, and Dr. Z. P. Fernandez took part in the discussion, and Dr. Cassie and Dr. Moodie replied.

A vote of thanks to the speakers, moved by Dr. Maitland Radford, was carried enthusiastically.

THE Chief Medical Officer to the Ministry of Health, Dr. A. S. MacNalty, has appointed Mr. J. E. Pater to be his Private Secretary.

THE National Baby Week Council are offering challenge shields for (a) the best propaganda on the welfare of the child from two to five years of age, and (b) the best scheme of maternity and child welfare propaganda for a rural area. Full details and regulations governing the competitions may be obtained from the Council at 117, Piccadilly, London, W.1.

A COURSE of three lectures on "Neglected Aspects of Public Health Work, with special reference to India" will be given at the London School of Hygiene and Tropical Medicine (University of London), Keppel Street, Gower Street, London, W.C.1, by Major-General Sir John W. D. Megaw, K.C.I.E., B.A., M.B., B.Ch., D.Sc. (President of the India Office Medical Board and Medical Adviser to the Secretary of State for India), at 5.30 p.m. on December 2nd, 4th and 5th, 1935. At the first lecture the chair will be taken by Professor W. W. Jameson, M.A., M.D., F.R.C.P., D.P.H., Dean of the London School of Hygiene and Tropical Medicine. Admission to the lectures is free, without ticket.

The Literature of Preventive Medicine.

The Cancer Problem and its Solution. By HASTINGS GILFORD, F.R.C.S. London: H. K. Lewis & Co., Ltd., 1934. pp. 59. Price 1s. 6d. (paper), 2s. 6d. (cloth), net.

For some 30 years or more the writer of this brochure claims to have approached this problem of the genesis of cancer from the point of view of one who is convinced that no more facts are needed, and that the truth lies buried under this mountain of information. Subtraction, he thinks, rather than addition is required, and he begins by discarding all that vast mass of material which has been thrown up so laboriously by those who explore this subject by experimenting on lower animals in laboratories. He maintains that the problem has been complicated and obscured by these experiments rather than simplified and clarified. His own contribution he no doubt regards as of an astonishing clarity. Even so, however, at the end he still leaves the reader without definite information as to what he or those who assist him in looking after his health are to do in the case of cancer.

Legal Medical Dictionary. By ERSKINE POLLOCK, LL.B., Solicitor of the Supreme Court; and E. RAYMOND CLUTTERBUCK, M.B., CH.B. London: Butterworth & Co. (Publishers) Ltd., 1935. pp. 126. Price 8s. 6d. net.

Though it is difficult for a member of the medical profession to see why, there can be no doubt that there is a very real need for a book of this sort. The difficulty is to get someone to undertake the labour of preparing it, and Mr. Pollock and Dr. Clutterbuck having done so, they deserve every credit. Also they merit praise for having done it so well, while the book deserves very strongly to be commended and recommended to those for whom it is intended.

Swimming Bath Water Purification. By F. WILKINSON, M.INST.C.E., M.I.MECH.E., Borough Engineer, Willesden; and F. J. FORTY, B.SC., A.M.INST.C.E., Borough Engineer, Ealing. London: The Contractors' Record Ltd., 1934. pp. 262. Price 12s. 6d. net.

It is only five years since the first edition of this volume appeared, but in these years extraordinary changes have taken place, not only in relation to bath construction, etc., but in the

outlook of the public on the subject. The opportunity for preparing the new edition has been well taken advantage of by the authors, who have completely re-written the book and made it more definitely than ever the standard publication on the subject.

In the Annual Reports

WHY IS ALL THIS DENTAL WORK NECESSARY?—The great majority of our elementary school children are physically well developed, apparently well nourished and defects of a serious character are conspicuous by their absence. Similarly, maternity and child welfare centres are very well attended, and the expectant and nursing mothers, many of whom are recommended for dental inspection by the medical officers in attendance, appear physically well fitted for their immediate responsibilities, and are likewise apparently well nourished. Factors to which brief reference might be made in answer to this important question concern, first, the water supply; second, feeding; third, cleanliness; and fourth, mal-development of the jaws, resulting in irregularities in the position of the teeth. In Cambridge, we are fortunate in having a liberal water supply containing a large proportion of lime salts. It is questionable, however, whether these salts are actually in an assimilable form. There can be no doubt that our elementary school children are fed chiefly by means of carbohydrate food. Food, that is to say, which is soft, sticky, and starchy, and therefore adheres to the teeth, ferments with the production of harmful bacteria. The teeth of the great majority of our elementary school children are not kept clean, a fact which in itself does more probably to raise the incidence of dental caries than any other. To inculcate habits of cleanliness is essential and must be practised if we are to offer any means of prevention and stimulate progress. Accordingly, I will offer two suggestions in the hope that those in authority will grant the necessary facilities whenever and wherever practicable. First, time should be allotted and materials provided to permit the cleaning of the teeth of all our children attending nursery classes and infant departments once daily; and secondly, similar provisions so that older children can brush their teeth carefully under the supervision of teachers of physical training and teachers of hygiene who should be invited to co-operate. Irregularity of the teeth (another predisposing cause of dental caries) is much too frequent; indeed, more than 50 per cent. of our elementary school children show irregularities of the teeth to a greater or lesser degree, and this problem is certainly one which can only be handled by the dentists. It will be necessary to devote more time and thought to this problem, and two solutions are worthy of attention—(1) in children of not more than ten years of age, aid the development of the jaws by means of apparatus, and so prevent future irregularity; and (2) in older children consider the advisability of removing one or more permanent teeth to relieve overcrowding.—*Mr. W. Baird Grandison, Public Dental Officer, Cambridge.*

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Editorial.

Twenty-five Years of Health Work in London.

PART I of Volume III of the Annual Report of the London County Council for 1934* deals with Public Health and is the report—or one of the several reports—for that year of Sir Frederick Menzies, the County Medical Officer of Health. In addition to discussing the health happenings and situation in the year reviewed, Sir Frederick, because the report was produced in the midst of the celebrations of His Majesty's Jubilee, decided also to give a short account of the development during the past 25 years of some of the more important

* No. 3131. London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Price 1s.

of the public health services administered by the Council. Amongst other matters discussed in this connection are the trend of vital statistics, the action taken towards the abolition of slums, and the prevention and treatment of venereal disease and tuberculosis. Other activities more or less peculiarly of this period referred to are those concerned with the operation of the Mental Deficiency and Blind Persons Acts, and directed to the improvement in the standard of work of midwives. In these and many other public health regards the picture at the end of the 25 years is very different from that presented at the beginning, though to those engaged in its production and watching, even if the change may be described as kaleidoscopic, it must have appeared to occur so gradually as hardly to

merit the description. So far as vital statistics are concerned, an interesting table reveals that, with the exception of the marriage-rate, all others of any importance showed a marked decrease. Of these only the birth-rate is disquieting, the percentage decrease in this being so great as 47·5—from 25·5 per 1,000 in 1910 to 13·4 in 1934. The most remarkable falls are those shown in the case of infant mortality—by 35 per cent. from 103 to 67, and tuberculosis—46·6 per cent. from 1·63 to 0·87. In the non-pulmonary form of tuberculosis the decrease was by 71·8 per cent. which comes near to that in the case of enteric fever where it was by no less than 93 per cent. To account for the fall in the infant mortality rate, amongst other explanations offered are “the lessening of the fly nuisance as a result of the replacement of horses by motor cars, and the more efficient control of milk supplies.” In regard to slum clearance and housing, the report shows progress, particularly towards the end of the 25 year period, to have been considerable. At March 31st, 1935, it is revealed no less a sum than £44,000,000 had been expended in the quarter century on the clearance of unhealthy areas and the provision of accommodation for nearly 307,000 persons. That the health department has been involved to an increasing extent in the bringing about of the changes in this regard is shown by the fact that whereas in the early years of the period the part-time services of one medical officer and of two to four sanitary inspectors were quite sufficient, in 1935 no fewer than six medical officers and 18 inspectors devote the whole of their time to the work. In relation to venereal disease treatment and prevention the activities of the Council have shown a marked tendency to increase and are believed to have been not without effect. The advantage of the larger clinic open all day was early recognised, and the policy of dispensing with the smaller clinics and replacing them by others of the *ad hoc* variety has been steadily pursued. At the present time in the metropolis, in addition to six clinics providing all-day intermediate treatment, there is an equal number of larger clinics open all day, one administered and staffed entirely by the Council's officers. During the first year of the operation of the scheme the number of new cases dealt with was 13,025, the total number of attendances being 120,659. The figures for 1934 show 16,064 new cases of venereal disease and 12,059 non-venereal. The number of attendances recorded in that year was 1,142,287,

which, compared with the increasing number of persons presenting themselves for examination, is taken to be an indication of the growing use made of the clinics, and should do much to assist in checking the spread of infection. The story told of the increases made from time to time throughout the 25 year period in the provision for dealing with tuberculosis is an interesting one and full not only of explanations of why so much of improvement has been obtained but of hope for further and even greater improvement in the future. The progress noted has been in every direction in which there appeared to be promise. Dispensaries which in 1913 numbered 19, now total 35, and bed accommodation has steadily increased in amount, particularly since the coming into operation of the Local Government Act. One of the greatest improvements in the view of many, though not of the older-fashioned charitably minded, is the abolition of the practice of assessing patients to pay contributions towards the cost of treatment and the substitution of absolutely free treatment for all. Two directions in which of late the Council has developed its preventive work is in relation to the provision of open-air schools and the making of arrangements for boarding out of child contacts. At present the schools number six, with accommodation for 515 children. Boarded out children are received mainly in houses in the country and are under foster-parents. The number dealt with in 1934 was 246. In regard to mental deficiency and the operation of the Acts connected therewith, as in connection also with the Blind Persons Act, Sir Frederick shows that the County Council have taken their responsibilities seriously and that progress in the direction of securing greater and greater advantages and benefit for those concerned has been steady and marked. Most marked also have been the improvements shown during the 25 years in the general standard of the work of the midwives in the metropolitan area, and for this undoubtedly the educational work done by the medical inspectors of midwives and the post-graduate lectures and demonstrations provided by the Council are largely responsible. The number of inspectors engaged at present is four, double the number employed in 1910. The number of midwives notifying their intention to practise in 1934 was 898 as against 470 in 1910. One condition in which there has been marked improvement, largely if not entirely as a result of action on the part of the

Council, is inflammation of the eyes in the newly born. Free medical attention for all such cases where a doctor is called in by a midwife is now available. As a result 955 cases were brought to notice in 1934 as against 165 in 1910; and whereas damage to the eyes ensued in 11 cases in 1910, no case of a damaged eye occurred in 1934. To show the variety of the directions in which movement and progress have taken place, Sir Frederick refers to the establishment of chemical and bacteriological laboratories as part of the County health department, and to the effects produced by the Nursing Homes Registration Act, 1927. Since this latter measure came into operation in July, 1928, the total applications for registration approved numbered 440. At December 31st, 1934, the number on the register was 211, showing that the total number which has been cancelled, including voluntary withdrawals, since the Act came into operation is 229. All the supervision carried out in these relations, and all the work done in these and other directions cannot fail to have had an effect on the public health of the metropolis. That they have had is shown by the improvements in the statistics of morbidity and mortality already quoted, although even more, perhaps, are they shown in the changes that have taken place in the face of London; possibly also and even more markedly in the appearance of the Londoner, the youthful Londoner in particular.

* * * * *

The Health of London in 1934.

IN a previous note evidence was produced to show how remarkable had been the progress in public health in the metropolis during the period of the King's reign. Evidence that the progress is continuing, and possibly also that there is to be a continuance, is to be found in the facts and figures stated in the report in regard to the year 1934. The death-rate in that year (12·2) was lower than that of 1933, when it was 12·5. The infant mortality rate of 67 was higher than in 1933 but not higher than the average or sufficiently high to give rise to misgiving or the belief that progress had been stayed. In regard to disease it does not appear that in 1934 there was any marked prevalence of any of the infectious group. A special note on food poisoning shows that 332 cases in all were notified. The only outbreak of any size amounted to 21 cases, the source

of the trouble remaining a mystery. In relation to puerperal fever and puerperal pyrexia the question of maternal mortality is interestingly discussed, particular attention being directed to the effect of an increase in the number of deaths from septic abortion upon the maternal mortality rate and in masking the results of an increased provision of ante-natal care. Figures with regard to tuberculosis show the death-rate in 1934—0·76 per 1,000—to have been the lowest recorded, while a special note upon treatment of the disease indicates the magnitude of the provision made in sanatoria and elsewhere with the object of securing complete control over the infection and the maximum of benefit for those affected. In other parts of the report the action taken under the Housing Acts, the Milk and Dairies (Consolidation) Act, 1915, and in regard to venereal diseases is discussed at length. The information given here and in respect of works done and investigations made in the laboratories of the Council leave no room for doubt as to the seriousness of the desire of the London County Council and the staff of the public health department under Sir Frederick Menzies to secure for the people of the metropolis such conditions as will make for freedom from disease and the fear it brings and for abundance of health and the joy it gives.

* * * * *

The Central Council for Health Education.

THE eighth annual conference arranged by the Central Council for Health Education was held, as in former years, at the London School of Hygiene and Tropical Medicine, on Thursday, November 21st. By a happy coincidence the meeting was the first of the series which Sir Kingsley Wood attended as Minister of Health, and the first also for Dr. A. Salusbury MacNalty, the new Chief Medical Officer of the Ministry, who has thus followed the lead of his predecessor. Moreover, the Central Council for Health Education will itself within the next few weeks take on a new lease of life by the act of incorporation. The Minister of Health in his address to the conference expressed his approval of this development and paid a well-deserved compliment to the Central Council in saying: “The Council plays undoubtedly a special and important part in helping all sorts and conditions of people to appreciate and understand those elementary

things which underlie a healthy way of life, and to ensure good thinking about health and the best way to attain it." As to an extent it shares, the Society may well be satisfied that the prestige of the Central Council has gained by this latest conference, which was attended by nearly 200 delegates from local health and education authorities and deserved so good an attendance for the interest of the subjects and the excellence of the discussions.

The morning discussion, which Dr. MacNalty introduced in an excellent address, was devoted to the subject of "Health Education in the Schools," and the stimulating lead given by Dr. J. J. Paterson (Medical Officer of Health and School Medical Officer, Maidenhead) and Mrs. E. V. Parker (National Union of Teachers) resulted in a debate to which the large number of succeeding speakers all had something of value to contribute.

At the afternoon session, after a review of the Central Council's history and present work by its very active Chairman (Dr. James Fenton of Kensington), the Minister of Health introduced the subject of "Health and Physical Education" in an address in which he referred to health advances in connection with nursery schools, maternity services and housing. Sir Kingsley Wood was followed by Sir Arnold Wilson, M.P., who urged that the aim of future physical education must be attention to the individual rather than to the mass. Another useful and practical debate followed.

The final feature of an outstanding conference was the showing at Film House, Wardour Street, of new sound films illustrating physical training in elementary schools, produced by Gaumont-British Instructional Films in co-operation with the Association of Physical Training Instructors, and of a "general interest" film, "Stand Up and Breathe," produced by the National Association for the Prevention of Tuberculosis."

* * * * *

District Nursing in England and Wales.

THE Survey of District Nursing recently completed, of which a report* has now been issued, may be counted a work of the extremest value. To the Queen's Institute of District Nursing who carried it out the thanks of all concerned in any way with the nursing service in any part of the country are most certainly

* Queen's Institute of District Nursing, 57, Lower Belgrave Street, London, S.W.1. Price 2s. 6d.

due. The tables provided, in addition to setting out a general survey of the work throughout England and Wales, outline the service provided in the administrative counties; the county boroughs and the metropolitan boroughs. An analysis of approximate income and expenditure and costs per nurse is also given.

The completed survey shows that of the 39,864,184 population of England and Wales there is a nursing service available for 38,206,867, or 96 per cent. and 87 per cent. of the whole in England and Wales respectively. From a detailed examination of the figures it appears that in many areas, particularly in the populous towns and cities, extension is required. In any case the increasing demand for domiciliary nursing care and a higher standard of living are indications of the extension that may be expected, and it is satisfactory to know that the Institute is concentrating on the establishment of a complete service throughout the country to be maintained with reasonable effort. In order to provide for the needs of all, 759 nurses are needed in England in the county boroughs and 739 in the administrative counties, while in Wales 21 are needed in the county boroughs and 106 in the administrative counties. In addition to this, more adequate emergency staffs are required by some county nursing associations.

In compiling the financial side of the survey, accurate figures have been given as far as possible but in some cases they are unobtainable or incomplete. The income for one year, however, is shown as £1,059,667 and the expenditure £1,019,075, in addition to that of many associations which have not furnished this information. The average cost of a nurse apart from her training has been taken under two headings. A Queen's nurse costs £231 unless working under a superintendent when, as the staff is larger, the cost is necessarily less and averages £207 per nurse. A non-Queen's nurse costs £184 10s. 0d. The cost of administration in the case of nurses supervised by the county nursing association is borne by that body and averages £11 10s. 0d. per nurse.

The survey was undertaken with the idea of presenting to the public as accurately as possible a statement of the position in the hope, that will be widely shared, that the knowledge will prove a stimulus to all concerned in the effort to provide an adequate, efficient and comprehensive district nursing service in every town, village and hamlet in England and Wales.

The Sanitary Officers Regulations, 1935.

THE Sanitary Officers (Outside London) Regulations, 1935, which the Society, through the Council, had the opportunity of considering while they were in draft, have now been issued and come into operation on January 1st, 1936, in place of the Order of 1926. Covering them is a circular (1505) addressed to county councils, town councils, urban and rural district councils and port sanitary authorities. Part I which contains, amongst other things, interpretations of certain terms, provides also for the revocation of the Order of 1926 except in so far as it applies to London. Remaining in operation in the metropolis, the 1926 Order is extended and brought to an extent into line with the Regulations of 1935 by means of the Sanitary Officers (London) Regulations, 1935, which prescribe as a duty to be performed by the medical officer of health, in the same way as does Art. 17 (4) of Part III of the Sanitary Officers (Outside London) Regulations, 1935, that he shall furnish every year to the Minister of Health as soon as practicable after December 31st a report for his district for the year ending on that date, relating to overcrowding within the meaning of the Housing Act, 1935, and showing:

- (a) the number of dwellings overcrowded at the end of the year together with the number of families and the number of persons dwelling therein;
- (b) the number of new cases of overcrowding reported;
- (c) the number of cases of overcrowding relieved and the number of persons concerned;
- (d) particulars of any cases in which dwelling-houses in respect of which the local authority have taken steps for the abatement of overcrowding have again become overcrowded; and
- (e) any other particulars with respect to conditions in relation to overcrowding upon which he may consider it desirable to report or which the Minister may from time to time require.

In Part II of the Regulations affecting officers outside London, medical officers of health of counties are dealt with, Part III covering district medical officers of health, and Part IV sanitary inspectors. In Part V power is reserved, as usual, to the Minister to dispense with any of the requirements of the Regulations as he thinks fit. So far as duties of county medical officers are concerned the main difference is that a specified requirement is imposed that they shall visit county districts as occasion may require. In the Regulations relating to medical officers of health of districts the provisions relating to qualifications and duties now apply

in every case and are obligatory. Also it is provided that it is a condition of the right of the council of any county district to receive from a county council a payment of one-half of the salary, that there shall be compliance with the requirements as to the mode of appointment and terms as to salary and tenure of office. Similar provisions apply in the case of sanitary inspectors. So far as qualifications are concerned, it is interesting to note that the alternative to the holding of a registered public health diploma of having had experience for a period as a medical officer of health is not now recognised, though the Minister reserves the right to dispense with the requirement as to a diploma in cases in which the appointment of an unqualified officer having expired, re-appointment becomes necessary. As regards advertisements of vacancies as required by the Regulations (Art. 11) the circular, it may be noted, declares that this requirement will be met if they are made in a medical journal where they will, "as a rule, attract a wider selection of candidates than advertisements in the non-technical press." In the case of sanitary inspectors, to whom a similar requirement applies, advertisement in "the appropriate technical journals" is recommended. In Art. 11 the provision is, as before, that the advertisement shall appear "in some newspaper or newspapers circulating in the district." Apropos Art. 12 of the Regulations, which treats of tenure of office and provides that an officer, the terms of whose appointment do not restrict from engaging in private practice, shall be appointed for a specified term only, the circular makes it clear that the reason for making no provision for automatic continuance of the appointment of such an officer is to secure that the way to the appointment of whole-time officers shall be as little obstructed as possible. Of other Articles, number 17, which prescribes briefly the duties of a medical officer of health of a borough or urban or rural district, is extended by the inclusion, as already explained, of an additional duty relating to returns of overcrowding. Part IV, as indicated, relates to sanitary inspectors of port sanitary as well as other authorities. Art. 20, which relates to qualifications, repeats the proviso with regard to veterinary officers that they may be appointed sanitary inspector, although not possessed of the prescribed qualification, for the purpose of exercising the powers and duties of an inspector in relation to meat. The provisions relating to mode of appointment, tenure of office, etc., resemble closely those applicable in the case of a

medical officer of health. The restriction on an inspector whose appointment is not whole time not to engage in his business in any work arising out of or in any way connected with the discharge of his duties as sanitary inspector is very strict. In the list of duties prescribed for sanitary inspectors in Art. 27 the fact that there is reference to the provisions of the Shops Act, 1934, particularly those relating to ventilation, temperature and sanitary conditions, is to be noted. It may be noted also that in the circular special attention is directed to the provision in the Local Government Act, 1933, requiring that a vacancy in the offices of medical officer of health and sanitary inspector of boroughs and urban and rural districts must be filled within six months, or such longer period as the Minister may permit, after its occurrence. As already mentioned, the Regulations come into operation on January 1st, 1936.

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Housing Act, 1935.

IT is the case that in a number of areas the overcrowding survey provided for in the Housing Act, 1935, is already well in hand and, indeed, in a few instances well on the way to completion. In some places there has been delay pending the issue of instructions by the Minister as to dates for completion of survey, etc. These have now appeared and local authorities responsible are requested to note that the limiting dates are: for completing the inspection, April 1st, 1936; for submitting a report on the results of the inspection, and for the submission of housing proposals to remedy the overcrowding revealed by the survey, June 1st and August 1st, 1936, respectively.

In addition to issuing instructions in this connection the Minister, it is learned, has now appointed the Central Housing Advisory Committee under the Act. Sir Kingsley Wood himself will be Chairman, with Mr. G. H. Shakespeare, Parliamentary Secretary to the Ministry, as Vice-Chairman. The Committee contains twenty-seven members including Lord Balfour of Burleigh, Sir Harold Bellman, Mr. G. M. Burt, the Earl of Crawford and Balcarres, Mrs. M. M. Dollar, the Earl of Dudley, Sir Francis Fremantle, Miss Megan Lloyd George, Mr. George Hicks, Ald. A. L. Hobhouse, Mr. L. H. Keay, the Countess of Limerick, Mr. O. Ling, Sir Miles Mitchell, Mr. C. J. Newman, Ald. E. G. Rowlinson, Major Sir Isidore Salmon, the Rev. E. St. G.

Schomberg, Mr. L. Silkin, Mr. J. A. Simpson, Sir Raymond Unwin, Mr. J. A. F. Watson, Sir Seymour Williams, Dr. J. Greenwood Wilson and the Bishop of Winchester.

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Aluminium in Food.

THE question as to whether or not aluminium cooking utensils are dangerous to health and the amount of the metal dissolved or corroded by food, small though it be, give rise to various ailments, including cancer, is one not uncommonly addressed to medical officers of health. No matter the answer returned it has frequently occurred that it has not proved satisfactory, very largely because there was little that was readily accepted as authoritative behind it. A report by Dr. Monier-Williams recently issued by the Ministry of Health entitled "Aluminium in Food,"* in which an attempt is made to correlate all the known information on the subject with the object of arriving at some definite conclusions as to whether or not aluminium is in any way injurious, goes a long way to provide the required authoritative backing and will be welcome for that reason. In the report not only aluminium vessels but alum baking powders have been brought under review, although the latter have been superseded in this country for many years by phosphate baking powders.

The amount of aluminium which may gain access to food from aluminium vessels under different conditions Dr. Monier-Williams shows to be very small. Many of the statements made as to large amounts being taken up by food, in his opinion, must be ascribed to the use of faulty methods of analysis. Strong acids as well as strongly alkaline materials such as soda are liable to attack aluminium and for this reason care is necessary, though the pure metal seems to be remarkably resistant to corrosion by acid foods. In the ordinary way and with care the amount taken up by foods is far less actually than the amount which would be introduced into bread by the use of alum baking powder.

Surveying the published work on the absorption of aluminium by the body and its effect on health, the report reveals that the amount of the metal which finds its way through the walls of the digestive tract and into the blood and organs of the body is extremely small; so small indeed (of the order of one or two parts

* Reports on Public Health and Medical Subjects, No. 78. H.M. Stationery Office, 1935. Price 9d. net.

per million) that it is difficult to believe that it can have any ill effect. At the same time, it is noted, it is an undoubted fact that moderately large doses of soluble aluminium salts may exert an astringent and irritating effect on the stomach lining and may interfere with digestion. For this reason the use of alum baking powders, which introduce relatively large amounts of aluminium into bread, is not desirable.

On the general question, therefore, the conclusion reached is that there is no convincing evidence that aluminium, in the amounts in which it is likely to be consumed as a result of using aluminium utensils, has a harmful effect upon the ordinary consumer. By way of a reservation, however, there is this, that in those cases where physicians and patients are firmly of opinion that aluminium has been a cause of illness and that benefit has resulted when it has been given up, it is possible there may be a genuine idiosyncrasy or sensitiveness to aluminium and that this may be shared by a number of people. To such persons, particularly if it can be satisfactorily established that an idiosyncrasy to aluminium does in fact exist, the suggestion—very wisely—offered is that it would be well to avoid it for the future.

The report, like all Ministry publications of this sort, is extremely readable and leaves nothing to be desired on the score of accuracy and authoritativeness.

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Swimming Baths and Pools.

IT is without question that there has been an increase in the use of swimming baths and pools whether provided by local authorities or by private enterprise at road houses and elsewhere. Equally there can be no question that a result of this increased usage has been to increase the necessity for the giving of greater attention to them, greater care to the water in them, and on the part of local authorities to the exercise of a greater amount of supervision over them. This certainly is the view of the Ministry of Health, and a circular (1503) dated November 1st, 1935, emphasises the opportunity afforded by the coming winter months to take any necessary steps for ensuring a proper standard of cleanliness and purity of water in swimming baths and pools, and draws attention to the special report on the subject.*

* "The Purification of the Water of Swimming Baths." Prepared by the Ministry of Health and published in 1929. H.M. Stationery Office. Price 1s. net.

Where the sanction of the Minister is required to loans for baths or pools, it is pointed out, care is always taken that any necessary plant for this purpose is provided. Plant will not do its work, however, unless it is properly maintained and used, and although it appears that great improvement has been effected, more is needed, and local authorities and private owners of baths or pools are urged to submit the present arrangements to thorough inspection.

In the report already mentioned, it is shown that the requisite degree of purity can best be maintained by efficient continuous filtration combined with continuous and accurately controlled chlorination. The need for properly qualified supervision is emphasised, however, and the keeping of a detailed daily record of the performance of the filtration and sterilisation plant is advised. The recommendations made in the report apply to all swimming baths and pools open to the public, whether owned by the local authority or by private persons, and their application is strongly recommended.

In the circular an answer is provided to a question frequently raised as to whether local authorities have any control over privately owned pools used by the public. In the view of the Minister's advisers, such powers are available under the Public Health Act, 1875. Section 91 provides that any premises in such a state as to be a nuisance or injurious to health shall be deemed to be a nuisance liable to be dealt with summarily in the manner provided by the Act. Section 102 gives the right of entry to the local authority or any of their officers for the purpose of ascertaining whether any nuisance exists. "In practice," says the circular, "it is likely that legal proceedings will seldom be needed, and that in general the measures required can be secured if the local authority in each district with swimming baths or pools instruct the medical officer of health to keep them under observation and, where conditions are unsatisfactory, to make necessary representations to the owners."

THE Institute of Medical Psychology (the Tavistock Clinic) has issued a list of 16 lecture courses arranged for the academic year 1935-36. These cover a wide field in psychotherapeutic theory and method, and those interested are invited to apply for full particulars to the Educational Secretary at the Institute, Malet Place, London, W.C.1.

The Place of Sugar in the National Diet.

By W. H. S. WALLACE, M.D., D.P.H., Assistant Medical Officer for Maternity and Child Welfare, Metropolitan Borough of St. Marylebone.

This attractive paper provided full scope for an interesting discussion at the meeting of the Maternity and Child Welfare Group held on October 18th, 1935, and in addition to being freshly pleasant to read will be found also stimulating to thought.

FROM a nutritive point of view the sugar ultimately absorbed by the tissues may be derived from three chief classes of foodstuffs. First, the starches which are present throughout the vegetable kingdom; secondly, the small percentages of sugar present in natural foods, such as milk, fruits and sugar-cane; and thirdly, the artificially prepared sugars such as jam, sweets, etc. It is this third group that is of most interest as its consumption has increased greatly during the last century. It is of importance to distinguish between the second and third groups, that is, the natural and artificial sources of sugar, as the amount and concentration of sugar obtained from them differ considerably.

The following are the chief natural foods containing sugar, with the percentage present as stated by Plimmer¹:—

	%
Apples	10.8
Pears	11.1
Grapes	13.9
Plums	8.1
Sugar-cane	18.0 ²

The following are the average percentages given for the artificially prepared sugars:—

	%
Chocolate	49.7
Treacle	59.9
Jam... ..	69.0
† Sugar	100.0

These few examples show the great difference between the amounts of sugar present in natural and artificial foods, and it is certainly possible that their effects on digestion and metabolism may differ considerably.

Sugar naturally present in fruits has presumably always been an article of man's diet. The only concentrated form in which he has until recently been able to obtain it is in the form of honey (71.9 per cent.). This, however, cannot have constituted a large part of his diet.

Sugar-cane has presumably been an important article of diet where it has been available and at the present time large quantities are

eaten in the West Indies and other sugar-producing countries. It contains 18 per cent. cane sugar, and this, which is the most concentrated form of sugar eaten to any great extent, from natural sources, does not compare with the concentration in the foods of civilised diets.

The art of sugar refining probably commenced in India and the Far East where sugar-cane was readily available. The Spaniards in the Middle Ages spread the art of cultivation and refinement. Venice was a centre for the sugar trade in the fourteenth century. During the Middle Ages, sugar was apparently available in this country for the upper classes and was presumably a pleasant and expensive delicacy. The earliest statistical data of the quantity consumed per head in the United Kingdom in the Encyclopædia Britannica are for the year 1875,³ when the consumption was 59.52 lb. per head per annum. In 1901 it was 93.2 lb. In 1928 the figure given in the League of Nations report on the World Sugar Situation⁴ is 98.6 lb. per head. This last-mentioned report gives full details of the sugar consumption per head in every country in the world. It may be interesting to note the consumption in pounds per head per annum in some of the chief countries at the present time (these figures are for 1927-28):—

Australia	127.7
Hawaii	121.4
Denmark	113.9
U.S.A.	109.2
Great Britain	98.6
Canada	89.9
Austria	66.0
France	52.4
Spain	26.9
Italy	20.0

These figures are calculated by dividing the total consumption of sugar by the population of the country concerned. They therefore understate the amount consumed. In calculating dietetic requirements or consumption of a population it is not correct to divide the

population into the amount consumed, as the population is spread through different sex and age-groups with different dietetic requirements. The "man value" of a population from a dietetic point of view is usually taken at 83 per cent.; 98.6 lb. per head per annum, or 4.32 oz. per head per day is the calculated amount if this point is not taken into consideration. Taking the man value of the population of 83 per cent., the amount of sugar consumed is equivalent to 5.23 oz. per head per day. Hutchinson⁵ in his book on dietetics suggests that a quarter of a pound of sugar per day may be regarded as a reasonable maximum which may be taken without harmful results. The average consumption is therefore above the reasonable maximum and many members of the population must be consuming a considerable excess.

Nutritive Value of Sugar.—Sugar is not an essential article of diet. In its concentrated form it is a comparatively recent addition to the diet of man and its place may theoretically be taken by other carbohydrates. This does not mean, however, that it is not an important food which may have many advantages and deserve a prominent position in a well-balanced diet. The chief advantage it possesses over the other forms of carbohydrate is that it is more rapidly absorbed, and is therefore a more readily available source of energy. For this reason it is specially valuable for those undertaking heavy muscular work or in competitions involving great physical energy. Dr. Nixon gives some excellent examples. He states⁶:—

"Yet, as a loyal Cambridge man, I attribute the recent success of the Cambridge boat to their recognition of the value of sugar in sustaining long physical effort. Dr. Somerville, the Everest climber, told me how at high altitudes the climbers lost their appetites for everything except sugar. In the South African War the soldiers said they preferred that the Boers should capture an ammunition column than a supply column with jam."

The valuable report of the United States Department of Agriculture⁷ on sugar also points out its value for the American farmer who is engaged in heavy muscular work. Other examples given of conditions in which sugar is especially valuable include polar expeditions, mountain climbing, and rowing. The pamphlet sums up the position as follows:—

"When the organism is adapted to the digestion of starch and there is sufficient time for its utilization,

sugar has no advantage over starch as a food for muscular work. In small quantities, and in not too concentrated form, sugar will take the place practically weight for weight of starch as a food for muscular work, barring the difference in energy and time, sugar having the advantage in these respects.

"It furnishes the needed carbohydrate material to organisms that have little or no power to digest starch. Thus milk is part of the natural food of the infant whose digestive organs are as yet unable to convert starch into an assimilable form.

"In times of great exertion or exhausting labour, the rapidity with which it is assimilated gives sugar certain advantages over starch and makes it prevent fatigue. This latter quality which renders it more rapidly available for muscular power may account for the fact that sugar is so relished by people who are doing muscular work and by those of active habits, such as children."

Another important use of sugar to be considered is its flavour. As stated in the report referred to:—

"Indeed its agreeable flavour has always constituted one of the chief reasons for its use, and will continue to do so even though we make use of the abundance of cheap starchy materials we possess, which theoretically may readily take the place of sugar as a food."

It has been maintained, in fact, that the desire for sugar is proof of its value. It must be remembered, however, that this desire in man is an instinct which developed in times when sugar was only procurable in very small quantities in comparison with the amounts obtainable at the present time. Again to quote from the report:—

"That sugar on account of its agreeable flavour furnishes a temptation to take more carbohydrate food than the system requires cannot be denied. The vigour of digestion and muscular activity in each particular case would seem to suggest the limit. A lump of sugar represents about as much nutriment as an ounce of potato, but while the potato will be eaten only because hunger prompts, the sugar because of its taste may be taken when the appetite has been fully satisfied."

The Economic Value of Sugar.—On studying a table showing calories per penny for various foods, sugar will appear to be one of the cheapest articles obtainable, but, on examining the case more closely it will be seen that if the more expensive foods, that is proteins and foods containing an adequate supply of roughage, vitamins, salts, etc., are supplied from their cheapest source, that is from the vegetable kingdom, a sufficient supply of carbohydrate is assured.

The accompanying diet, containing no sugar, made out on lines of the adult ration suggested by the British Medical Association, gives an adequate variety of foods, 37

grammes of first-class protein, $\frac{1}{2}$ pint of milk, sufficient variety, roughage, vitamins, and salts. The total cost is slightly below that of the British Medical Association Committee diet, being 5s. 8½d. as compared with 5s. 10½d. per week.

expensive and valuable proteins and discouraged from purchasing sugar.

Injurious Effects of Excess of Sugar.—These may be classified as (1) those due to the form in which the sugar is taken; and (2) those due to an actual excess.

FIRST-CLASS PROTEIN = 37 GRAMMES.

Item.	Quantity.	Price. B.M.A. mean.	Protein. Grammes.	Fat. Grammes.	Carbohydrate. Grammes.	Calories.
Beef	$\frac{1}{2}$ lb.	3d.	42.6	41.7	—	563
Minced meat	$\frac{1}{2}$ lb.	2½d.	42.7	41.8	—	563
Corned beef	$\frac{1}{2}$ lb.	3d.	59.6	42.4	—	639
Eggs	4 ozs.	2d.	12.6	11.4	1.6	164
Cheese	$\frac{1}{2}$ lb.	3½d.	58.3	79.4	7.0	1,005
Milk	2½ pts.	6½d.	43.6	47.6	63.4	882
Butter	$\frac{1}{2}$ lb.	5d.	0.4	188.2	—	1,752
Suet	1 oz.	½d.	0.3	26.4	—	247
Lard	$\frac{1}{2}$ lb.	3d.	—	226.8	—	2,110
Bread	9½ lb.	1s. 4½d.	274.8	43.9	2055.1	9,960
Potatoes	7 lb.	5d.	60.2	0.8	574.8	2,612
Peas (dried)	$\frac{1}{2}$ lb.	2d.	46.2	1.4	129.4	734
Tea	$\frac{1}{4}$ lb.	3d.	—	—	—	—
Oatmeal	$\frac{1}{2}$ lb.	1½d.	27.0	19.5	158.7	943
Rice	$\frac{1}{2}$ lb.	1½d.	13.4	1.0	182.2	810
Cabbage	1 lb.	1d.	3.2	0.2	17.7	88
Beans	$\frac{1}{2}$ lb.	1½d.	42.2	1.6	141.0	766
Barley	$\frac{1}{2}$ lb.	1d.	15.8	1.8	181.2	825
Fresh fruit and vegetables	—	7d.	—	—	—	100
Total weekly quantities ...	—	5s. 8½d.	742.9	775.9	3512.1	24,763
Daily quantities per man...	—	—	106.1	110.8	501.7	3,537

It is not suggested that a complete absence of sugar in a diet is therefore desirable. This diet is put forward to show that sugar is not an economic necessity. It may be objected that if protein is obtained from vegetable sources a smaller amount of first-class protein will be consumed. The diet suggested, however, contains 37 grammes, an amount considered adequate by many leading authorities. The diet also contains a slightly larger quantity of milk and eggs than suggested in the British Medical Association diets. Diets rich in first-class protein require a certain amount of pure carbohydrate, most easily obtained in the form of sugar, to balance them. Cheaper diets made up of vegetable foods do not require sugar. Those who can spend liberally on a diet, therefore, and thus obtain the more expensive articles of food in excess, such as meat, fish, eggs and milk, may well spend money on sugar. But those of more limited means will, however, tend to eat an excess of carbohydrate. They should therefore be encouraged to purchase the more

(1) *Effects due to the Form in which Sugar is Taken.*—These will naturally be confined to the gastro-intestinal tract. The effect on the teeth is well recognised. A leaflet⁸ on the Prevention of Decay in Teeth has been issued by the Society of Medical Officers of Health in which it is stated that starchy and sugary foods are liable to stick on or between the teeth and undergo fermentation and thus cause decay. The sugary foods mentioned are: all foods to which sugar is added; sweets of all kinds; honey, syrup, jams, marmalade; milk. These foods, with the exception of milk, consist largely of artificially refined sugar or are made up with it. The eating of large quantities of sugar is not necessarily bad for the teeth; but as sugar in a civilised diet is chiefly taken in the form of the food-stuffs mentioned, a relation between the amount of sugar consumed and the incidence of dental caries would be expected. Sir George Newman in his Report on the Health of the School Child⁹ draws attention to Mrs. Mellanby's Birmingham experiments, in

which the children given treacle showed a greater incidence of caries. Pitts¹⁰ in *Thursfield and Patterson's Text-book on Diseases of Children* states that "the great increase of sugar in a readily fermentable form is probably another factor in the great increase in dental caries in modern races."

With regard to the effect of sugar on the stomach it appears to be generally recognised that in a concentrated form it is an irritant. Dr. Nixon¹¹ states that

"In concentrated form it may irritate the mucous membrane of the stomach, or it may set up fermentation and cause in either case indigestion, flatulence and loss of appetite."

(2) *Effects due to an Actual Excess of Sugar.*—Ill-effects may also result to the gastro-intestinal system from an actual excess of sugar, without regard to the form in which it is taken. Sugar is an excellent culture medium for intestinal bacteria, which break it down with the formation of acid. These acids may again be a source of intestinal irritation. On the other hand, sugar is rapidly absorbed and is therefore not likely to remain in the intestinal canal for long enough to cause trouble in this way. Trouble may result, however, in the case of infants. The intestine of an infant is only made to deal with the small amount of lactose (4.5 per cent.) present in milk, and therefore patent infant foods which unfortunately often contain much larger quantities of sugar of a different character which is not so easily dealt with, may lead to intestinal irritation and its consequent troubles.

The effects of large quantities after absorption may be considered. Naturally the effects on metabolism have attracted considerable attention. It has been suggested that continued excess in the blood causes the pancreas to produce an excess of insulin which may later lead to a state of exhaustion of the Islets of Langerhans, and eventually produce diabetes. In spite of this reasoning, however, the incidence of diabetes does not bear out the contentions. C. A. Mills in America has been, and still is, investigating the problems of this disease. He compares the death-rate from diabetes with the consumption of sugar in a large number of countries, and in conclusion he states:—

"A study of this table fails to show any direct relationship between consumption of sugar and deaths from diabetes. Some countries with a high consumption of sugar, as Hawaii, Argentina and Cuba, have a

relatively low death-rate from diabetes, while some countries with a high death-rate from diabetes, such as the Netherlands and the Union of South Africa, come fairly well down the sugar consumption column. It is to be noted, however, that of the thirteen countries highest in consumption of sugar, eleven are found among the thirteen highest in death-rate from diabetes. I might cite various other instances to illustrate the lack of any uniformity between the intake of sugar and the deaths from diabetes, but the variability is so great that no further details seem necessary. Lack of space prevents the presentation of all the data on which these statements are made, but the study of the entire mass of the data leaves little doubt in my mind that the consumption of sugar as such is not related in a causal way with the death-rate from diabetes."

In connection with the subject and the effects of sugar on metabolism, it would be convenient here to consider the relation of sugar to acidosis. A diet deficient in carbohydrate and rich in fat is generally considered to be a ketogenic diet. Lack of carbohydrate may interfere with the complete destruction of fats with a resultant ketosis. Ketosis may occur secondarily from a variety of causes but the only "idiopathic" form which has been attributed to dietetic errors is the cyclic vomiting or periodic acidosis of children. It has therefore been suggested that there is danger in depriving children of sugar as it may predispose to acidosis. It is frequently recommended that the correct lines on which to treat the patient between attacks of this disease to prevent their recurrence, is to avoid fat and take carbohydrate in excess. Frequently, chocolate and sweets are prescribed. But if a large quantity of sugar is eaten it may undergo fermentation in the intestine, thus producing acid. The mucous membrane will then secrete alkali to neutralise the intestinal contents, and the blood will thus tend to be deprived of its alkali reserve. According to Dr. Leonard Findlay, a ketogenic diet does not in any case appear to predispose to attacks of cyclic vomiting. He states¹²:—

"The condition is not a mere matter of an arrest of the complete combustion of fat and the increased production of acetone bodies, since symptoms cannot be induced, even in a child who is subject to attacks of cyclic vomiting, by the administration of a ketogenic diet (fat rich, and carbohydrate poor) so as to produce an abnormal amount of ketones. In one example, at the very outset of an attack one of us deliberately put the child on such a diet with the intention of increasing the ketosis but the child, nevertheless, made a speedy and uninterrupted recovery."

Leonard Findlay is of the opinion that the cause of the disease is in great part nervous and that a defective diet cannot be considered

to be a cause of the condition. Similar views are put forward in Thursfield and Patterson's Text-book.¹⁴ They state:—

"In sufferers from this condition there are no detectable differences in the response to fasting or to a ketogenic diet as compared with normal children. It is frequently impossible to induce an attack in the hospital ward even in the most regular cyclic type."

With regard to the relationship of excessive consumption of sugar to infective conditions, Paton¹⁵ considers that catarrhal conditions are favoured by excessive carbohydrate, and brings forward evidence in support of his conclusions. There must be so many other factors in the etiology of bronchitis and pneumonia that very carefully controlled observations would be necessary to give convincing evidence of such a contention.

Paton also draws attention to the relation of excessive sugar consumption to blepharitis and infective conditions in the eye. It is difficult to produce statistical evidence of the relation of sugar to infective processes generally, but that is no reason for neglecting reasonable theories regarding the subject. It is possible that a continued high blood sugar may predispose to infective processes. In diabetes there is a predisposition to boils, carbuncles and eczema.

It has been suggested that a relation between excessive sugar consumption and infective processes generally may be due to the fact that a diet containing excess of sugar may be lacking in vitamin A, the vitamin to which anti-infective properties have been attributed. Before a decision can be reached on this point, it is necessary to decide how much of the vitamins are desirable in a diet. There appear to be two views on the matter: one is that only a very small quantity is necessary and that disease only results from almost complete deprivation of vitamins which occurs chiefly in the laboratory and seldom in the population of this country; the other view is that, since certain diseases arise from almost complete deprivation, minor maladies or symptoms may result from relative deficiencies, and that therefore an abundant supply of vitamins is desirable in a diet. If this latter view is correct, diets containing large quantities of sugar may produce ill-effects by "crowding out" vitamins. On the other hand, if only very small quantities are required it is more probable that the injurious effects are due to the sugar itself.

There are various other conditions that have been attributed to excess of sugar. Cameron considers that in children it predisposes to the production of the "lymphatic" or "catarrhal" child. He states¹⁶:—

"As a rule, their demand for sugar and starchy foods, especially bread, is insistent. Yet it is just these elements in the diet which seem the most harmful in that they tend to the retention of increased amounts of fluid in the body, to a rapid increase in weight and to the exacerbation of the catarrhal tendency."

It is also held that excessive consumption of sugar by children may lead to their being irritable. It is possible that excess of energy-producing food may cause this; on the other hand, the children frequently given sweets are probably "spoilt" children and the irritability may rather be due to faulty upbringing.

Paton,¹⁷ who has made a considerable study of the relation of sugar and disease, also suggests that it is a possible cause of hypertension, arteriosclerosis and cancer. With regard to cancer he points out a relation between the recent increase in the consumption of sugar and the increased death-rate from this disease. This is not very strong evidence, however, as there have been so many marked changes in our environment recently.

Finally, the question of the injurious effects of sugar cannot be left without reference to its effect in producing obesity. Sugar is a fat sparer, and its excessive use is well recognised as a cause of obesity.

Conclusions.—Consideration has been given to the quantity of sugar consumed per head in this country, its nutritive value, its value as flavour, its economic value and the harmful effects that have been attributed to its excessive consumption, and we may draw the following conclusions:—

(1) The average amount consumed per head per day is 5·23 oz., which is slightly in excess of the reasonable maximum of $\frac{1}{4}$ lb. daily, suggested by leading authorities on the subject.

(2) The nutritive value of sugar over starch and other carbohydrates is that it is a more readily available source of energy and so valuable for hard muscular exercise.

(3) Sugar is economically valuable in diets containing large quantities of animal protein. Roughly it may be stated that sugar is necessary to balance a diet containing more than 37 grammes of first-class protein, but for diets containing less than this quantity, sugar is

economically undesirable. In view of the fact that the diet of the poorer classes is more likely to be lacking in protein on account of its expense, the money spent by them on sugar is to a large extent unnecessary.

(4) The chief harmful effects of sugar are attributable to the concentrated form in which it is taken, e.g., as a cause of dental caries or intestinal irritation. The harmful results of a quantitative excess which have been considered form an interesting field for discussion and further research, but cannot yet be said to be definitely proven.

The general conclusions mentioned in the report of the U.S.A. Department of Agriculture already referred to also support the conclusion that it is chiefly the concentrated form in which it is often taken that is likely to produce harmful results as the following quotations show:—

"One may say in general that the wholesomeness of sweetened foods and their utilisation by the system is largely a question of quantity and concentration. For instance, a simple pudding flavoured with sugar rather than heavily sweetened, is considered easy of digestion, but when more sugar is used with the addition of egg and fat, we have as the result a highly concentrated form of food which can be eaten with advantage only in moderate quantities, and which is entirely unsuited to children and invalids."

"Sugar is a useful and valuable food. It must, however, be remembered that it is a concentrated food and, therefore, should be eaten only in moderate quantities. Further, like other concentrated foods, sugar seems best fitted for assimilation by the body when supplied with other materials which dilute it and give it the necessary bulk."

What advice then are those concerned with dietetic problems to give to the public? The simple advice to avoid eating sweets, pastries, jam and cakes between meals would both help to prevent the diseases attributable to the concentrated form in which sugar is taken, and lead to a reduction of the total amount consumed, and thus to a better balance of the national diet. One of the chief difficulties in giving such advice is the objection that many people have to any negative dietetic advice. If something "extra" is to be given to children the public feels it is sure to be beneficial. If children are "deprived" of their sweets, food is being taken away from them. Sugar is rightly considered to be a food and it appears to be difficult for some minds to grasp that it may be beneficial to take food from undernourished children when it is the wrong food. It must be remembered that correctly

balanced meals are in the end the cheapest.

Unfortunately, much propaganda is indirectly being carried on which encourages the consumption of sugar. Sugar is a valuable preservative and thus constitutes a large part of patent foods which are advertised both among the medical profession and the laity. Sugar, cakes and sweets can also be made into more attractive forms than most articles of diet. Whatever may be the effects of this, it is unfortunate that manufacturers and traders should be exerting such a powerful influence on the national diet.

On the other hand, the recent interest in nutrition has led to much valuable propaganda being done to encourage the poorer classes to eat the more nutritious foods, such as milk, eggs, meat, fruit and vegetables, but children may have no appetite for these if, in the interval between their meals, they have filled themselves at the tuck shop.

In conclusion, therefore, propaganda should not be confined to encouraging the public to eat more of the valuable foods, but should extend to discouraging them from eating the less valuable which to-day are being eaten in excess.

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Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters).

The Annual Dinner.

The Annual Dinner of 1935 will go down in history as an occasion on which records were broken; more people in a smaller space listening to fewer speeches in a shorter period than ever before. For some of the records broken Sir George Newman must be held responsible. Clearly it was because he was the guest of honour and the honoured guest of the Society that its Fellows attended in numbers so large that in the reception room there was barely room to receive and be received or raise a hand in greeting to a distant friend, and in the dining room so cramped a space that when the waiters passed between the tables there was danger for those seated thereat unless they stooped, and elbow made more frequent contact with elbow than was either comfortable or polite. That these conditions affected only those below the salt may be hoped, since the galaxy at the top table was even more glittering than usual, the President, the Minister of Health and Sir George Newman being supported by at least two members of the House of Lords, two or more of those recently-elected members of the House of Commons, a number of Presidents and Secretaries of kindred bodies and the two or three most distinguished members of the Council of the Society itself.

Sir George Newman, Guest of Honour.

For that there were so many noteworthy personalities present, Sir George Newman was again responsible and doubtless had there been more room there would have been many more in attendance to see him and to honour and hear him. As everybody knows, Sir George has been for a long time one of the leading medical orators and conspicuously the leader so far as the preventive side is concerned. At the dinner he added to his laurels, making a speech which was in every sense appropriate, though it was not long and he was quite obviously much moved by the occasion and the warmth and the enthusiasm with which he was received on rising. The toast of the health of Sir George Newman was in the able hands of Dr. G. F. Buchan and, knowing the guest of honour so well, he was all the better qualified to introduce that intimate touch that can give so much of added grace and attraction.

The Minister of Health and the Society.

The only other toast proposed during the evening was that of the Society, which came from the Minister of Health, Sir Kingsley Wood. This was not by any means his first appearance at a function of this sort, Sir Kingsley having been Parliamentary Secretary to no fewer than four Ministers of Health in the course of the last ten years and called upon to deputise for some or all of them from time to time. It must be a record for any Minister of the Crown to have had so long and so intimate an association as this with the department of which he is given charge, and there can be but few who are in a position to claim to have been the first Parliamentary Secretary to the first Minister. The first Minister was, of course, Dr. Addison and, having acted with him, Sir Kingsley Wood occupied a similar position alongside Sir Alfred Mond (afterwards Lord Melchett), Mr. Greenwood and Mr. Neville Chamberlain. In his speech the Minister recalled these things and although he did not make the claim, largely in all probability it was because his experience was so wide that he was able to speak with so much authority and knowledge upon the health matters that are engaging and will more and more engage the attention of his department and the health authorities for some time to come, and so suitably to refer to the services rendered by the Society and health officers and the cordial relations existing between them and the Ministry. Representing the central department along with the Minister were Sir George Chrystal and Dr. MacNalty, both of them present for the first time after taking up their duties, the former as Permanent Secretary and the latter as Chief Medical Officer. Also present from the Ministry were Dr. Carnwath and Dr. Lethem; and Dame Janet Campbell, the first woman medical officer of the Ministry, and her husband, Mr. Michael Heseltine, formerly of the secretariat, and now Registrar of the General Medical Council, were also there.

The President Replies.

The response to the toast of the Society was made by Dr. W. G. Savage, and was as genial and dignified as the Society would desire, containing the correct modicum of wit and of

assurance of loyalty to the Ministry and devotion to the public to whose service the medical officer of health brings so much knowledge of so many and so varied subjects and sciences. Recognising that no special provision had been made for voicing a welcome to the guests, the President wove into his reply a reference to the pleasure it gave him and the Society to have so many distinguished people willing to accept an invitation and to be present. Presumably there was some good reason for shortening the toast list, even if it was no more than a wish on the part of those brighter young and not quite so young people to get away from the society of the older and not so very much older members of the company and take part in such gaieties as a cabaret such as that provided at the Piccadilly can offer. In any case, ten had barely struck when the proceedings ended and guests and hosts joined in the struggle to escape.

Meetings and Conferences.

The week of the dinner was marked by a number of meetings, nearly every day providing opportunity for members of the Society and service to come together. The earliest meeting was that of the Health and Cleanliness Council when, at the luncheon to which the members were invited, Mr. Geoffrey Shakespeare, the Parliamentary Secretary to the Minister of Health, made a most interesting speech in proposing the toast of the Council. To this Dr. G. F. Buchan, as President, replied, afterwards taking the chair at the annual meeting. Another annual meeting was that of the Central Council for Health Education to which reference is made elsewhere. This conference becomes more and more firmly established as one of the features of the year and, held as it usually is on the eve of the Society dinner, assists in bringing together a good attendance for that function and the meetings of the Society that precede the dinner. These meetings are of the Council in the early part of the afternoon and of the Society as a whole later. At the Council meeting on this occasion something of a record was created, all the business being disposed of in a little over an hour. To an extent this very exceptional speed was attained because the business was largely non-controversial or could not be made the subject of much controversy. That the President, who was in the chair for the first time, by the skill and excellence of his management succeeded in keeping discussion

within reasonable limits is put forward in many quarters as the chief reason why the business was disposed of so quickly, even though it included consideration of a report from the Maternity and Child Welfare Group and of two disciplinary cases.

The Council and Society Meetings.

Pleasant happenings at the meeting were the nomination of Dr. T. W. Naylor Barlow (late of Wallasey) and of Dr. Edward Walford (formerly Medical Officer of Health of Cardiff and a foundation member of the West of England Branch in 1893) for election as fully-paid Life Fellows. Why there should have been delay until this year in making recognition of two such men as these it is difficult to understand. The names of Barlow and Walford always seem to have been associated with the Society and with the work and counsels of the Society. Dr. Barlow, in particular, has held many important posts both in the parent Society and the North-Western Branch, and has done yeoman service for the Society and his colleagues in many connections and directions. Of all the Fellows there is none more deserving of recognition than he. Doubtless it would have been given long ago in the form now taken if the practice had been one commonly followed. Now that the provision under which action of this sort is taken has been put into operation it is probable that every Branch will have names to bring forward, and the Society will readily take advantage of the power they possess to show their gratitude by bestowing, even belatedly, such an honour as the title of Life Member may carry. The meeting of the Society called for 5 o'clock was a short one also because the business to be done was largely formal, involving the reception of certain reports. To the President at least it must have been an advantage that the meeting was, in fact, so short and so free from controversy, as the dinner always involves a certain amount of preparation. Anyhow, everything went with extreme smoothness, and whether Dr. Savage congratulated himself at the end or not it may be said that he had every reason for doing so.

As She is Spelled.

"To D, . . . , tow all. Dir Sir,—if you was pasing by cud you gist give me a look in bick Cottage. Mr. H. . . ."

The Society.

Reports, Proceedings and Announcements.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, November 22nd, 1935.

The President (Dr. W. G. Savage) was in the chair and there were also present Drs. H. Stanley Banks, Vynne Borland, G. F. Buchan, Capt. G. S. Elliston, Drs. James Fenton, James Ferguson, A. W. Forrest, W. M. Frazer, R. P. Garrow, W. W. Jameson, A. Joe, R. H. H. Jolly, G. W. N. Joseph, James Mair, H. J. Milligan, Agnes Nicoll, W. Paterson, T. N. V. Potts, E. H. Snell, P. H. Stirk, J. A. Stirling, D. J. Thomas, A. G. G. Thompson, H. G. Trayer, Ernest Ward, H. Gibbons Ward, R. H. Wilshaw and F. T. H. Wood.

The President was accorded a warm welcome on his first appearance as chairman of the Council, and he himself, before opening the business of the meeting, extended a welcome on behalf of the Council to the following new members, Dr. H. Stanley Banks, Capt. G. S. Elliston, Drs. A. W. Forrest, W. M. Frazer, Agnes Nicoll and H. G. Trayer.

The minutes of the last meeting held on September 20th, were then approved and signed, and apologies for absence received from Drs. J. J. Buchan, Ethel Cassie, R. Veitch Clark, G. H. Pearce, R. M. F. Picken, Charles Porter, T. P. Puddicombe and E. W. Caryl Thomas.

Nominations for Life Memberships.—The Council unanimously decided to nominate for election under Article 12 as fully-paid Life Fellows the following: Dr. T. W. Naylor Barlow, O.B.E. (on the recommendation of the North Western Branch) and Dr. Edward Walford (on the recommendation of the Welsh Branch).

Salaried Service of Midwives.—The Council considered the following resolution submitted by the East Midland Branch:—

"That in the opinion of the East Midland Branch the scheme for a Municipal Midwifery Service prepared by the Joint Council of Midwifery requires very careful discussion before it can be made a safe basis for legislation, and the Council of the Society is requested to ask all Branches to give immediate consideration to the Scheme and forward their observations and criticisms thereon to Headquarters so that the opinion of the Society as a whole may be available when the matter comes before Parliament"

Dr. Fenton reminded the Council that he,

with Drs. Veitch Clark and J. J. Buchan, had been nominated to advise the special sub-committee of the Association of Municipal Corporations which was considering the Joint Council of Midwifery's scheme, and said that, when the Association had made its decision, he would be reporting fully on the matter.

The Council decided to follow the suggestion made in the resolution from the East Midland Branch, and to ask all the Branches of the Society to forward their observations on the Joint Council's scheme to headquarters not later than the end of January.

Appointments accepted by M.O.'s H. in contravention of the Askwith Memorandum.—The Council considered further action under Article 11 in the cases of the acceptance by two Fellows of the Society of appointments in contravention of the policy of the Society and the British Medical Association with regard to the Askwith Memorandum on Salaries. Both these Fellows were asked to proffer their resignations, by the decision taken at the Council's meeting of September 20th.

In the case of one of these Fellows, the Council decided, in the absence of any fresh information or of a letter proffering resignation, to apply the full provisions of Article 11. A vote was taken, and the necessary majority was obtained in favour of the expulsion of this Fellow.

In the other case a letter was received from the Northern Branch, stating that the Branch Council had considered certain correspondence, which had not previously been produced, in this connection and therefore asked the Council to defer any decision until this fresh information had been investigated.

The Council decided to defer further action under Article 11, until they had received a report on the above-mentioned correspondence from the General Purposes Committee.

Report of Trustees.—Dr. G. F. Buchan (Hon. Treasurer and Trustee) reported that there had been a meeting of the Trustees on November 1st when they had verified the stocks and investments held on behalf of the Society.

Report of the General Purposes Committee.—Dr. James Fenton presented the following report of the last meeting of the General Purposes Committee:—

(1) A meeting of the General Purposes Committee was held at the house of the Society on Friday, November 1st, 1935, at 2 p.m.

Present: Drs. James Fenton (Chairman), G. F. Buchan, J. J. Buchan, R. H. H. Jolly, G. W. N. Joseph, James Mair, H. J. Milligan, G. H. Pearce, Charles Porter, Ernest Ward, H. Gibbons Ward and F. T. H. Wood.

The minutes of the meeting held on September 6th were confirmed and signed, and apologies for absence were received from Dr. R. Veitch Clark, and Professor R. M. F. Picken.

(2) **Housing and Administration of the Society.**—(i) At their meeting held on May 17th last, the Council approved the recommendations made by the special Sub-Committee, under the chairmanship of Dr. F. T. H. Wood, regarding the future housing of the Society. At the same meeting the General Purposes Committee reported that further consideration was being given to the section of the Sub-Committee's report dealing with the administration of the Society's business.

(ii) Your General Purposes Committee discussed this subject at several meetings and now beg to recommend that certain alterations in administration, which are set out below, should be brought into effect as from January 1st next, with the object of immediate concentration upon recruitment of new members and increasing the Society's strength.

(iii) With regard to the editorial arrangements of PUBLIC HEALTH, Dr. Charles Porter has been re-elected Hon. Editor for the current session, and there is therefore no question of suggesting any change in the editorial arrangements at the present time.

(iv) In other directions, however, the work of the Society has been divided amongst several hands, i.e., (a) the general secretarial work, collection of subscriptions, etc., has been carried out by a part-time Executive Secretary (Mr. G. L. C. Elliston) at a salary of £450 p.a. with the assistance of one shorthand-typist (Miss Scotchford, £156 p.a.); (b) the arrangements for advertisements in PUBLIC HEALTH and for lettings of the Society's rooms have been left in the hands of Captain G. S. Elliston on a commission basis under the terms made at the time of his retirement from the Executive Secretaryship in September, 1930; (c) the accountancy work has been carried out by Mr. A. Edwards for an annual fee of £25; and (d) the indexing of PUBLIC HEALTH has been done outside the office at a fee of £5.

(v) The General Purposes Committee have come to the conclusion that it would be to the advantage of the Society if a whole-time Secretary were appointed as soon as possible, so that intensive recruitment work could be commenced without further delay. They have therefore reviewed the present position, and at their request the Chairman ascertained that Captain G. S. Elliston and Mr. Edwards would be willing to give up their fees above mentioned as from December 31st next, and that Mr. G. L. C. Elliston would be willing to act as whole-time Secretary to carry out the work of the Society previously performed by Captain Elliston and Mr. Edwards as well as his present secretarial work at a commencing salary of £525 p.a.

(vi) The following table shows, on an annual basis, the present cost of administration (left-hand column), and the future cost (right-hand column) if Mr. G. L. C.

Elliston takes over the work hitherto performed by the Consultant Secretary, and also the work of accountancy and indexing:—

PRESENT.	£	FUTURE.	£
Dr. Charles Porter...	100	Dr. Charles Porter...	100
Mr. A. H. James ...	50	Mr. A. H. James ...	50
Executive Secretary	450	Executive Secretary	525
Miss Scotchford ...	156	Miss Scotchford ...	156
Capt. Elliston		Auditor's fee ...	21
(Comm. on ads.)	120		
(comm. on lettings)	25		
Mr. A. Edwards			
(accountancy) ...	25		
Indexing PUBLIC			
HEALTH ...	5		
Auditor's Fee ...	21		
	£952		£852

It will be seen that under the new arrangement the cost would be £100 p.a. less than at present, and that there would therefore be this margin for the salary of an additional clerk without increasing present expenditure.

We therefore beg to recommend:—

(a) That Capt. G. S. Elliston and Mr. A. Edwards be accorded the sincere thanks of the Society for their work on its behalf, and for their willingness to co-operate by giving up this work at the end of 1935.

(b) That Mr. G. L. C. Elliston be appointed as whole-time Executive Secretary, as from January 1st, 1936, his duties to include all secretarial and business work on behalf of the Society, the management of the advertisements in the journal, and a special concentration on recruitment, at a commencing salary of £525 p.a.

(c) That the General Purposes Committee be authorised to appoint a second clerk to assist in the work of the office as from January 1st at a commencing salary of £104 p.a.

(3) **Memorandum on Salaries of Public Health Medical Officers.**—The Committee considered a letter from Dr. E. S. Galbraith, formerly S.M.O., York C.B., with reference to the attitude of the Board of Education, as set out in their letter of July 19th, published in PUBLIC HEALTH, October, page 25.

The Committee decided to recommend to the Council that Dr. Galbraith be informed that the Society sympathises with his present position, but is afraid that it is impossible at this stage to do anything further in his case.

The Committee also instructed the Executive Secretary to ascertain whether the B.M.A. were pursuing with the Board of Education the general question of the Board's attitude to the Askwith Memorandum.

(4) **Salaries of Whole-Time Public Veterinary Officers.**—The Committee received Majors Brennan de Vine, F.R.C.V.S., and D. S. Rabagliati, F.R.C.V.S., and Mr. F. Knight (Secretary) who attended to explain the campaign of the National Veterinary Medical Association to obtain the general application of their salaries scale for whole-time veterinary officers employed by local authorities (a copy of which was circulated for the last Council Meeting).

The representatives of the Association stated that efforts had been made to secure adoption of their scale by the County Councils' Association and the Association of Municipal Corporations. The C.C.A. sympathised with the attempt to obtain some uniformity of veterinary salaries but had stated that it was not within their province to advise adoption of salaries scales by their members. An interview had still to be arranged with the A.M.C. They said that the Veterinary Association took disciplinary action against any of their own members who acted in disloyalty to their salaries policy.

The representatives of the Association further said that approximately 50 counties and county boroughs employed whole-time veterinary officers, and that three of these were not applying their scale salaries. It appeared that the existence of this salaries scale was not known to some medical officers of health, and they therefore asked the Society to assist them by making the scale known to its members.

The General Purposes Committee recommend that a communication on the following lines be sent to the National Veterinary Medical Association:—"The Society heard the deputation with interest and sympathies with the aim of the Association to regularise salary conditions of municipal veterinary officers. The Society understands that one of the main obstacles to the general adoption of the scale lies in the fact that medical officers of health are ignorant of the existence of such a scale, and the Society therefore suggests that this can be remedied if the Association circularises to every M.O.H. of an authority which employs, or is likely to employ, whole-time veterinary officers a reasoned memorandum setting out the suggested salaries for the various grades of veterinary officers."

(5) *Hygiene of Crews' Spaces*.—The Committee considered the new series of recommendations drawn up by the Association of Port Sanitary Authorities with regard to the hygiene of crews' spaces, which is to be submitted by the Association to the Ministry of Health and the Board of Trade.

The Committee instructed the Executive Secretary to circulate copies of the memorandum to the next meeting of the Council and decided to recommend that the Association be thanked for giving the Society an opportunity of seeing this document.

(6) *Domestic Use of Smokeless Fuels*.—The Committee considered a report on the above subject by a special sub-committee of the Manchester City Council and the following resolution passed at the annual conference of the National Smoke Abatement Society:

"That this Annual General Meeting of the National Smoke Abatement Society congratulates the Manchester City Council upon its action in appointing, and in approving the report and recommendations of, a special sub-committee to consider the desirability and practicability of increasing the use of smokeless fuels (including gas and electricity), and urges all other local authorities either:—

(a) to consider and act upon the recommendations of the Manchester report, or

(b) to appoint committees of their own Councils with similar terms of reference."

The Committee decided to recommend to the Council that Dr. Cyril Banks, one of the Society's representatives on the National Smoke Abatement

Society, be asked to write an editorial on this subject for inclusion in PUBLIC HEALTH.

(7) *Sessional Programme Sub-Committee*.—The Committee considered the suggestion by Dr. A. Joe that a special sub-committee should each year be responsible for making early arrangements, in consultation with the President-elect, for the sessional programme.

The Committee decided to recommend that a sub-committee should be set up, to consist of the President for the time being, the Chairman of the General Purposes Committee and the Editor of PUBLIC HEALTH, who would act in consultation with the President-elect so soon as his name was known.

It was further suggested that this sub-committee should consider the arrangements for papers being read by representatives of the Society at conferences or meetings of other bodies.

(8) *Treatment and Use of Drugs at M. & C.W. Centres*.—The Committee considered a memorandum on the above subject presented by the Maternity and Child Welfare Group.

The Committee were of the opinion that it was difficult and unwise to try to define exactly the functions of maternity and child welfare centres, and that it was owing to the elasticity which had existed in the past that such success had been achieved. They therefore decided to recommend the Council to take no action on this memorandum.

The Council discussed the Group's memorandum at some length, and the Group's representative was asked to convey to them the reasons of the Council for accepting the recommendation that no action be taken.

(9) *Readmission to the Society*.—The Committee considered a letter from Dr. Peter Lowe, C.M.O.H., Herefordshire, enquiring whether he would be allowed to rejoin the Society.

In the opinion of the Committee there is nothing in the constitution of the Society to prevent a former member from applying for readmission, but his re-election would be subject to the usual conditions set out in Article 10.

In this connection, standing instructions were given to the Executive Secretary to refer to the General Purposes Committee any cases of doubt amongst those applying for election to the Society.

(10) *Carriage of Butcher's Meat in Vehicles used for Transporting Animals*.—The Committee considered a letter from the Association of County Medical Officers of Health, enclosing a communication from the Lindsey Diseases of Animals Committee with regard to the practice of using the same vehicles for carrying butcher's meat as are used for transporting animals.

The Committee decided to recommend that a reply be sent to the Association that, in the view of the Society, the powers given under Article 21 of the Public Health (Meat) Regulations 1924, if properly applied, are ample for the control of such a practice.

(11) *Local Government Hospital Stewards*.—The Committee considered a paper on the position of stewards in public health hospital administration, forwarded for information by the National Association of Administrators of Local Government Establishments.

The Committee decided to thank the Association for giving them the opportunity of seeing this document.

(12) *Cremation*.—The Committee considered a letter from the Editor of *Pharos*, the quarterly journal of the Federation of Cremation Authorities in Great Britain. This letter stated that it was the intention in the next issue of *Pharos* to include a feature on the health aspect of cremation, and that he had sent a letter to a large number of medical officers of health inviting them to give their views on the subject. He enquired whether the Society itself would wish to make a pronouncement in regard to cremation.

The Committee decided to recommend to the Council that it be left to individual medical officers of health to express their opinion in regard to cremation.

(13) *Meat Inspection*.—The Committee considered a letter from Dr. E. K. Macdonald, M.O.H., Leicester C.B., stating that it was proposed to introduce private legislation for Leicester to deal *inter alia* with the question of meat inspection. Dr. Macdonald said that it was proposed to include powers to inspect at some central depot meat killed outside the city and brought into the city for sale, either at the market or at butchers' shops. Dr. Macdonald asked whether the Society had any suggestions to make on this or similar matters suitable for inclusion in the Leicester Bill.

The Committee instructed the Secretary to inform Dr. Macdonald that the best method of ascertaining what has been done in other local Bills would be to enquire of the Parliamentary agents, who have such information readily available.

(14) *Notification of Erysipelas*.—The Committee considered a letter from the Chief Medical Officer, Ministry of Health, enquiring, in connection with the consolidation of the Public Health Acts, the view of the Society as to whether erysipelas should continue to be a notifiable disease.

After full consideration the Committee decided to recommend the Council to reply that the Society is of opinion that erysipelas should be retained as a notifiable disease, and considers it desirable that M.O.'s H. should receive as much information as possible in regard to infections caused by organisms of the streptococcal type.

(15) *Advisory Committee on Public Health Salaries*.—Dr. G. F. Buchan reported on the meetings held by the Advisory Committee set up under Section 10 of the Askwith Memorandum, at which questions regarding salaries under the Merioneth and Cardigan C.C.'s had been settled, and a case from Northampton deferred.

(16) *Milk for School Children—Power of M.O.'s H. to act otherwise than in accordance with the instructions of their authorities*.—The Committee gave further consideration to the Counsel's opinions considered at earlier meetings (see PUBLIC HEALTH, October, 1935, p. 23) and to the suggestion made by Professor Picken at the last Council Meeting.

The Committee had the benefit of the attendance and advice of Dr. Thomas Orr, and decided to recommend that the following be set out in full in the minutes of the next Council Meeting:—

"The Council directs attention to the fact that the decision of the Milk Marketing Board to accept for rebate only milk which had been approved, as regards source and quality, by the

medical officer of health does not constitute an authorisation to that officer to act on behalf of the Board, and that any authority so to act should be obtained from the council to which he is directly responsible."

(17) *Sterilisation of Utensils in the Production of Grade A Milk*.—(See Council Minutes, PUBLIC HEALTH, June, 1935.) The Committee considered a communication from the Borough Medical Officers Committee of the Metropolitan Branch with reference to the memorandum on the above subject by Dr. Savage adopted by the Council and submitted to the Ministry of Health. The final paragraph of the memorandum read as follows:—"The Council of the Society of Medical Officers of Health are therefore strongly of the opinion that a licence for the production of Grade A milk should only be given when the applicant's equipment provides for efficient methods of steam sterilisation."

The communication from the Borough Medical Officers Committee expressed the following view:—

"That the opinion of the Council of the Society should be amplified to include the distribution, which in the metropolis, has at least as important a bearing as production in the provinces."

The Committee recommend the Council to endorse this opinion of the Borough Medical Officers Committee, and to notify the Ministry of Health that the recommendations regarding sterilisation of utensils should be held to cover retailers of Grade A milk as well as producers.

(18) *Supply of Milk to Maternity and Child Welfare Authorities*.—Dr. Thomas Orr raised the question of the delay by the Milk Marketing Board in formulating the proposed scheme for the supply of milk at a cheap rate to Maternity and Child Welfare authorities for expectant and nursing mothers and children under school age.

He urged that an expression of opinion by the Society regarding such a provision of milk would be of assistance in expediting the scheme.

After discussion the Committee agreed to recommend the following pronouncement for adoption by the Council:—

"That the Society are of the opinion that the health of expectant and nursing mothers, and children under school age, would be improved if there were more milk available for them."

(19) *Recruitment*.—The Executive Secretary reported the election of 31 Fellows and 6 Associates at the meeting of October 18th, and that 20 candidates have been nominated for election on November 22nd.

The Committee in this connection considered the wording of the circular letter which is sent to prospective members of the Society.

The Committee were of opinion that in future prospective members should be sent a shorter circular letter, together with a copy of the booklet on the Constitution and Bye-Laws of the Society.

They instructed the Executive Secretary to draft a shorter letter for consideration at its next meeting.

(20) *Official Advertisements in PUBLIC HEALTH*.—Dr. James Mair submitted the following resolution passed at the last meeting of the Yorkshire Branch:—

"Resolved that the Branch noted with pleasure in a recent number of PUBLIC HEALTH the appearance of an advertisement from a local authority

requiring a medical officer, and they suggest that the Council consider whether steps cannot be taken to obtain more advertisements of this nature, thus increasing the prestige, income and usefulness of the journal."

The Committee welcomed this resolution, which they decided to recommend for the approval of the Council.

(21) *Midland M. & C.W. Sub-Group*.—The Executive Secretary reported that the Hon. Secretary of the above Sub-Group had asked whether it would be possible for them to extend invitations to M. & C.W. Medical Officers outside the Midland Branch area.

The Committee were of opinion that there would be no objection to this being done, subject to the hon. secretaries of the other Branches concerned being notified of the proposal.

(22) *International Hospital Association*.—A letter was received from the Hon. Secretary, International Hospital Association, submitting the redrafted constitution of the Association and asking the Society to send representatives to a meeting to be held in London on Wednesday, November 13th.

The Committee decided to request the President and Dr. Veitch Clark to attend as the Society's representatives.

It was reported to the Council that owing to the inability of the President and Dr. Veitch Clark to attend the above meeting, Drs. James Ferguson and Thomas Orr had represented the Society and had submitted a report, consideration of which was referred to the General Purposes Committee.

(23) *Salaries of Public Health Dental Officers*.—The Secretary reported that the conference on salaries of public health dental officers had now been fixed for Friday, November 29th at 3 p.m.

(24) *Matters Deferred to the Next Meeting*.—(1) Memorandum on Facilities Desirable in Order to Improve and Maintain the Efficiency of Medical Personnel in a Public Health Department, submitted by Dr. Agnes Nicoll. (2) Resolutions regarding the status of Venereal Diseases Officers of local authorities, submitted to the Ministry of Health by the Medical Advisory Board, British Social Hygiene Council.

(25) *A Vote of Thanks to the Chairman*.—This being the last meeting of the present Committee, a very hearty vote of thanks to Dr. James Fenton was passed unanimously for his services as Chairman of the Committee for the year 1934-35.

The Council adopted the report and recommendations of the Committee with the additions shown under paragraphs 8, 9 and 22.

Election of General Purposes Committee.—The Council elected the following to constitute its General Purposes Committee for the session 1935-36, in addition to the President (Dr. W. G. Savage), Vice-Presidents (Drs. R. Veitch Clark, Charles Porter and G. H. Pearce) and the Hon. Treasurer (Dr. G. F. Buchan), who are members *ex-officio*: Drs. T. W. Naylor Barlow, J. J. Buchan, James Fenton, A. Joe, R. H. H. Jolly, G. W. N. Joseph, James Mair,

H. J. Milligan, R. M. F. Picken, Ernest Ward, H. Gibbons Ward and F. T. H. Wood.

Election of Neech Prize Assessors.—In addition to the President and the Hon. Editor, who are assessors *ex-officio*, the Council re-elected Professors W. W. Jameson and R. M. F. Picken for the session 1935-36.

Representation of the Society.—The Council elected the following to represent the Society: (1) on the Joint Tuberculosis Council, 1935-36, Professor W. W. Jameson; (2) on the Court of Governors of the London School of Hygiene and Tropical Medicine, for three years—Dr. J. J. Buchan; (3) to take the place of Dr. Agnes Nicoll on the M. & C. W. Committee of the National Council of Women—Dr. Stella Churchill.

Nominations of representatives on the Central Council for District Nursing in London were referred to the Metropolitan Branch.

M. & C.W. Group Dinner-Discussion.—The attention of the Council was drawn to the Dinner-Discussion arranged by the Maternity and Child Welfare Group, to take place at the Criterion Restaurant on Friday, December 6th, when Capt. G. S. Elliston, M.P., and Sir Arnold Wilson, M.P., would open a discussion on "Politicians and Public Health."

The Group extended an invitation to all members of the Society to be present on this occasion.

The meeting then adjourned.

ANNUAL GENERAL MEETING.

The Annual General Meeting of the Society was held at the house of the Society on Friday, November 22nd, 1935, with the President (Dr. W. G. Savage) in the chair.

The minutes of the last Annual General Meeting were approved and signed.

The meeting adopted the annual reports of the Council, the Hon. Editor, the Hon. Treasurer and the Auditor, together with the balance sheet and revenue account, as printed in the last number of PUBLIC HEALTH on pages 64 *et seq.*

A hearty vote of thanks was passed to the Hon. Editor and the Hon. Treasurer for their work on behalf of the Society.

In presenting his report, the Hon. Treasurer drew attention to the increase in income by subscriptions in 1934-35, which he said was mainly due to a collection of arrears. He also

mentioned that the figure for repairs and decorations under expenditure included the redecoration of the maisonette in the Society's house, which would henceforward bring in a revenue by rental of £175 per annum. He once more stressed the importance of recruitment of new members.

In this connection, Dr. J. L. Burn asked whether the Council could consider arranging for eminent persons to address the Branches in order to increase the interest of Branch meetings.

The meeting then re-elected Mr. James T. Harris as Auditor for the session 1935-36.

The following candidates being duly proposed and seconded were elected to the Society:—

As Fellows:—

Armstrong, Keridwen St. Valentine, M.D., D.P.H.; Emerson, H. H. A., Col., D.S.O., A.M.S., M.B., B.Ch. (DUBL.), D.P.H.; Forsyth, Charlotte Elizabeth, M.B., CH.B. (EDIN.) D.P.H.; Gorman, James, M.B. (EDIN.), D.P.H.; Greener, Joan Ethne, M.B., CH.B. (BIRM.); Hepburn, Janet Whyte, M.B., CH.B. (GLASG.), D.P.H.; Jamieson, Elizabeth Robertson, M.B., CH.B. (EDIN.), D.P.H.; Ker, Frank Leighton, M.B., CH.B. (EDIN.); MacKenzie, Mary Meta, M.B., CH.B. (ABERD.), D.P.H., M.M.S.A.; Martin, Russell Dickson, M.B., CH.B. (GLASG.), D.P.H.; Phillips, Lilian Edith, M.R.C.S., L.R.C.P., B.A. (LOND.); Smith, Eric Rollins, M.D. (LIV.), D.P.H.; Walters, Constance, M.B., B.Ch. (WALES).

As Associates:—

Davie, George Mackenzie, L.D.S., R.F.P.S. (GLASG.); Macdonald, John Hector Nelson, L.D.S., R.F.P.S. (GLASG.); Morgan, Richard Ernest, L.D.S. (BIRM.); Munro, Anne Moir, L.D.S., R.C.S. (EDIN.); Richardson, Evelyn, L.D.S. (EDIN.); Sarson, Henry Sidney Ruegg, H.D.D., R.C.S. (EDIN.), L.D.S., R.C.S. (ENG.); Sleight, Bernard, B.Ch.D. (LEEDS).

A number of nominations were received for the election to be held on December 20th.

The meeting then adjourned.

ANNUAL DINNER.

A record in the number of attendances was easily created at the Annual Dinner of the Society, held in the Georgian Suite of the Piccadilly Hotel, London, on Friday, November 22nd, 1935, when the President (Dr. W. G. Savage) and Miss Savage received over 250 members and guests.

The President was supported by the following:—

Past Presidents.—Dr. G. F. Buchan (Hon. Treasurer), Sir Francis Fremantle, O.B.E., M.P. (Member of Council), Dr. C. Killick Millard, Dr. Charles Porter (Hon. Editor), Sir John

Robertson, C.M.G., O.B.E., and Dr. E. H. Snell (Member of Council).

Members of Council.—Dr. H. Stanley Banks (President, Fever Hospital Medical Service Group), Dr. Vynne Borland, Captain G. S. Elliston, M.C., M.P. (Consultant Secretary), Dr. James Fenton (Chairman, General Purposes Committee), Dr. James Ferguson, Dr. A. W. Forrest (President, Home Counties Branch), Dr. W. M. Frazer (President, North Western Branch), Dr. R. P. Garrow, Professor W. W. Jameson, Dr. R. H. H. Jolly, Dr. H. J. Milligan, M.C., Dr. W. Paterson, Dr. T. N. V. Potts, Dr. T. P. Puddicombe, D.S.O., Dr. P. H. Stirk, Dr. D. J. Thomas, Dr. E. W. Caryl Thomas, Dr. H. G. Trayer (President, Tuberculosis Group), Dr. A. A. Turner, M.C., Dr. H. Gibbons Ward, Dr. R. H. Wilshaw, and Dr. F. T. H. Wood, O.B.E.

Branch and Group Presidents.—Dr. G. H. Dart (Metropolitan Branch), Dr. L. Meredith Davies (West of England Branch), Dr. P. G. Horsburgh (Midland Branch), Dr. A. B. Williamson (Southern Branch), and Mrs. W. Rosa Thorne, D.D.S. (Past President, Dental Officers' Group).

John Adam, Esq., Dr. L. C. Adam, Dr. A. F. Adamson, Mrs. Adamson, Dr. B. W. Anderson, Dr. G. C. Anderson (Medical Secretary, British Medical Association), Dr. E. B. Argles, Mrs. Argles, Dr. W. M. Ash, Mrs. Ash.

Councillor D. J. Bailey, J.P., Dr. A. L. Banks, Mrs. A. L. Banks, Mrs. H. S. Banks, Dr. H. L. Barker, Mrs. Barker, Dr. Malcolm Barker, Dr. H. W. Barnes, The Rt. Hon. Lord Bayford, P.C., J.P. (President, County Councils' Association; Vice-Chairman, Somerset County Council), Dr. E. F. Bebbington, Myles Bickerton, Esq., F.R.C.S., Mrs. Bickerton, Dr. E. J. Boome, Mrs. Boome, Frederick Breese, Esq., L.D.S., Mrs. F. Breese, W. Leigh Breese, Esq., L.D.S., Mrs. W. L. Breese, Dr. G. L. Brocklehurst, Mrs. Brocklehurst, Dr. G. I. Brodie, Dr. C. O. S. B. Brooke, Mrs. Brooke, Mrs. Buchan, Dr. Helen Buck, Dr. H. A. Bulman, Dr. J. L. Burn, Dr. Matthew Burn, M.C., M.M.

Dame Janet Campbell, D.B.E., Dr. Thomas Carnwath, D.S.O., J. W. Catlow, Esq., C.C. (President, Association of Education Committees), Dr. Irene Chandler, Mrs. W. I. Chaplin, Dr. Stella Churchill, Sir George Chrystal, K.C.B. (Secretary, Ministry of Health), Dr. J. A. M. Clark, Mrs. Clark, Dr. Mary Clarke, A. Powell Coke, Esq., Dr. F. Garland Collins, Mrs. Collins, Dr. G. Lissant Cox, Mrs. Cox.

Sir W. Dalrymple-Champneys, Lady Dalrymple-Champneys, Dr. W. Allen Daley, Mrs. Daley, A. E. Darby, Esq., Dr. Hilda M. Davis, Dr. W. H. Dickinson, O.B.E., Mrs. Dickinson, Dr. W. T. Donovan, Dr. N. D. Dunscombe.

Mr. G. L. C. Elliston, M.A. (Executive Secretary, Society of Medical Officers of Health).

Dr. J. S. Fairbairn (Chairman, Central Midwives Board), Councillor P. Fairhurst, Dr. H. A. Fawcett, Mrs. Fawcett, Mrs. Fenton, Mrs. Ferguson, A. N. Ferrier, Esq., Dr. J. Graham Forbes, Mrs. Forrest, Mrs. Frazer, Dr. V. Freeman, Mrs. Freeman, Dr. L. S. Fry, Mrs. Fry.

Mrs. Garrow, Dr. Muriel Gibson, Councillor George Goldsmith, Dr. E. W. Goodall, O.B.E.

Dr. Betty C. Hamilton, Dr. E. H. R. Harries, Mrs. Harries, P. T. Harrison, Esq., Mrs. Harrison, Dr. A. G. Henderson, Mrs. A. G. Henderson, Michael Heseltine, Esq. (Registrar, General Medical Council), Dr. Charles Hill (Deputy Medical Secretary, British Medical Association), Mrs. Charles Hill, Dr. T. W. Hill, Mrs. T. W. Hill, Sir Fredk. Hobday, C.M.G. (Principal, Royal Veterinary College), A. L. Hobhouse, Esq. J.P., C.C. (Chairman, Public Health Committee, Somerset County Council), Mrs. Horsburgh, Dr. J. B. Howell, Mrs. Howell, Dr. J. W. Hunter, Mrs. Hunter, Dr. Robert Hutchison (President, Royal Society of Medicine).

Miss Cicely Jackson, Major R. W. H. Jackson, Mrs. Jameson, Dr. Iris Jenkin-Lloyd, Mrs. Jolly, Dr. Rose Jordan.

Dr. W. H. Kelleher, Alderman C. W. Key (Chairman, Metropolitan Boroughs Standing Joint Committee), Dr. H. R. Kidner, C. M. Kohan, Esq., O.B.E., Dr. Lydia Leney, Dr. W. A. Lethem, M.C., Mrs. Lethem, Dr. Vida Liddle, Dr. S. Fox Linton, Dr. J. Bruce Low, Mrs. Low, D. T. Lucke, Esq., B.Sc., F.I.C.

Dr. H. M. C. Macaulay, Mrs. Macaulay, Dr. G. F. McCleary, Dame Louise McLroy, D.B.E., Dr. D. P. McIver, Dr. R. Macleod, Mrs. Macleod, Sir Ewen Maclean, M.D., F.R.C.P., (President, British College of Obstetricians and Gynaecologists), Dr. A. I. McMahon, Dr. A. Salusbury MacNalty (Chief Medical Officer, Ministry of Health and Board of Education), Councillor C. A. G. Manning, D.L., J.P., Sir Frederick Kay Menzies, K.B.E., Mrs. Milligan, Dr. Egbert Morland (Acting Editor, *The Lancet*), Dr. R. Morrison.

Dr. Hugh Neil, Mrs. Neil, Miss O. Nethersole, R.R.C., Sir George Newman, G.B.E., K.C.B., D.C.L., LL.D., M.D., F.R.C.P., D.P.H., Dr. A. A. E. Newth.

Dr. K. Odling-Smee, C. W. Odling-Smee, Esq., Dr. H. L. Oldershaw, Mrs. Oldershaw, Dr. Thomas Orr.

Lt.-Col. G. S. Parkinson, D.S.O., Mrs. W. Paterson, Miss Cora Paterson, Prof. J. W. Paterson, Dr. D. D. Payne, F. J. Pilbeam, Esq., L.D.S., Dr. A. B. Porteous, Mrs. Porteous, Mrs. Charles Porter, Dr. C. R. D. Porter, Sir Allan Powell, C.B.E., Lady Powell, Dr. A. T. W. Powell, M.C., Mrs. Powell, Mrs. Puddicombe.

Dr. Maitland Radford, Dr. A. B. Raffle, Mrs. Raffle, Paul Scott Rankine, Esq. (Secretary, Central Council for Health Education), E. Rees-Jones, Esq., Dr. E. W. Rees-Jones, J. W. Dudley Robinson, Esq., M.Sc., Ph.D. (Secretary, Royal Sanitary Institute), Dr. James Rowatt, Dr. Violet I. Russell.

William Sargeant, Esq., Dr. S. W. Savage, R. Simpson, Esq., F.R.C.V.S. (President, Society of Veterinary Officers), Dr. Carol Sims, Dr. J. T. C. Sims-Roberts, Dr. R. D. Smedley, Frank Smith, Esq., Dr. E. H. R. Smithard, Rt. Hon. Lord Snell, O.B.E., J.P. (Chairman, London County Council), Miss Stern, B.Sc., Dr. W. B. Stott, Mrs. Stott.

Councillor H. E. Tate (Mayor of Bethnal Green),

Dr. John Tate, Mrs. Tate, Miss Tate, Dr. Dorothy M. Taylor, Mrs. D. J. Thomas, Mrs. E. W. C. Thomas, Arnold Thorne, Esq., Dr. G. Clark Trotter, Mrs. Turner.

S. D. Venning, Esq. (President, British Dental Association).

Dr. J. Sim Wallace, Dr. W. H. S. Wallace, Dr. Nora Wattie, Dr. Ernest Weatherhead, K. C. B. Webster, Esq., L.D.S., Dr. C. G. Welch, Mrs. Welch, Dr. J. S. Westwater, Miss Wheatley, Dr. C. F. White, Mrs. White, Dr. A. D. Whitelaw, Mrs. Whitelaw, Dr. Gladys E. Wilkinson, Sir William Willcox, K.C.I.E., C.B., C.M.G. (Master of the Society of Apothecaries of London), Dr. H. C. Maurice Williams, Mrs. Williams, Mrs. Williamson, Dr. Hugh Willoughby, Dr. W. M. Willoughby, Mrs. W. M. Willoughby, Miss Wilshaw, Miss M. S. Wood, Sir Kingsley Wood.

The loyal toast, proposed by the President, was enthusiastically honoured.

The Rt. Hon. Sir Kingsley Wood, P.C., M.P.

(Minister of Health), in proposing the toast of "The Society of Medical Officers of Health," recounted his associations with the Ministry of Health, principally as Parliamentary Secretary to former Ministers, during the ten years which had elapsed since he last addressed the Society. That period had been an eventful one in the field of local government and public health, with great legislative changes and reforms. Under the Local Government Act, 1929, for example, 143 poor law institutions had already been appropriated for the public health service. As regards maternity and child welfare, the number of ante-natal clinics had increased from 350 in 1924 to nearly 1,500 last year, and child welfare centres from 2,300 to well over 3,000 during the same period. The tuberculosis service had also expanded, the number of beds in institutions for the treatment of the disease having increased from 21,400 to 28,900 in the last ten years. Great credit was due to local authorities, and particularly to their medical officers, for the progress that had been achieved. There was, however, a great deal still to be done and it was unnecessary to emphasise the importance of seeking a solution of the problem of maternal mortality, which had shown no decline since the beginning of the century. Cancer was another problem of grave concern. Every year 60,000 people died of the disease in this country, and at present 150,000 people were suffering from cancer. It was a mistake to suppose that the nation was entirely defenceless against the disease, and there was a danger of allowing it to become a public bogey. Research was proceeding steadily, and already in radium, deep X-ray therapy and operative measures there were means to cure or alleviate

a greater proportion of cases than might be supposed, and when treatment was sought in time there was every hope of cure. Consideration must be given as to how best to devote existing knowledge to the solution of this difficult and serious problem. For the next few years there was a good and full programme, which included such questions as the further development of the maternity and child welfare and school medical services and the provision of nursery schools, and he knew the Ministry of Health would receive the fullest co-operation of the medical officers of health throughout the country.

The President, in response, thanked Sir Kingsley Wood for his understanding that they, as a Society and in their individual capacities, could and must play a very considerable part in the progress of public health in this country. Members of the public health service were often in a position to acquire expert knowledge which they were always glad to put at the disposal of the Ministry of Health to enable them to carry out their functions. The Society, whose principal object was to promote the advancement of public health in every branch, had existed for 79 years and claimed amongst its members the majority of those practising public health in this country. Dr. Savage reminded his audience of what the perfect medical officer of health should know. First he had to be a qualified practitioner of medicine and was required to keep abreast of progress in medicine generally, but perhaps particularly on the obstetric and gynaecological side; among other things he should be a sound physiologist, a trained statistician, possess a good working knowledge of pathology, bacteriology and chemistry, know a good deal about buildings and plans, be well acquainted with educational problems, mental deficiency and industrial diseases, prove himself a good, popular lecturer, and now, with slum clearance and housing much to the forefront, the study of entomology was an intimate part of his duties. The President concluded an excellent speech by offering a hearty welcome to the guests.

Dr. George F. Buchan proposed the toast of "Sir George Newman," the Society's guest of honour, who recently retired, on reaching the age-limit, from the post of Chief Medical Officer to the Ministry of Health and Board of Education. The Society, he said, desired to express its high appreciation of the work and talents of Sir George Newman and the great regard and affection of its members for him as a colleague

and a friend. Before commencing his 28 years' service in the central departments, Sir George had served as medical officer of health of a metropolitan borough and a rural county, but from his entry into the service he had been marked out for preferment on account of his high scientific attainments and his remarkable gifts for appropriate expression. He laid the foundations of the school medical service and united in the Ministry of Health the medical activities of various departments of government. In particular, thanks were due to him for the cordial relations which had existed between the central department of health and the public health departments of local authorities. Without that co-operation the striking progress in the field of public health could not have been made. The annual reports of Sir George Newman, to which every member of the health service had always looked forward, were unique in any land and in any language. Regarded not only as an able administrator but as the outstanding medical writer of his time, history would give Sir George a position very high in the list of those who had been good doctors as well as good writers. Of all periods of history it was doubtful if any had done so much for mankind as the era of preventive medicine with which the name of Sir George Newman would for ever be associated. He would go into retirement with the best thanks, the gratitude and the affection of every member of the public health service.

Sir George Newman, who, on rising to reply, was greeted with enthusiastic applause, expressed gratitude to Dr. Buchan for his generous words, and said he was glad to have an opportunity of attempting to thank the members of the Society for inviting him to their dinner. In 1895, he was instructed by wise men to join the Epidemiological Society and the Society of Medical Officers of Health. At that time, the Epidemiological Society had for its President, Shirley Murphy, and there and in the Society of Medical Officers of Health he first met Arthur Whitelegge, Arthur Newsholme, Timbrell Bulstrode, Dr. Tatham, Dr. J. C. McVail, Dr. Corfield and others whose names were well known in the Society. From them he learned not only an affection for and interest in those bodies but received services which he desired now most warmly to acknowledge. His appointment to Whitehall led to a controversy as to his suitability to undertake the post, and it was particularly satisfactory to him to be invited to be the guest of the Society who alone in the medical

profession at that time believed he could carry out the task allotted to him. In a sense, therefore, he came back after 28 years to thank the members of that Society for their support then and their continued and faithful support ever since. He congratulated the Society that in its progress during the past 40 years it had witnessed a very large and continually enlarging sphere of public service which ought to be its full consolation and reward. The Society had increased in numbers, had secured improvement in status, in duty and in pay, and had widened the whole field of public health service in this country. Best of all, it had created a new outlook and a new kind of appreciation of public health

among the English people. In conclusion, Sir George said: "I thank you with all my heart for the great reward and treasure which you have given me to-night. We look back over a long road and sometimes a very discouraging road, but none of us can say that we regret our choice or that we were called upon to take some share in this great work. It is little use making life longer if it be not better and larger. 'That also is our task.'"

The dinner finished much earlier than on previous occasions, and many of the members and guests afterwards took advantage of the opportunity of dancing and witnessing the cabaret entertainment in the hotel.

THE DUTIES OF A MEDICAL OFFICER OF HEALTH.—Under the impression, apparently, that stories relating to the duties of the medical officer of health, especially when questions affecting food were involved, are in general apocryphal, the individual who retailed this headed it "A True Story" and vouches for it: "An excited individual came to the public health department with a substantial complaint against a local restaurant. He was seen by the medical officer of health to whom he opened his hand which was full of a semi-masticated mass of (?) dishcloth, for all that immediately appeared to the contrary. The past history of the bolus showed that the material had been supposed by the complainant to be indiarubber and had tasted of this commodity on attempted and partly successful chewing. Cold words can hardly suggest the agitation and indignation of the complainant. His state was calmed or rather damped by a suggestion that we would remove the ill-looking mass from the immaculate varnish of the office table on which he had deposited the offence to a piece of paper where we could examine it with equanimity. Fingered lightly with a forceps the bolus resolved itself into two large (?) Portuguese oysters the worse for wear, part of another, a piece of fat and one of fibrous tissue. It then transpired that the complainant had been eating steak and oyster pie. The judgment was fully expressed to him in sorrow rather than anger:—

- (1) That, as a matter of fact, having found oyster in a steak and oyster pie he ought to have paid extra.
- (2) That having got something of unexpected consistency in his mouth his sensorium had tricked him into connecting consistency and taste.
- (3) That a cooked oyster would in any case have lost all taste reminders of its marine origin and its tactile succulence.

(4) That the evidence would be burned and the mess he had made mopped up.

The complainant left apologetic and mollified. Any stain was on the table only."

THE ROGERS PRIZE.—This prize, representing the accumulated income from the investment of a legacy given by the will of Dr. Joseph Rogers, deceased (after payment of any expenses incurred in the administration), will be awarded by the trustees, the President of the Royal College of Physicians and the Master of the Society of Apothecaries of London, "to such person as in their opinion shall have written the best or only essay on the treatment of the sick poor of this country and the preservation of the health of the poor in this country or either of such subjects," power being reserved to the trustees to withhold the award of the prize if no essay shall have been submitted which in their opinion merits a prize. The competition is open to all; the treatment of the subjects and the length of the essay are left to the discretion of the essayist. The essay must be typewritten, and must not have been previously published. If subsequently published the essay must be described as the Rogers Prize Essay. Persons desirous of competing for the prize, which it is estimated will amount to about £200, are invited to submit essays, which must be forwarded to Group Captain Henry Cooper, Clerk to the Trustees, Apothecaries' Hall, Water Lane, London, E.C.4, not later than May 1st, 1936. Essays should be signed with a motto or other *nom-de-plume*. The decision of the trustees as to the award or withholding of the prize shall be final and conclusive, and will be duly notified in the public Press. There are no conditions beyond those stated above.

The Branches and the Groups.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.

Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

A special meeting of this Branch was held in the Guildhall, York, on October 7th, 1935. Dr. G. C. F. Roe occupied the chair, and was supported by ten members.

Following the transaction of formal business, the members proceeded to take part in the opening of the York Health Exhibition by Sir George Newman, and afterwards made a tour of the Exhibition.

The inaugural meeting of the Branch for the session 1935-36 was held in the Hotel Metropole, Leeds, on October 25th, 1935. Over twenty members were present.

In the absence of Dr. J. A. Scott, the retiring President, Dr. T. N. V. Potts invested Dr. G. C. F. Roe, Medical Officer of Health and School Medical Officer, Halifax, with the badge of office and installed him in the presidential chair. Dr. Roe thanked the Branch for the honour done him by his colleagues.

Dr. J. J. Buchan, Medical Officer of Health, Bradford, was elected a representative on the Branch Council of the British Medical Association to fill the vacancy created by the resignation of Dr. J. A. Scott.

Dr. Gladys Russell reported that owing to the small number of attendances, it had been found necessary to suspend the meetings of the Maternity and Child Welfare Sub-Group of the Branch.

The question of advertising in *PUBLIC HEALTH* was considered, and it was resolved: "That the Branch note with pleasure in a recent number of *PUBLIC HEALTH* the appearance of an advertisement from a local authority requiring a medical officer, and they suggest that the Council consider whether steps cannot be taken to obtain more advertisements of this nature, thus increasing the prestige, income and usefulness of the journal."

The Hon. Secretary was instructed to forward this resolution to the Council of the Society.

It was decided that the December meeting should be held in Leeds on Friday, the 20th.

Dr. G. C. F. Roe delivered his presidential address on "**Random Excursions into Mental Prophylaxis**," a subject of supreme public interest. He showed, by means of epidiascopic projections, a series of human and anthropoid

brains and demonstrated the evolution and elaboration of the supra-granular layer *pari passu* with the higher mental processes. He dealt with racial decadence, modern dysgenic tendencies, the sterilisation of the mentally defective and birth control; and made a strong plea for placing more emphasis on the hereditary factors in regard to the ætiology and prophylaxis of mental deficiency. On the proposition of Dr. Jervis, seconded by Dr. T. Gibson, a very hearty vote of thanks was accorded to the President for his interesting address, which it is hoped may be published in full in a later issue of *PUBLIC HEALTH*.

The meeting was preceded by the annual luncheon of the Branch at the Hotel Metropole, Leeds. In the absence of the retiring President, Dr. T. N. V. Potts presided and forty-four members and guests were present.

After the loyal toast, proposed by the Chairman, the following were honoured: "The Society of Medical Officers of Health," proposed by Mr. R. C. Jones, Deputy Clerk, West Riding County Council; responded to by Dr. J. J. Buchan, Medical Officer of Health, Bradford: "Our Guests," proposed by Dr. T. Gibson, Medical Officer of Health, Wakefield, and Dr. N. Gebbie, Medical Officer of Health, Hull; responded to by Councillor T. Keighley, Deputy Chairman, Bradford Health Committee.

THE WEST OF ENGLAND BRANCH.

President: Dr. L. Meredith Davies, M.O.H., Devon C.C.

Hon. Secretary: Dr. P. H. Stirk, formerly M.O.H., Exeter.

A meeting of this Branch was held at St. Peter's Hospital, Bristol, on October 18th, 1935.

It was decided that the Branch should again nominate Dr. E. Ward for the Presidency of the Society for the session 1936-37.

The Hon. Secretary reported the receipt of a reply from the Council of the Society that the General Purposes Committee would continue to keep close observation on the matter concerned with the milk problem, calling in special advice when necessary; a Sub-Committee would be appointed to deal with any points that might require special attention, but the Council considered the appointment of a special committee undesirable.

The incoming President, Dr. Meredith Davies, was then installed, and a vote of thanks

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was accorded to Dr. Dunstan Brewer for the able manner in which he had occupied the chair during the past session.

"**The Graded Milk Scheme,**" was the subject chosen by Dr. Meredith Davies for his presidential address, and at the conclusion of its delivery the matter was discussed at some length, especially in regard to the difficulty experienced in connection with the scheme in scattered country districts. A vote of thanks to Dr. Meredith Davies for his address, proposed by Dr. Page, was carried by acclamation.

The Hon. Treasurer presented his report, and after being audited the accounts were duly passed.

The meeting terminated with a vote of thanks to the Bristol Public Assistance Committee for the use of the room for the meeting.

THE METROPOLITAN BRANCH.

President : Dr. G. H. Dart, M.O.H., Hackney.

Hon. Secretary : Dr. Vynne Borland, M.O.H., Bethnal Green.

A party of members of this Branch visited the works of Messrs. J. & E. Hall, Ltd., of Dartford, on October 25th, 1935, on the kind invitation of the firm. The members were received by Lord Dudley Gordon, one of the Directors.

A tour of inspection of Messrs. Hall's extensive premises under the guidance of the principals and technical experts of the firm revealed the great extent of their activities. Messrs. Hall are well known as makers of modern refrigerating plants for shops, restaurants and ships, but the visitors also observed cooling apparatus for use in mortuaries and even an air conditioning plant for the new Bank of England building in the making, the whole visit providing a very interesting insight into a modern engineering plant.

At the termination of the visit, the party was entertained at tea by the Directors, and Dr. Willoughby fittingly expressed the thanks of the Branch for the instruction afforded to the members and the courtesy of their reception. Lord Dudley Gordon replied. It may be mentioned that among the literature presented to each visitor was a most interesting history of the firm, which dates back to 1785 and numbers among its associates such distinguished engineers as Bryan Donkin and Richard Trevithick.

THE WELSH BRANCH.

President : Dr. D. Rocyn-Jones, C.B.E., J.P., County M.O.H., Monmouthshire.

Hon. Secretary : Dr. D. J. Thomas, M.O.H., Rhondda.

The first meeting of the session of this Branch was held at the Institute of Preventive Medicine, Cardiff, on October 11th, 1935, when nineteen members, including Dr. W. G. Savage (President of the Society) were present and the retiring President (Dr. Thomas Evans) occupied the chair. A letter was read from Dr. Rocyn Jones, the President-elect, stating that owing to an important engagement he regretted his inability to be present.

A letter from the Executive Secretary was read drawing attention to the lack of opportunities offered to departmental officers for attending conferences, etc., dealing with subjects bearing on their work, and the Hon. Secretary was instructed to draw the attention of medical officers of health within the area of the Branch to this matter.

Dr. Evans referred to the honour conferred on the Branch by the presence of Dr. W. G. Savage, and as the subject under discussion was "**Food Poisoning,**" the members were extremely fortunate in that Dr. Savage, who was obliged to leave early, had consented to open the discussion.

Dr. Savage thanked the members for their welcome and then briefly reviewed the more recent work on food poisoning. He referred more particularly to the recognition of eggs, especially ducks' eggs, as vehicles of infection and to the rôle of certain strains of staphylococci and, in a few outbreaks, of streptococci as infecting organisms.

Papers on the subject were subsequently read by Dr. C. W. Anderson (Assistant Medical Officer of Health, Cardiff), Dr. W. P. Phillips (Deputy Medical Officer of Health, Cardiff) and Dr. H. R. Tighe (Deputy Medical Officer of Health, Swansea), and it is hoped that these contributions will be published in a later issue of **PUBLIC HEALTH**.

Dr. W. Parry Morgan of the Cardiff and County Public Health Laboratory then gave a *résumé* of the recent advances in the bacteriology of food poisoning. He remarked that symptoms of food poisoning were sometimes attributable to the Flexner or Sonné groups of dysentery organisms. The most suitable medium for culture purposes was Maconkey's impregnated with brilliant green. The sugar reactions and the

significance of the absorption of the agglutinins in diagnosing food poisoning organisms were fully demonstrated.

Dr. W. A. Murphy (Ogmore and Garw), in summarising his experience of food poisoning outbreaks in his district, mentioned that the majority were caused by foods prepared in other districts. Synthetic cream was probably the cause of one small outbreak last July, and he questioned the importance of human carriers.

Prof. Picken said that it was essential that the bacteriological work in connection with any outbreak should be carried out promptly, and the facilities available at the Ministry's central laboratory were of advantage for undertaking the finer developments in the technique for isolating these organisms. Recent outbreaks at Cardiff had shown that human carriers probably existed. Simple commonsense methods of prevention, insisting on cleanliness in the preparation and handling of foodstuffs, appeared to be best; powers to license food producers were now in force at Cardiff but additional powers in regard to sampling were required.

Dr. Evans emphasised the failures to get at the sources of infection, due to lack of co-ordination with the persons who dealt with animal diseases. The study of comparative pathology and its application would be of great value in discovering the reservoirs of infection which caused food poisoning.

A hearty vote of thanks, proposed by Dr. D. A. Powell, was accorded to Dr. Savage and the readers of the papers for the interesting discussion they had provided.

ASSISTANT MEDICAL OFFICERS' AND SCHOOL DENTISTS' SUB-GROUP.

President : Dr. Amy L. Jagger, Assistant School Medical Inspector, Glamorgan County Council.

Hon. Secretary : Mr. Quentin A. Davies, L.D.S., Assistant Dental Officer, Glamorgan County Council.

A meeting of this Sub-Group was held in the Institute of Preventive Medicine, Cardiff, on October 23rd, 1935. The President occupied the chair, and twelve members and friends were present.

The following office-bearers were elected for the session 1935-36 :—

President.—Dr. Amy L. Jagger.

Hon. Secretary.—Mr. Quentin Davies, L.D.S.

Committee.—Drs. D. P. Holmes, W. P. Phillips, Mary Gordon and Mr. John Young.

Mr. D. N. Rocyn-Jones, F.R.C.S., gave an

address on "**The Treatment of Some Deformities of the Feet.**" After describing briefly the anatomy of the foot, Mr. Rocyn-Jones dealt in detail with the treatment of congenital and acquired foot lesions. Club foot, metatarsus varus and pes calcaneus were described under the former heading, and flat foot, hallux rigidus, Morton's disease and hammer toe in connection with the latter.

An interesting discussion followed, in which most of those present took part. At the close, on the motion of the President, seconded by Dr. Gwladys Evans, a cordial vote of thanks was accorded to Mr. Rocyn-Jones for his most lucid and helpful address.

THE HOME COUNTIES BRANCH.

President : Dr. A. W. Forrest, M.O.H., Leyton.

Hon. Secretary : Dr. R. P. Garrow, M.O.H., Hornsey.

A meeting of this Branch was held at the house of the Society on November 1st, 1935. Thirty-six members were present.

In the absence of Dr. Turner, the retiring President, Dr. G. Buchan, the senior ex-President present, invested the President, Dr. A. W. Forrest, with the President's badge of office.

Consideration of a letter from the Executive Secretary in regard to nominations for the Presidency of the Society for the session 1936-37, was postponed.

The Hon. Secretary read a letter received from the Executive Secretary suggesting that facilities should be given to assistant medical officers to attend Branch and Group Meetings of the Society.

The Hon. Secretary reported that Dr. Nash had offered to deliver to members of the Branch a lecture on the Heston and Isleworth Orthodontic Scheme, and that this was being arranged for December 5th. At Dr. Nash's suggestion, members from other Branches and others likely to be interested would be invited to attend the lecture.

Dr. Tapper, the Hon. Treasurer, submitted the accounts and balance sheet of the Branch for the year ended September 30th, 1935, which were approved.

Drs. Adamson and Herington were appointed Auditors for the year 1935-36.

Dr. A. T. W. Powell (Medical Officer of Health, Walthamstow), opened a discussion on the **Housing Act, 1935**, dealing particularly with the overcrowding survey. Many of the members

contributed to the discussion, and the views expressed indicated wide variations in methods of procedure in different areas.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.
Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held at Parker's Restaurant, Manchester, on November 8th, 1935, the President occupying the chair. Thirty-three members and visitors were present, and apologies were received from twelve members.

Mr. G. L. C. Elliston, the Executive Secretary, briefly addressed the members on the advantages of membership of the Society.

Mr. Alexis Tumarkin, M.B., F.R.C.S. EDIN., D.L.O. LOND., opened a discussion on the "**Conservative Treatment of Chronic Mastoid Disease**," with a very instructive and stimulating paper, which it is hoped will be published in an early number of PUBLIC HEALTH.

An interesting discussion followed, in which Dr. Sage Sutherland, Dr. H. Herd, Dr. Galloway and the President took part. On the proposition of Dr. Herd, seconded by Dr. Galloway, a hearty vote of thanks was accorded to Mr. Tumarkin, who replied to various points raised during the discussion.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.
Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A well-attended meeting of this Branch was held at the South-Western Hotel, Southampton, on November 18th, 1935, when Sir Francis Fremantle, O.B.E., M.P., D.L., M.A., M.D., M.CH., F.R.C.P., F.R.C.S., D.P.H., Chairman of the Medical Committee of the House of Commons, delivered an instructive address entitled "**Public Health in the New Parliament**." After relating his early experiences in public medical life in most of its varied aspects, Sir Francis traced the history of the exponents of public health from the Parliamentary viewpoint from the time of Dr. Addison to the present day, and concluded by epitomising the prospects of the near future. Some of the great problems awaiting discussion were noted, such as housing, nutrition, maternity and midwives, water supply and drainage (especially in rural areas). Important suggestions Sir Francis had in mind concerned such matters as linking up of hospitals and nursing inside and

out, instruction of doctors on the main public health lines, and the desirability of Parliament seeking advice from public health bodies rather than from specialists on the clinical side of medicine.

A hearty vote of thanks was accorded to Sir Francis Fremantle on the proposition of Dr. Maurice Williams, seconded by Dr. G. W. Fleming.

Following immediately upon the meeting Sir Francis proceeded to the Coliseum to open the Empire Health Week Exhibition.

THE MIDLAND BRANCH.

President: Dr. P. G. Horsburgh, M.O.H., Nuneaton.
Hon. Secretary: Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

The second meeting of the session of this Branch was held at the Medical Institute, 154, Great Charles Street, Birmingham, on November 7th, 1935. The President and twenty-six members were present.

The Hon. Treasurer (Dr. E. H. Snell) presented his annual financial statement and balance sheet for the session 1934-35, which was received and adopted.

Dr. E. R. W. Gilmore read a paper on "**Some Clinical Features of Cerebro-Spinal Meningitis**." After reviewing the history of cerebro-spinal fever during the present and past century, he gave a detailed account of 16 cases of this disease which had come under his care. The main features of each case, including symptoms, temperature charts, bacteriological findings, complications and sequelæ, were all dealt with in an exhaustive manner, as well as the treatment given. These 16 cases had a recovery rate of 60 per cent. Dr. Gilmore stressed the importance of early diagnosis and prompt administration of serum, and considered this was the main factor in diminishing the mortality and reducing the risk of the occurrence of complications. Whilst in favour of intensive serum administration in all severe cases of the disease, he considered it inadvisable to go by any rule of thumb doses and said that in cerebro-spinal fever, more than in any other infectious disease, each case had to be judged on its own merits in order to obtain the best results from treatment.

A hearty vote of thanks was given to Dr. Gilmore for his most interesting paper on the proposition of Dr. Auden, seconded by Dr. Anderson.

1935.

THE EAST MIDLAND BRANCH.

President: Dr. W. S. H. Campbell, M.O.H., Lindsey (Lincs.) C.C.

Hon. Secretary: Dr. J. A. Stirling, M.O.H., Chesterfield.

The opening meeting of the session of this Branch was held in the Guildhall, Nottingham, on October 17th, 1935, Dr. J. A. Fairer occupying the chair. Twenty-one members and one guest were present.

Dr. Fairer installed Dr. W. S. H. Campbell as President of the Branch for the session 1935-36, and Dr. Campbell suitably replied.

On the proposition of Dr. Banks, seconded by Dr. Barker, a unanimous vote of thanks was accorded to Dr. Fairer, the retiring President, for valuable services rendered during his year of office.

The Hon. Secretary read a letter from Dr. Kingston regretting inability to accept office on the Branch Council, and Dr. Ramage was unanimously elected to fill the vacancy. Dr. Ramage was also elected representative of the Branch on the Tuberculosis Group Committee for the session 1935-36.

Dr. Campbell delivered his presidential address on "**An Outbreak of Puerperal Fever in a Maternity Home**." His paper was very interesting and highly instructive, and at its conclusion he was warmly thanked by the members.

A further meeting of the Branch was held in the Guildhall, Nottingham, on November 14th, 1935, Dr. Fairer occupying the chair. Fourteen members and one guest were present.

Dr. Davies opened a discussion on "**The Proposed Municipal Midwifery Service**." Everyone present took part in the subsequent general discussion, and at its close a vote of thanks was accorded to Dr. Davies for his paper on the proposition of Dr. Macdonald.

Arising out of the discussion, the following resolution was passed unanimously and the Hon. Secretary was instructed to forward it to the Executive Secretary of the Society:—"That in the opinion of the East Midland Branch the scheme of a municipal midwifery service prepared by the Joint Council of Midwifery requires very careful discussion before it can be made a safe basis for legislation, and the Council of the Society is requested to ask all Branches to give immediate consideration to the scheme, and forward their observations and criticisms thereon to headquarters, so that the

opinion of the Society as a whole may be available when the matter comes before Parliament."

THE MATERNITY AND CHILD WELFARE GROUP.

BIRMINGHAM AND MIDLAND SUB-GROUP.

Chairman: Dr. Henry P. Newsholme, M.O.H., Birmingham.

Hon. Secretary: Dr. Agnes Young, ASST.M.O., Warwick C.C.

The annual meeting of this Sub-Group was held on October 12th, 1935, in the Carnegie Institute, Birmingham. Dr. Morris Jones, the retiring Chairman, presided. The following officers were elected for the session 1935-36:—

Chairman.—Dr. Henry P. Newsholme.

Vice-Chairman.—Dr. Hamilton Wood.

Hon. Secretary and Treasurer.—Dr. Agnes Young.

Committee.—Drs. Hirst (also Assistant Secretary), Balsillie, Lena Walker, Ursula Cox, Jean McLean and Ethel Cassie (*ex-officio* member).

Representatives on Group Committee.—Drs. Balsillie and Young.

Professor Richard Berry (Stoke Park Colony, Bristol) gave a most interesting discourse on "**Brain Structure in Relation to Social Efficiency**." A vote of thanks to Professor Berry was proposed by Dr. Newsholme and seconded by Dr. Balsillie.

Prior to the meeting a luncheon was held at the Three Counties Club, Birmingham, at which Professor Berry was the guest of honour.

ANNUAL REPORT, 1934-1935.

The Sub-Group held four meetings during the session, and also paid a visit to the Wincanton Factories of Messrs. Cow & Gate, Ltd.

The fourth annual meeting took place at the Children's Hospital, Birmingham, on October 20th, 1934, Professor Parsons presiding. After routine business, Dr. Helen Mackay (London) held the eager attention of the meeting by an extremely interesting address on "**Diet and Susceptibility to Infection**." Prior to the meeting the retiring Chairman (Professor Parsons) entertained at luncheon 25 members and friends with Dr. Helen Mackay as the guest of honour.

The second meeting of the year took place on November 30th, 1934, in Selly Oak Hospital, Birmingham, by kind permission of Mr. Kelman, Medical Superintendent. The meeting was clinical in character, extremely interesting cases being discussed and demonstrated by members of the hospital staff. Fourteen members attended.

The third meeting of the session was held at the Royal Cripples Hospital, Birmingham, on February 22nd, 1935. The Chairman was Dr. Morris Jones and thirteen members were present. Mr. Wilson Stuart (Hon. Surgeon to the Hospital) gave a demonstration, mostly by lantern slides, on "Minor Deformities in Children." The conditions dealt with included the following: club foot, congenital dislocation of hip joint, coxa vara and coxa valgum, torticollis and infantile paralysis.

The fourth meeting was held at the City Hospital, Derby, on June 1st, 1935. Dr. Morris Jones occupied the chair and 15 members were present. Dr. William E. Haigh read a paper on "Co-ordination in Preventive Medicine." Many members took part in the ensuing discussion on this most instructive, interesting and provocative paper.

The Committee and members of this Sub-Group take this opportunity of offering sincere thanks to all who have given, so willingly, their talent, their services, their valuable time and their excellent hospitality, and who, by so doing, have contributed so largely to the success of session 1934-35.

THE DENTAL OFFICERS' GROUP.

President: Grantley Smith, Esq., L.M.S.S.A., H.D.D., L.D.S., Municipal Dental Officer, Bermondsey.

Hon. Secretary: J. F. Pilbeam, Esq., L.D.S., Dental Officer, Croydon.

The annual general meeting of this Group was held at the house of the Society on October 12th, 1935.

The following office-bearers were elected for the ensuing session:—

President.—Mr. Grantley Smith.

President-Elect.—Mr. J. Fletcher.

Immediate Past-President.—Mr. R. Chase.

Vice-Presidents.—Mr. F. Breese; Mr. Sidney Smith; and Mr. George Thomson.

Hon. Editor.—Mr. K. C. B. Webster.

Hon. Treasurer.—Mr. Geo. Thomson.

Hon. Secretary.—Mr. J. F. Pilbeam.

Hon. Asst. Secretary.—Mr. G. Taylor.

Elected Members of Council.—Messrs. Breese, Chase, Thomson, Doswell Wallis, Rhys-Herbert, Mason, Newton, McClelland, Webster, Pilbeam and Taylor.

Representative on Council of Society.—Mr. Rhys-Herbert.

Representative of Yorkshire Sub-Group on Council of Group.—Miss A. M. Radcliffe.

The Hon. Secretary reported that during last session eight general meetings and ten Council meetings had been held. The year had proved to be one of the most active from the standpoint of the Group. Three important resolutions were submitted to the Council of

the Society, and in each case the Group representative appeared before Council to support the recommendations.

The retiring President (Mr. R. Chase) on behalf of the Council of the Group, presented Mr. Leigh Breese, who was honorary secretary for seven years, with a pair of gold cuff links. In making the presentation, Mr. Chase said it was impossible for him to tell in a few words all that Mr. Breese had done for the Group, and no reminder was needed of his devotion to his work and his unfailing courtesy to all members.

Mr. Leigh Breese thanked the President for his kind remarks, and for the gift. He stated that he had enjoyed his tenure of office, and it had been a matter of great regret to him when he was compelled to relinquish the secretarial duties.

It was proposed from the chair and carried unanimously that a hearty vote of thanks be accorded to Mr. Leigh Breese for his services to the Group.

Mr. Reginald Chase delivered his valedictory address and inducted Mr. Grantley Smith, the new President, into the chair.

Mr. Grantley Smith gave his inaugural address, at the conclusion of which Mr. L. Breese proposed, and Mr. Fletcher seconded, a vote of thanks to the President for his interesting remarks.

The President expressed the hearty thanks of the Group to the retiring President (Mr. R. Chase) and referred to the progress the Group had made under his capable leadership.

THE TUBERCULOSIS GROUP.

President: Dr. H. G. Trayer, Med. Supt., Baguley Sanatorium, Altrincham.

Hon. Secretary: Dr. Ernest Ward, T.O., South Devon.

A meeting of the Group Committee was held at the house of the Society on November 22nd, 1935, the President occupying the chair. Twelve members were present.

The Hon. Secretary and Council Representative announced:—

(a) That he was continuing to investigate the letters alleging benefit from Stevens' Cure and was receiving helpful co-operation from colleagues in the public health service. So far only one area had refused assistance.

(b) That Dr. Ramage had been nominated to represent the East Midland Branch on this Committee;

Dr. Deaner in addition to Drs. Elliott and Gordon Smith would represent the Midlands, and Dr. Roy Midgeley replaced Dr. Anderson for the West of England. Dr. Midgeley, present for the first time, was welcomed by the President.

(c) That Drs. H. G. Trayer, Agnes Nicoll and Stanley Banks had been elected to fill the three vacancies on the Council of the Society created by the modified constitution.

(d) That it had been decided that the headquarters of the Society be transferred to British Medical Association House. Tenants were awaited to whom the present premises could be sub-let before making the transfer.

(e) That he had attended two meetings of the Public Health Advisory Committee at which it had been agreed that joint county council and local medical officer of health appointments in Merioneth and Cardigan might be made below the scale provided that, as soon as arrangements with local districts were completed, the scale figure of £800 should be adopted. He was more than ever convinced of the importance of a departmental officer on that Committee.

Dr. Trayer was nominated President of the Group for the session 1935-36; Drs. Jessel and Tattersall, Vice-Presidents, and Dr. Ernest Ward, Hon. Secretary and Council Representative.

The present circular soliciting new members for the Society was considered and it was thought desirable that the proposed new circular should be seen by the Committee as soon as possible. The opinion was expressed, however, that the first paragraph on page 2 of the present circular should be expanded by the statement: "all members are of equal status within the Society."

Dr. Crowe had presented an excellent account of the holiday facilities extended to tuberculosis officers in the London area. For this memorandum he was sincerely thanked by the Committee, and several members promised to make enquiries in other districts: Dr. Elliott undertook the Midland area; Dr. Tattersall, Yorkshire; Dr. Trayer, Lancashire, Manchester and Cumberland; Dr. Dickinson, Northumberland and Durham; Dr. Cameron-Renwick, Surrey and Middlesex; and Dr. Midgeley, Devon, Cornwall, Somerset and Dorset.

Three memoranda on the provision of facilities for radiography were considered by the Committee. Drs. Blackmore, Heffernan and Jessel were thanked for their good work, and Dr. Ward was asked to submit to the next meeting another memorandum, taking advantage of the material already provided and including some figures he had obtained from the Ministry of Health.

The Presidency of the Society was next

discussed. Dr. Ward had already been nominated this year by the West of England Branch.

A joint meeting of this Group with the Dental Officers' Group had been arranged at the house of the Society for Friday, February 21st, 1936, at 8 p.m. The subject for discussion would be: "Dental Treatment for Tuberculous Patients." Dr. Trayer had kindly promised to be the chief speaker for the Tuberculosis Group.

Dr. Crowe had written to the Hon. Secretary concerning superannuation. The Hon. Secretary was asked to bring the matter before the next meeting of the General Purposes Committee.

Friday, February 21st, 1936, at 10.30 a.m., were the date and time fixed for the next meeting of the Committee.

The annual general meeting of the Group was held at the house of the Society on November 22nd, 1935, nineteen members being present.

Dr. H. G. Trayer was elected President of the Group for the session 1935-36; Drs. Jessel and Tattersall, Vice-Presidents, and Dr. Ernest Ward, Hon. Secretary and Council Representative. A hearty vote of thanks to Drs. Ernest Ward for his services during the past year was carried.

Drs. Peter Edwards and Patrick Heffernan were elected members of the Committee.

Drs. Tattersall, Ernest Ward and F. J. C. Blackmore were re-elected to represent the Group on the Joint Tuberculosis Council, and Drs. Jessel, Ernest Ward and F. J. C. Blackmore to represent the Group on the Inter-Group Committee.

In an account of the year's work the Hon. Secretary mentioned the election of three departmental officers (Drs. Trayer, Stanley Banks and Agnes Nicoll) to the Council of the Society, and that Dr. Dan Powell had spoken for the Group at a meeting of the Epidemiological Section of the Royal Society of Medicine discussing "The Prophylaxis of Pulmonary Tuberculosis." The Hon. Secretary had prepared notes at the request of the Joint Tuberculosis Council on "The Prevention of the Common Cold," and Spahlinger treatment. He was engaged with the collaboration of colleagues on an investigation of claims of patients to have benefited from Stevens' Cure; and the Executive Committee was investigating holiday periods for tuberculosis officers and facilities provided for radiography in various districts.

The Literature of Preventive Medicine.

Maternity Services. By DAME JANET CAMPBELL, D.B.E., M.D., M.S., HON.D.HY., formerly Senior Medical Officer for Maternity and Child Welfare, Ministry of Health. London: Faber & Faber, 1935. pp. 56. Price 1s. net.

Although this pamphlet is primarily intended for non-professional readers, it gives such a simple and concise summary of the maternity services of this country that it should also be in the hands of every medical officer interested in the subject. The most important question dealt with is, of course, that of maternal mortality. The steps that have already been taken to bring about its reduction are fully described. Particular interest attaches, however, to the recommendations for further progress in this sphere, coming as they do from one of such wide experience and understanding as Dame Janet Campbell. She is of opinion that, although the idea of a maternity service is generally accepted, the schemes that have been put forward would be costly to establish, and it cannot be said that there is yet proof that the improvements which might result from them would justify the expenditure. She therefore proposes that the Government should provide, out of public funds, money for model schemes to be set up in selected areas, preferably the "black" areas. If these schemes proved successful, expenditure could confidently be made to bring them into operation all over the country. Within the health service these proposals have received considerable support, and it is probable that as a result of the publication of this pamphlet further support will be forthcoming.

The Chemical Control of Conception. By JOHN R. BAKER, M.A., D.PHIL., Lecturer in Cytology, University of Oxford. London: Chapman & Hall, Ltd., 1935. pp. 173. Price 15s. net.

For this book it is claimed that in it the author presents the whole of the results that he has obtained in his work on the action of substances on sperms since he first began to study this subject under the Birth Control Investigation Committee nearly seven years ago. Detailed descriptions are given of the techniques which he has standardised for the purpose of accurately grading the spermicidal

powers of pure substances and proprietary preparations. The mode of action of various substances upon sperms is discussed. The book is intended for the medical man, the chemist, the pharmacologist, the physiologist and the biologist. It is so very much more scientific than practical, however (the author hopes that it will be regarded as a contribution to pure as well as applied science), that it is doubtful if the generality of medical practitioners will find in it much of real guidance.

Simple Instructions for Diabetic Patients. By DOROTHY C. HARE, M.D., M.R.C.P. Second edition. London: H. K. Lewis & Co., Ltd., 1935. pp. 22. Price 1s. net.

The instructions contained in this little brochure are those drawn up for use in the diabetic clinic of the Royal Free Hospital. They are correctly described as simple, and will be found useful by those for whom they are intended—patients, nurses and practitioners.

FOLLOWING the series of lectures on Health and the Law delivered last spring under the auspices of the Jewish Health Organisation of Great Britain, further lectures have been arranged by that body. The opening lectures of the present series were delivered by Dame Louise McIlroy, who dealt with Ante-Natal Care, and Dr. Reginald C. Jewesbury, who lectured on the Care of the Infant in the First Two Years of Life. The speakers and subjects for the remaining eight lectures are as follow: Dr. Bernard Myers on the Physical and Mental Welfare of the Pre-School Child (December 7th); Dr. M. D. Eder on the Care of the Child in Relation to his Studies (December 14th); Dr. H. Harris on Play in Childhood (December 21st); Mrs. Susan Isaacs on the Mental Welfare of the Child (December 28th); Mrs. Winifred Raphael on the Welfare of the Worker (January 4th); Professor V. H. Mottram on Domestic Hygiene (January 11th); Mr. Phineas Quass on the Protection of the Worker (January 18th); and Professor Samson Wright on the Care of the Adolescent (January 25th). All lectures are given at 8.30 p.m., at the Whitechapel Art Gallery, High Street, Whitechapel, London, E.1. Admission is free, without ticket.

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Editorial.

The Health of the School Child in 1934.

THOUGH naturally it is not limited to a discussion of these subjects, Dr. MacNalty's report on the Health of the School Child* shows a very definite and distinct tendency to enlarge upon nutrition, health education in the school and the work of the school medical service in the direction of improving physical and health conditions of the children. In his introduction, which is both learned and interesting, he makes perfectly clear that the place he gives to physical culture in the scheme of education is a very prominent one and indicates the reasons that lead him to that conclusion. Inevitably, there

*Annual Report of the Chief Medical Officer of the Board of Education. H.M. Stationery Office, 1935. Price 2s. 6d. net.

is much said about Greece and the Greek conception of education. More important still, there is evidence in support of the belief he very strongly holds that here in this country there is a marked desire to re-establish a harmony between training of the mind and training of the body for which the school medical service is very largely responsible.

Discussing nutrition and school feeding, Dr. MacNalty submits, in proof of the great expansion which has taken place in schemes for the provision of meals, the fact that between November, 1931, and March, 1935, the number of children receiving free meals has doubled, and the number receiving free milk increased five times. Under the milk in schools scheme, which was introduced on October 1st, 1934, the number of children receiving milk on payment

leapt in one bound from 900,000 to 2,650,000.

Curiously, in view of these startling changes, the figures for the incidence of malnutrition revealed by routine inspection show a slight increase over those of 1933. Some of the increase no doubt, however, is apparent rather than real and associated with the increased facility for treating cases of malnutrition which has resulted from the Milk Marketing Board's scheme and the emphasis which the Board's circular 1437 lays upon the defect by directing that the slightest symptoms of subnormal nutrition should be taken into account.

Reports from a number of school medical officers quoted by Dr. MacNalty are on the whole also reassuring, though there are, of course, some exceptions. The case of Leeds is one of the most interesting, weight charts given in the report going to show that 12-year-old girls now average nearly 6 lbs. and 12-year-old boys nearly 4 lbs. more than in 1923.

Since it is a matter of importance, some space is given in the report to a discussion of the assessment of nutrition, the choice of a clinical standard rather than any method based upon a weight-measure-age ratio, being explained. There is a reminder also that in every collection of children, however well fed and circumstanced, so many as 4 per cent., may appear of subnormal nutrition. Some such proportion may be found in preparatory schools for the well-to-do, where their subnormality is clearly due neither to lack of food or sleep or fresh air. The fact that such children will always be found does not, however, invalidate the statement that the main factor in the production of subnormal nutrition in children is poverty.

Discussing the experiment now in progress under the auspices of the Milk Marketing Board to study the effect of giving different amounts of raw or pasteurised milk to children in elementary schools, opportunity is taken to make reference to a number of points connected with milk generally, making clear particularly that though there never was any intention in circular 1437 or anywhere else to preclude the use of raw milk in favour of the efficiently pasteurised article, there is a very strong belief that the latter possesses many advantages.

On physical education a most encouraging account of the physical training in elementary schools is given, though the need for suitable rooms and equipment for the physical exercises and properly laid out playing fields for games is stressed. Further, and very rightly, disappointment is expressed that only 122 local education

authorities employ organisers of physical training since they are needed not only in schools and by the teachers but as leaders in the organisation of *all* local physical training activities, whether voluntary or provided by the authority.

The magnitude of the work of the school medical service in directions other than those mentioned is shown by figures relating to the routine of inspection and treatment, and by facts regarding such activities as those connected with dental work; eye, ear and speech conditions; open-air and nursery schools; mal-adjusted children, and so on. The number of children inspected in the specified age-groups during 1934 was 1,794,963, or 35.5 per cent. of those in average attendance. In addition, 1,231,663 children were referred for some special reason by parents, nurses, school teachers or attendance officers. The total number of 3,026,626 children thus passed under medical review represents 59.8 per cent. of the average attendance. The number of re-inspections carried out was 2,006,936. For the treatment of those found to be suffering from defects it is interesting to learn additional provision was made during the year, the total number of school clinics going up to 1,916 from 1,880 in 1933.

For the treatment of children with defective vision and eye disease all local education authorities, with one exception, it is noted, have established schemes. The importance of making provision for early detection in these schemes is emphasised, and a plea is made that the ophthalmic service should stretch backwards to cover children below school age and forward, as far as legislation allows, to include young persons above the age of 14 years. In this connection the desirability of co-operation between various health services is stressed.

The subjects of ear disease and deafness, as they well deserve, are given a chapter to themselves. Here there is an interesting note on the causation of chronic middle ear disease, and it is shown that there can be no doubt that although the incidence of this condition in elementary school children has diminished, there is good reason for believing that many cases escape detection by the ordinary methods of medical inspection. A note on the treatment of the disease is given, and the concluding section with regard to some special investigations on defective hearing is deserving of attention.

The account of the activities of the school dental service contains naturally much reference to dental caries, a disease which affects some 95 per cent. of the school population. The need

for fuller provision for dealing with this very formidable problem is again stressed, attention being drawn to the note on "Conditions of a satisfactory dental scheme" which has appeared in previous reports.

Special interest attaches to what is contained in the report with regard to stammering and other speech defects, and effort is made to have it generally realised that failure to acquire reasonable facility in speech is just as serious as failure to acquire ability to read and write. The success of modern methods of speech training in curing or improving cases of defective speech is so encouraging that, more particularly since the cost of making provision is not great, local education authorities in increasing numbers may be expected to adopt the suggestions offered by Dr. MacNalty.

That there is a growing realisation of the value attaching to open-air schools and nursery schools is clear, and in addition to the references to the good work done and capable of being done by these institutions there is a hint as to the willingness of the Board of Education to consider applications from local education authorities as to their establishment.

The problem of the maladjusted child receives consideration in a special chapter, and reference is made to the work of the child guidance clinics set up in different parts of the country for the study and treatment of such children. At present two clinics maintained by local education authorities have been approved by the Board, and seeing that reference is made to the fact that it is as yet too early to express detailed views as to what constitutes a well-organised clinic of this description, the Board would appear to be not unwilling to consider and discuss proposals. The staff, it is suggested, should include a medical man with experience in psychological medicine, a psychologist and a trained social worker. The premises should provide rooms in which the members of the staff can interview children, a play room and a waiting room. Very properly the need for avoiding any association in the public mind of the child guidance clinic with mental disorder or mental defect is impressed.

In the final chapter Dr. MacNalty makes reference to the chief epidemiological happenings of 1934 in so far as they affect school children. Measles, it is shown, was prevalent and caused 3,719 deaths in children under 15 years of age. The fact that diphtheria caused a greater mortality among children than measles, even in a year of epidemic prevalence of measles, was an

unusual feature of 1934. The reasons for this increased diphtheria mortality and the question of artificial immunisation are discussed. The need for the provision of immunising facilities is indicated as is also the willingness of the Board of Education to encourage and assist in every way possible. The increased prevalence of scarlet fever, to which a reference was made in 1933, was even more marked in 1934, and there was a rise in deaths from rheumatic fever and heart disease probably epidemiologically associated with it. In this connection attention is drawn to the fact that institutional provision for the treatment of children suffering from after-effects of acute rheumatism is still inadequate, particularly in the north and midlands.

This is the first report by Dr. MacNalty since he assumed office as Chief Medical Officer of the Board of Education. On it he is offered sincere congratulation, and it is noted that both at the beginning and the end he has generous tribute to offer to others: in the former position to his colleagues, and in the latter to Sir George Newman, who became the first Chief Medical Officer of the Board in 1907 and retired on March 31st, 1935, and throughout the whole of that period rendered service to the nation of inestimable value.

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Meals for Children Attending Public Elementary Schools.

THAN the eve of Christmas no more opportune moment could have been chosen by the Board for the issue of their circular 1443 (December 16th, 1935). In this, in consequence of the many communications received from, very prominently amongst others, the Society of Medical Officers of Health in criticism of circular 1437 and as to the methods to be adopted in the selection of children for provision of meals having regard to the provisions of sections 82 to 84 of the Education Act, 1921, and also to those of the Board's Special Services Grant Regulations, a restatement of the Board's attitude is made and, notably, the announcement that "provision may properly be made for any child who shows any symptoms (of malnutrition) whether educational or physical, however slight." What the reasons for the limitations imposed by circular 1437 in regard to milk distribution may have been it is not easy to say. It cannot be doubted, however, that, as this present circular states, the Board are concerned to secure that all children who are unable by reason of lack of food to take full

advantage of the education provided for them should receive such supplementary nourishment as may be appropriate in each case, the meals being provided free where the parent is unable to pay. On the new point of view, expressed in the restatement of attitude, the circular offers a number of explanations and also indicates the course to be adopted in consequence by local education authorities, school medical officers and others.

The Board, it is noted, do not, in general, question the reasonableness of the income scales adopted by authorities, which are normally fixed sufficiently high to cover the children of parents in receipt of unemployment allowances and of those working for low wages. The fact that the parents' income falls within an authority's scale, however, does not by itself justify the provision of free meals. Regard needs also to be had to the actual condition and special circumstances of the child.

The need of a child for feeding should not be considered only upon an application from the parent, since in that case it is almost certain that many parents will hold back and children needing supplementary nourishment will not receive it. The authority should themselves take steps to ascertain the children who are in need of feeding, by inviting reports from the members of the school medical service or the public health service, from teachers, school nurses, school attendance officers, and others in regular contact with the children from day to day.

The necessary investigation of cases will inevitably take time. It will accordingly generally be necessary to make interim arrangements for the immediate feeding of children recommended for meals.

Whatever methods of selection may be adopted, all children selected should be seen as soon as possible by the school medical officer. Causes of subnormal nutrition or consequences of insufficient food may be present which can only be determined by a medical practitioner and which need to be taken into account in deciding on the nature and extent of the supplementary feeding required and of any other appropriate treatment. He should also keep under review the condition and progress of all children receiving meals and should report upon them as occasion arises.

The opportunities of the school medical officer of recommending children for meals are likely to be largely curtailed by the fact that routine medical inspections are only held at comparatively long intervals in the child's life. Teachers

and others who are responsible for recommending children, though they are in much more continuous contact with the children, may through lack of medical training fail to detect early physical signs of subnormal nutrition. The experience of the Board shows that in some areas for these or other reasons there are children in need of supplementary nourishment who do not receive it. The Board accordingly suggest that authorities would do well to consider the advisability of holding periodical nutrition surveys at which all children not receiving meals would be passed under review. Such surveys would no doubt involve some increase of the work of the medical officers, though not as much as might at first sight appear. It should be remembered that many of the children can be quickly passed by the medical officer as clearly well nourished and only a small proportion should need detailed examination. No matter how great or small the number, however, it may be taken that the additional work will be readily undertaken.

Some provision is needed for the periodic review by the authority of the list of children being fed free, but where there has been no change in the financial circumstances of the family, the Board contemplate that children will only be removed from the list where the authority are satisfied, after considering all the circumstances, that the provision of meals can be discontinued without risk of relapse.

This circular applies generally to the provision of free milk as well as solid meals. In some cases the needs of the child may be sufficiently met by the provision of an adequate quantity of milk in addition to his home dietary: in others, milk may be needed in addition to ordinary meals. The nature and extent of the supplementary feeding required will naturally be a matter on which the authority will take into consideration the recommendation of their school medical officer, but if it is considered desirable to provide free milk for all children who are selected for free meals, the Board will not refuse to recognise for grant the expenditure involved, provided that they are satisfied that the authority's arrangements generally are reasonable.

On the circular generally, and the Board's restatement it would appear almost unnecessary to make comment. At the same time, it may be permitted to say that however niggard the spirit in which circular 1437 may have been thought to have been cast, there will be few but will accept that in the new circular there is

sufficient of generosity manifest to make amends and to justify its receipt without anything but the warmest approval and welcome.

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Tuberculosis in Lancashire.

DR. LISSANT COX provides in his Report as Central Tuberculosis Officer of the Lancashire County Council for the year 1934 a review as stimulating and interesting as usual. The actual death-rate for pulmonary tuberculosis was 0.46 per 1,000 population, the lowest yet recorded, and it compares favourably with the pulmonary rate (0.63) for England and Wales. For non-pulmonary tuberculosis, with its greatly reduced death-rates, the rate of decline during the past ten years has been much less; the actual rate for 1934 was 0.12 per 1,000 population, the same as for the previous year and for the whole of England and Wales. Although the mortality in 1934 for non-pulmonary tuberculosis was highest for the age-group 0-5 years, it is in this age-group that the most striking decline has occurred; in 1914 the deaths totalled 286, whereas in 1934 there were only 59—a drop of nearly 80 per cent.

This decline is described as due to "segregation and supervision of the adult pulmonary cases, social measures, the safeguarding of the milk supply, and the successful modern methods of treatment of children with non-pulmonary disease." In an enlightening paper entitled "How may the Child be Safeguarded against Human Infection," read at the annual conference of the National Association for the Prevention of Tuberculosis, Dr. Lissant Cox drew attention to the Lancashire research on "The Fate of Young Children in Tuberculous Households." This showed that the death-rates from non-pulmonary tuberculosis (tuberculous meningitis and tuberculous bone and joint disease) of young children under five years of age was greatly in excess of the rate from the same cause among children in Lancashire serving as "controls," the rate being:—

9 times as great in the age-group 0-1 year	
14 " " " " " "	1-2 years
19 " " " " " "	2-5 years

Accepting this as correct, the drop of 80 per cent. in the death-rate from non-pulmonary tuberculosis in children 0-5 years would appear to vindicate the policy of "segregation and supervision of the adult pulmonary

cases." But in the same paper Dr. Lissant Cox gives tables contrasting for the years 1914 and 1934 the death- and case-rates for pulmonary and non-pulmonary tuberculosis in the general and child (0-15 years) population of Lancashire. These show that, whereas in pulmonary tuberculosis the case-rate and death-rate have fallen almost in parallel, in non-pulmonary tuberculosis the fall in the death-rate is much more pronounced than the fall in the case-rate, and this is especially marked in the child population. Doubtless much of this apparently high incidence rate in non-pulmonary tuberculosis in children is due to more extensive notification following on improved facilities for treatment, but it also suggests two things: that modern methods of treatment have much to do with the decline in the death-rate, and that the percentage incidence due to bovine infection is not falling as rapidly as could be wished. It would be interesting to know what percentage of the cases were bovine in origin.

Dr. Allon Pask contributes an informative chapter on the findings in 47 consecutive autopsies performed on patients admitted with non-pulmonary lesions to Wrightington Hospital. The initial lesion in 15 cases was in the lungs and in the same number in the spine. This confirms the view generally held that Pott's disease is the most dangerous of the forms of bone and joint tuberculosis. The site of the spinal lesion was cervical in three, dorsal in three and lumbar in nine cases. A comparison of the deaths with the admissions in cases of Pott's disease shows a percentage mortality of 42.8 in cervical lesions, 4.0 in dorsal and 12.1 in lumbar. This suggests that the prognosis is best when the dorsal area is affected and worst when the lesion is cervical. The number of cases of cervical caries admitted was, however, small (seven as compared with 74 each for dorsal and lumbar disease), and too much significance cannot be attached to this figure. Of the total of 47 cases examined, eleven died of amyloid disease and 26 had lung lesions, although in only eight was the lung lesion a contributory cause of death.

Dispensary X-ray examinations during the past year numbered 10,137: excluding the screen examinations (3,408), the majority of which would be done in connection with artificial pneumothorax treatment, this represents 623 skiagrams per 100 deaths—a very

high figure. Dr. Lissant Cox is an advocate of the wide use of X-rays in diagnosis, both to detect the early case and also to ensure that only definite cases of tuberculosis will be taken on the dispensary register and afforded treatment. In the chapter on treatment he expresses the view that all types of adult pulmonary tuberculosis should be treated in one and the same institution. Few will disagree with this. But that treatment is best carried out in relatively small institutions, superintended or visited by the tuberculosis officer, is open to question. Artificial pneumothorax and phrenic nerve operations have again been fairly extensively used, but thorocoplasty and cauterisation of adhesions rarely.

An investigation of the housing condition of all patients under treatment or supervision revealed that 4.5 per cent. of the infectious cases living at home were not occupying a separate bed. The total new contacts examined during the year was 908, or 84.2 per 100 deaths—a low figure: of the 908 contacts, 37, or 4.07 per cent., were found to be suffering from tuberculosis. A particularly pleasing piece of information was that, for the first time since 1921, the deaths in the female age-group 15-25 years had fallen below the deaths in the age-group 25-35 years. The former age-group had previously shown least response to treatment, but in 1934 the fall was decided. It is to be hoped that the improvement is permanent and that the usual sequence of what Lancashire has achieved to-day other parts of the country may attain to-morrow will follow.

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Health Services—Annual Returns.

IN a circular (1504) addressed to county and county borough councils, other maternity and child welfare authorities, and tuberculosis joint committees, the Minister of Health directs attention to the annual returns required from local authorities with respect to maternity and child welfare, tuberculosis, venereal diseases, and hospital treatment. Copies of the forms to be used in making the returns for the year 1935 accompany the circular, and in regard to these comment is made.

The form of return relating to hospital treatment, it is explained, is similar to those issued in previous years. As regards maternity and child welfare, the general expansion of these

services in recent years has made it desirable to ask for certain additional particulars in the returns, in order to afford more complete and up-to-date information as to the work done by local authorities for the welfare of mothers and young children.

The forms of return relating to the treatment of tuberculosis are those prescribed in memorandum 37/T (revised), subject to the variation notified in circular 1368 of December 28th, 1933, so far as parts (D) and (G) of the first schedule to the memorandum are concerned. In making the returns, attention should be paid to the instructions in the memorandum and to the above-mentioned variation. The completion of the supplementary return in the form prescribed in the third schedule to the memorandum is optional. The hope is expressed, however, that the chief administrative tuberculosis officer of the council will endeavour to complete this return as far as practicable. The returns prescribed in the memorandum in respect of counties or county boroughs which are included in the area of a tuberculosis joint committee will be furnished by the medical officer of that committee.

As regards the notification of tuberculosis, the form of return is similar to that issued last year, and full instructions for completing the return are printed on the back of the form. In respect of venereal diseases, the returns required from treatment centres are the same as last year. The necessary returns as to pathological examinations will be obtained from the approved laboratories.

As regards cancer, reminder is given of the reference made in circular 1276 of April 29th, 1932, to the facilities available in national and regional radium centres for advice and treatment in cases of this disease, and the present circular notes that it is desired to ascertain to what extent cancer patients have been enabled to benefit from these facilities under arrangements made by the councils of counties and county boroughs, and for the purpose a new form of return (Form Hosp. 7) is enclosed. Provision is also made in the return for showing the extent to which cancer patients have been treated in institutions belonging to the councils.

Local authorities are requested to arrange for the returns for which they are responsible to be furnished to the Minister at the earliest possible date, and in any case not later than February 15th, 1936. In many instances it is necessary, for the purpose of a return, to obtain information from one or more voluntary bodies, and it is

urged that in such cases steps should at once be taken to secure that the information is in the hands of the local authority immediately after the end of the year.

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Hæmolytic Streptococci and Puerperal Fever.

BY a calculation based on the experimental evidence actually obtained with the present admittedly imperfect procedures and on the comparable figures already published by J. Smith, it is estimated that the deaths of at least 576 women and the non-fatal illness of at least 2,304 women, in addition, might be avoided annually in England and Wales if infections due to hæmolytic streptococci were prevented. In this fact resides sufficient justification for the action of the Medical Research Council in giving their support to the establishment of a "unit" of research in the subject of puerperal sepsis at Queen Charlotte's Hospital, London, in the Bernhard Baron Memorial Research Laboratories attached to the new Isolation Block at Hammersmith. That they made it possible for Dr. Dora Colebrook to carry out the extremely important and exceptionally practical investigations dealt with in this and other reports published by the Council is a matter upon which they and other bodies making contribution deserve to be congratulated. Dr. Colebrook's researches were directed mainly to an elucidation of problems associated with puerperal sepsis and more particularly those associated with the identification and differentiation of the hæmolytic streptococci. The work of Dr. Colebrook in this connection was to some extent simplified as a result of certain technical procedures developed at the Rockefeller Institute in New York. As a result of these, indeed, she and her fellow workers at Queen Charlotte's Hospital have been enabled to reach the important conclusion that the hæmolytic streptococci which are occasionally found in the genital tract of healthy parturient women are not, as was formerly supposed, identical with those causing puerperal fever and are, indeed, usually harmless to their human hosts, and further, that when the pathogenic types of hæmolytic streptococci do invade the genital tract they have been conveyed to it from some outside source.

The task of Dr. Dora Colebrook was to track down these outside sources in a large series of cases of puerperal fever. Her laborious work, extending over three years, is described with

full detail in the report now published.* That her results will be of considerable interest to bacteriologists, as showing that it is now possible, by a judicious application of various technical improvements, to obtain reliable and clear-cut results of definite epidemiological value, cannot be doubted. To epidemiologists, as well as to obstetricians concerned with puerperal fever, the report will also be of interest as indicating, with a very high degree of probability, what are the usual sources, outside the genital tract, from which hæmolytic streptococci are conveyed to the woman in labour. The multiplicity of these sources is particularly striking but will occasion no surprise in view of the great variety of infections caused by the hæmolytic streptococci. Ample confirmation of the view that the streptococci of the respiratory tract bear an intimate relation to puerperal fever is contained in Dr. Colebrook's results; but these results suggest that the respiratory tract of the mother must be taken into account as well as that of her attendants, and familial sources of infection have been incriminated in not a few instances.

In the nature of the case, stronger evidence than that given as to the responsibility of the throat and nose-carried streptococci on the one hand, and of those of various septic infections on the other, in the causation of puerperal fever, it would be scarcely possible to obtain. On it the only conclusion to be drawn is that until methods are known for ensuring a high resistance of the maternal body to these pathogenic agents, it is undesirable—and indeed dangerous—for any person suffering from an acute infection of the respiratory tract to engage in maternity work. It is also unwise for nursing homes and small hospitals to deal with maternity and surgical cases under the same roof unless adequate provision can be made for complete separation of the nursing staffs of the two departments. That there should be a wider employment of the laboratory services available throughout the country for the prompt detection of the puerperal case infected by the streptococcus, when it occurs, is a further conclusion that may be drawn.

Dr. Colebrook is to be congratulated on the thoroughness with which she has carried out this investigation, and on the caution she has

*THE SOURCE OF INFECTION IN PUERPERAL FEVER DUE TO HÆMOLYTIC STREPTOCOCCI. Medical Research Council Special Reports Series, No. 205. H.M. Stationery Office, 1935. Price 1s. 6d. net.

shown in drawing conclusions. These give to the report a stamp of authority absent from much earlier work on this subject and suggest that, if rightly applied, the results and lessons should lead to a reduction in the incidence of hæmolytic streptococcus infection following childbirth.

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The London Waters in 1934.

IT is seldom that the scheme of life provides a man of such varied attributes as the late occupant of this chair, Sir Alexander Cruikshank Houston, a man of goodwill, a nature-loving scientist with the instincts and flair of a poet, endowed with shrewdness and acumen, balanced by a natural courtliness. The field of preventive medicine, which knows no barriers, is much the poorer by his death, but his work is indelibly engraved upon the health statistics of every civilised country. It had been his intention to write an article on chlorination in one of these reports, and, as a tribute to his memory, the following account of new work carried out on the Board's works and in the laboratories at Nottingham Place is dedicated." With these generous words Colonel Harold, the successor of Sir Alexander Houston, opens his first annual report to the Metropolitan Water Board.* In addition to the most excellent article on chlorination which has very special interest and value, the report deals with a number of other matters, in particular the drought and the methods of chemical treatment adopted. In regard to the latter, Colonel Harold points out that although, on the one hand, he counsels the use of chemicals as a finishing process and as a supplementary final barrier, he considers it necessary, with such effective agents as the chloramines, to voice a warning as regards their position in the scheme of water purification. The aim of application should be as a corrective to counter an emergency rather than the be-all and end-all of water purification, otherwise there is a definite risk of allowing filtration, sedimentation and storage barriers to fall into a less important position, and to depend upon chloramine entirely. That there is danger in

* Twenty-ninth Annual Report on the Results of the Chemical and Bacteriological Examination of the London Waters for the Twelve Months ended December 31st, 1934. By Lt.-Col. C. H. H. Harold, O.B.E., M.D., CH.B., D.P.H., Director of Water Examination, Metropolitan Water Board. London: P. S. King & Son, Ltd., 2 and 4, Great Smith Street, S.W.1. Price 10s. 6d.

doing so has been shown over and over again, but never so convincingly as in the case of Milwaukee, U.S.A., which draws its supply from Lake Michigan. Here on a day in 1916 when the chlorine was shut off for several hours, unfortunately it happened that on this day the raw water was badly polluted and within a short time 25,000 to 100,000 cases of diarrhoea resulted, followed by about 500 cases of typhoid fever and 60 deaths from typhoid fever.

In safeguarding the purity of London's supply the work of the Board's laboratories plays an important part. During 1934 the record number of no less than 27,759 samples of water were examined. Of these, 15,134 were used for bacteriological tests and 4,566 for chemical tests. In addition, 6,363 samples were specially collected for tasting purposes, 500 centrifuged deposits were examined microscopically, microphotographs were taken of 685 samples of river and reservoir waters to study their algal contents, and the filterability tested of 1,011 samples. The fact that 88.3 per cent. of samples of water going into supply proved negative to *B. coli* in 100 c.c., compared with 85.5 per cent. in 1933, indicates that efficient control of purification processes has maintained its usual high level. The average daily gauged flow of the Thames and Lee in million gallons was 388.1 and 11.4 respectively. The average daily consumption of water in 1934 was 264.3 million gallons. The number of cases of enteric fever notified in the Administrative County of London during the year was the satisfactorily low one of 109. Going back to 1900 the figure was 4,292.

Amongst annual reports that of the Metropolitan Water Board has always ranked high as regards importance. That in the hands of Col. Harold they will continue to so rank is absolutely clear from that of 1934.

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Maternal Mortality: A Question of Nomenclature.

IN the annual report of the Medical Officer of Health of St. Pancras (Dr. Maitland Radford) attention is drawn to a point of some importance in relation to maternal mortality, a subject which, as he points out, has recently received considerable publicity. In spite of this and unfortunately, the term "maternal mortality" has never been clearly defined. Various authorities—the Registrar-General, the Ministry of Health and the local public health authorities—use it to mean markedly

different groups of deaths. This is a regrettable state of affairs, because the use of the term without a definition can be very misleading. The following example is quoted to explain the position: A woman died and the death certificate given was—"Acute pulmonary oedema, asthma, recent puerperium." This death counts as a maternal death and so increases the figure of maternal mortality. This figure, therefore, includes deaths which are merely associated with pregnancy, cases which one cannot include with the figure, which should represent the common risk run by the average woman who becomes pregnant. There would be no difficulty if maternal mortality always meant this wide group of deaths. Some authorities, however, use it to mean only those deaths directly due to pregnancy. When a figure is quoted without a definition it is impossible to know whether the small, select, true group or the large indefinite group is indicated. Some authorities use the same term to indicate either the one or the other, and this occurs in the Departmental Report on Maternal Mortality and Morbidity issued by the Ministry of Health.

It is asserted that the clearest classification divides all these deaths into two groups. Those deaths occurring during pregnancy or childbirth, where the death is directly due to the puerperal state, are grouped as puerperal maternal mortality. This group is sub-divided into the deaths which have been due to puerperal sepsis and those due to non-septic puerperal causes. Such a group would indicate the average risk of pregnancy very accurately if we could eliminate those cases of abortion which have been artificially induced, but leave insufficient evidence to return a verdict of criminal interference.

The second group is reserved for those deaths which are only associated with pregnancy or childbirth, such as the case of asthma already mentioned. They are all classified primarily to their particular cause of death, and then re-grouped as non-puerperal maternal deaths. They do not include cases following criminal abortion.

The puerperal and non-puerperal groups are added together to form the total maternal mortality. The qualification, puerperal or non-puerperal, Dr. Radford claims, is the important indication to the true meaning of any given term when discussing this subject.

The American Public Health Association Annual Meeting.

THE 1935 annual meeting of the American Public Health Association at Milwaukee was the sixty-fourth of the series and has been described as one of the very best in the Association's history. It is stated, indeed, that the only conclusion that can be drawn from the enthusiasm manifested is that "public health is really going places and that the American Public Health Association is to be the standard bearer."

Amongst the business done was the election of new officers, Dr. Walter H. Brown (who represented the Association at the Royal Sanitary Institute Congress at Bournemouth in July) becoming President of the Association for the ensuing year. The election of Dr. Thomas Parran, Jr., as President-Elect proved universally popular. The other officers are Dr. Robert E. Wodehouse, First Vice-President; Professor Samuel C. Prescott, Second Vice-President; Dr. Angel de la Garza Brito, Third Vice-President; Dr. Louis I. Dublin, Treasurer; and Dr. John A. Ferrell, Chairman of the Executive Board. New Orleans was selected as the next convention city, the meeting to be held some time in the latter part of October, 1936.

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The Actinomyces Group.

TO health officers in general for whom actinomycosis and actinomyces mean merely conditions referred to as "lumpy jaw" and "wooden tongue," a report of Miss Dagny Erikson dealing with a systematic study of infective micro-organisms belonging to a group which lies on the borderline between the true fungi and the bacteria which multiply by fission will conceivably be less interesting than to bacteriologists and professional mycologists. To these, advance in the study of fungi of medical importance has for long been hindered by inadequate examination and description of strains recovered from various human and animal sources, and by a confused and irresponsible nomenclature which has greatly embarrassed the archives of the subject. A further obstacle to accurate comparative investigation of pathogenic strains by modern methods, moreover, has arisen through cultures described and docketed in the literature being allowed to die out.

One of the chief objectives of the Medical Research Council, in founding the National Collection at the Lister Institute, was to improve this state of affairs by soliciting the deposition

there of inadequately identified strains which could be retained in the living state for comparative study when occasion arose. An opportunity of this kind, in the case of the aerobic "ray-fungi" of the *Actinomyces* group, came some two years ago, and it was for this reason that Miss Erikson was enabled to make the study upon which the report here referred to* is based. As a result of her work Miss Dagny Erikson has succeeded in identifying by their cultural, morphological and biochemical properties no fewer than twenty-five species, including fifteen that appear to be entirely new. These she has described and illustrated, and it is in the hope and belief that it will form a useful basis for future work that the report has been published.

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The League of Nations Nutrition Commission.

THE Expert Commission on Nutrition appointed by the League of Nations' Health Committee held its first meeting in London at the London School of Hygiene and Tropical Medicine, under the Chairmanship of Professor Edward Mellanby, from November 25th to 30th, 1935. The first question on its agenda was the determination of the nutrition requirements of pregnant and lactating women, as well as of infants, of children of all ages and of adolescents. The Commission is a scientific one and is endeavouring, as far as the present state of knowledge permits, to formulate conclusions on one of the most important studies of the physiology of nutrition. Their work was divided between two sub-commissions, one dealing with nutrition requirements of energy-bearing substances, and the other with protective foods providing minerals, salts, and vitamins. The final report is therefore divided into two sections. The first sub-commission studied the calorie, protein and fat requirements, according to age, sex, muscular work, pregnancy and lactation. The second sub-commission in its study of the energy and vitamin requirements for the same categories dealt with the fundamental question of milk consumption as well as cereals and sugar.

The importance of nutrition as an essential factor in public health is universally recognised to-day, but this is the first time that it has been dealt with at an international conference by

*THE PATHOGENIC AEROBIC ORGANISMS OF THE ACTINOMYCES GROUP. Medical Research Council Special Reports Series, No. 203. H.M. Stationery Office, 1935. Price 1s. net.

some of the most prominent European and American authorities. The members of the Conference will remain in touch with each other through the Health Organisation of the League of Nations and continuous collaboration will be maintained. For the general co-ordination of the work the League has appointed a "Joint Committee for the Study of the Problem of Nutrition," which is to present a general report to the Assembly in 1936. The report of the Conference recently concluded will be transmitted to this Joint Committee, whose first meeting will take place early in 1936. The experts who have drawn up the present report will be represented by their Chairman (Professor Edward Mellanby) and Professor E. V. McCollum, or, if either of these is prevented from attending, by Sir John Boyd Orr or Dr. Mary Swartz Rose.

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Medical Uses of Radium.

IN a report bearing this title and issued by the Medical Research Council* there is provided a summary of reports from various research centres for 1934 with a continuance of the accounts, given in the 12 others that have preceded it, of the research done with radium and radium emanation distributed by the Council. On the clinical side the report deals mainly with the treatment of various forms of cancer, but it contains also a brief section on the use of radium for some non-malignant conditions. In addition to describing work done during 1934, the report gives statistical data relating to the after-histories of patients treated in previous years. There is, further, a preliminary section dealing with purely experimental studies in the fundamental aspects of irradiation. The number of cases actually dealt with, it appears from the figures contributed by various centres for the five years 1930-1934, is 10,430. Of these, 2,887 have been treated by means of surgery alone, making 28 per cent., and 4,560 have been treated by means of radium alone, making 44 per cent. In the report there is given a summary of information provided by each of the centres in regard to cancer in various situations—breast, uterus, mouth, nasopharynx, larynx and œsophagus, and rectum. In addition, there are sections on sarcoma, telerradium therapy, and non-malignant conditions. A report that is itself

* Special Report Series, No. 204. H.M. Stationery Office. Price 1s. net.

a summary is not easy to summarise; it is clear, however, that neither on the experimental nor the clinical side is there any tendency to slow down the pace of research until the ultimate possibilities of radium and of methods of employing it in connection with cancer have been fully realised. At the Imperial College of Science and Technology and elsewhere, workers individually and in teams have physical and biological investigations in hand, and at the hospitals throughout the country new techniques are being evolved and applied in a degree that cannot fail to satisfy the Medical Research Council and the Radiology Committee, and to support the most optimistic of the views submitted to the Society on a recent occasion by the Minister of Health.

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The Fever Group Presidential Badge.

ABOUT a year ago, the President of the Fever Hospital Medical Service Group (Dr. H. Stanley Banks) announced that he desired to present a presidential badge to the Group on the occasion of the installation of his successor in the presidential chair. The Council of the Group proceeded to consider suggestions for the design of the badge, and in this task was ably assisted by its experienced and erudite member, Dr. E. W. Goodall. Various symbols, from the serpent of Æsculapius to the figure of St. Roch, the patron saint of the plague, were considered and, for various reasons, rejected, as were also the attractive words from Persius, "venienti occurrere morbo," which are already inscribed on the Jenner medal. The design ultimately selected is simple and, in some ways, novel. It consists of an oval field divided into two halves, surrounded by the name of the Group and of the Society in gold and blue, and surmounted by the word "President." In the upper half of the oval the high sun is seen in an azure ground, and in the lower half three golden arrows slope downwards on a black ground. The arrows are representative of the Homeric "toxa," or bows and arrows, and of the classical tradition that Apollo spread an epidemic among the Greeks by shooting with arrows. It is intriguing to be reminded that our hard-worked word "toxin" derives from the idea of poisoned arrows, through the phrase "pharmaka toxika." The "pharmaka" being dropped, the word "toxic" became synony-

mous with poison and, latterly, bacterial poison. In the badge, therefore, the arrows may be taken to represent toxins or epidemic diseases, and they are shown in partial retreat from the sun, the source of life and of all bodily defences.

At a meeting of the Group on November 29th, 1935, the donor invested the new President (Dr. E. H. R. Harries) with the badge as its first wearer, and expressed his earnest desire that the badge would stand as a symbol of the spirit of hopefulness and achievement in the great work to which members of the Group were devoted.

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"RECENT Developments in Sewage Treatment and Disposal at the London County Council Works" will form the subject of an address to be delivered by Mr. J. H. Coste, F.I.C., Chief Chemist to the London County Council, at a sessional meeting of the Royal Sanitary Institute to be held at 90, Buckingham Palace Road, London, S.W.1, on Tuesday, January 14th, 1936, at 5.30 p.m.

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Scottish Housing Advisory Committee.—This Committee, as appointed by the Secretary of State for Scotland, is constituted as follows:—

Mr. Henry Alexander (Chairman). Mr. Alexander was Lord Provost of Aberdeen from 1932 to 1935.

Dr. G. Clark, a Deputy Medical Officer of Health for the City of Edinburgh.

Mr. J. Cunnison, M.A., a lecturer in the School of Social Study and Training at Glasgow University.

Mr. Joseph Duncan, Secretary of the Scottish Farm Servants' Union.

Miss Grace Drysdale, Warden of the University Settlement in Edinburgh.

Mr. William Elger, Secretary of the Scottish Trades and Labour Council.

Bailie Rutherford Fortune, former President of the National Federation of Property Owners in Scotland.

Mr. G. P. Laidlaw, a member of the Glasgow Council for Community Service.

Mr. Angus McIntosh, Crown Factor at Thurso.

Mr. J. W. McKillop, County Clerk of Inverness.

Mr. Robert Mitchell, Sanitary Inspector for the City of Dundee.

Miss Eleanor Stewart, J.P., Glasgow organiser of the Transport and General Workers' Union.

Lady Swan, wife of Sir Alexander Swan, who was Lord Provost of Glasgow from 1932 to 1935.

Mr. J. P. Ross Taylor, a farmer, with a wide knowledge of rural housing.

Sir W. E. Whyte, O.B.E., a former Clerk to the District Committee of Middle Ward of Lanarkshire.

Miss Cecil Young, a poultry farmer, who has taken a deep interest in the social and physical welfare of agriculture workers.

Fever Hospital Practice in Retrospect and Prospect.

By E. H. R. HARRIES, M.D., D.P.H., Medical Superintendent, North-Eastern Hospital, London County Council.

Although there were no views or opinions of which anyone need feel anything but pride, in order to comply with the Council's standing orders, Dr. Harries found it necessary to state that the London County Council accepted no responsibility for the opinions or conclusions he expressed in his presidential address to the Fever Hospital Medical Service Group, which was warmly received and led to a most useful discussion.

THE selection of a topic which might form a suitable basis for a presidential address has not been easy. The fever hospital and its problems—administrative, structural and clinical—have been ably presented and discussed within the last few months or years either at meetings of the parent Society or its Branches or at meetings of this Group. Thus, in November, 1931, papers by Dr. Stanley Banks and Dr. Dunstan Brewer upon fever hospital policy and modern treatment were presented and discussed at an ordinary meeting of the Society. I have re-read those papers and have asked myself whether anything of significance in the fever hospital world has occurred during the four years which have elapsed since they were published. I think that a good deal has happened, not least in London, and that although the ideals set forth in Dr. Banks' paper have not yet been attained, very much has been done and is still being done to improve the structure, equipment and practice of the fever hospital. I venture to assert that from either of these three aspects, the modern fever hospital, considered in relation to its special purposes, will bear comparison with institutions much more widely known to the profession and to the public. Admittedly, fever hospitals made a bad start, and here I refer not to the historic "houses of recovery" of the late eighteenth and early nineteenth century but to the institutions which arose all over the country in response to the various Public Health Acts from the mid-nineteenth century onwards.

Large, small, and very small, good, bad, and indifferent, these hospitals, some of them hospitals in name only, were erected, usually upon the outskirts of towns or in the open country, as cheaply as possible and equipped and staffed as meagrely as possible to attain what has proved to be the unattainable—the reduction in the incidence of endemic infectious disease by the isolation, far from the madding

crowd, of a minority of infective individuals. It is easy to be wise after the event, but we now know that the primary task imposed upon the fever hospital was about as hopeful of accomplishment as an endeavour to empty a bath with both taps running. There is, I believe, no endemic acute infection the incidence of which has been appreciably diminished by the segregation in hospital of the clinical case. The great decline in the incidence of the enteric group of diseases has been due entirely to sanitation, and there has been no decline worth mentioning in the incidence of scarlet fever, diphtheria, measles or whooping cough. Nor can the fever hospital take any but a small part of the credit for the fall in the fatality rates of the common specific infections. This fall commenced before the widespread provision of fever hospitals and, with the exception of one disease, diphtheria, the decline has, with or without hospitalisation, been progressive.

In the case of diphtheria, the decline in fatality commenced steeply 40 years ago and is to be ascribed primarily to the introduction of antitoxin.

But although most diphtheria patients in or out of hospital receive antitoxin sooner or later, it is ordinarily only in hospital that they can obtain that necessary adjunct, skilled nursing, without which, it is not sufficiently recognised, antitoxic therapy may be of no avail. It would seem, however, that the decline in the fatality rate which has been brought about mainly by these inseparables, antitoxin and nursing, has reached its limit. It is fortunate, therefore, that when the public so desires, diphtheria may be added to those infective diseases which are not only preventable but, in fact, prevented.

There are those, like C. V. Chapin, who hold that fever hospitals, after all, by segregating over a number of years the more severe types of scarlet fever have contributed to the production of the present relatively innocuous form

of the malady to which, on the other hand, some would deny, or at least question, specific rank. I am convinced that, apart from the natural decline in the severity of type of scarlet fever, the lessened incidence of late complications in hospital-treated patients, which was evident long before the introduction of scarlet fever antitoxin ten years ago, has been due, in great part, to improved ward environment and administration. The realisation that overcrowding of wards, far from being economical, results in a high incidence of extraneous pyococcal infections, and thus to a very much lengthened average stay, is now general. In the properly administered fever hospital, adequate bed spacing is insisted upon and maintained even in times of epidemic pressure. I do not believe that any comparison of the incidence of complications in series of cases of scarlet fever can be valid, contemporaneous though these series be, unless the conditions under which the patients were nursed can be shown to be strictly comparable. The ward management of several of the common fevers consists essentially in the control of infection and re-infection of the upper respiratory tract. To this end, not only is adequate bed-spacing in the open ward essential but the segregation, within or without the main ward, of patients who constitute potential foci of gross infection. This necessity has been increasingly provided for, during the last four years especially, by the provision of cubicles or chambers upon a scale which 25 or 30 years ago would have been regarded by public health authorities as fantastic but by medical administrators as gifts from the gods. But it must not be forgotten by those who are practising in fever hospitals to-day that the realisation of the dangers of extraneous ward infections, not only specific cross-infections but the much more dangerous non-specific infections of the upper respiratory tract, is due to those who were administering the large fever hospitals a generation ago. The introduction of aseptic nursing, the cubicle, the chamber, the barrier and the bed-isolation ward is due to the pioneer work of the late Foord Caiger and Biernacki and of those such as E. W. Goodall, Frederic Thomson, Knyvett Gordon, Gordon Pugh and Claude Rundle, representatives still, happily, with us of those notable vintage years of the Metropolitan Asylums Board—the first decade of the century. It was they who adapted for their special purpose, and under great difficulties, the principles and practice of Grancher and Hutinel.

It is our privilege to continue and extend, under much more favourable circumstances, the work of these pioneers. Admitted, as it must be, that the fever hospital has not achieved the primary object for which it was intended, the erection of new hospitals and the enlargement or reconstruction of old ones provide very substantial evidence that these institutions continue to play an important part in the social services. Although it cannot be claimed as a popular institution, the fever hospital is undoubtedly an institution for the people and, as such, is at times in embarrassing demand. Incidentally, it is among the few remaining medical institutions which makes no direct charge to the patient or his parents for its services.

During the last 25 years the range of infections admitted to fever hospitals has become very much wider. In the large provincial cities, almost any acute infective condition from anthrax to zoster may be admitted to the wards of its fever hospital. But not only has the range of diseases become very much wider but the range of clinical services available for the treatment of these conditions has increased enormously. There was a time when to diagnose a typhoid perforation or an acute mastoiditis was also to carry out the necessary surgical procedures oneself. Those days rightly are gone. Even the one operation, tracheotomy, which must of necessity be performed by the resident staff, is becoming unusual, partly because of the decline in the incidence of laryngeal diphtheria and partly because of the substitution of intra-laryngeal methods for the relief of obstruction. The provision in the fever hospital of specialist services for special conditions is not only necessary in the interests of the patient but wholly desirable from the point of view of the institution and its staff. It is frequently assumed that the diagnosis and treatment of the common fevers make but few demands upon clinical acumen or technical or nursing skill. This assumption arises from sheer lack of knowledge of what is actually done in the wards. We have all spent months or years working as students or residents in the wards of general hospitals, but real knowledge of the clinical work of a large fever hospital is confined to a few. For the great majority that knowledge is based upon a limited number of attendances at classes for instruction in fevers which permit of no opportunities for day to day observation of the progress of individual

patients. Even so, I venture to think that the glimpses so afforded of the variety of procedures now carried out are sufficient to show that the fever hospital is not a mere dump for those of the sick who are labelled as suffering from certain acute infective processes. The more our work is known outside the walls, the more accurately will its standard be assessed. The attachment to the staff of large fever hospitals of accredited exponents of other branches of medicine, either to help in the solution of difficult clinical problems requiring particular experience or technique or for the purposes of research, is the best and, indeed, the only way to bring about recognition of the municipal fever hospital as a clinical institution with aims and ideals as high as any. The closer the integration of the work of the fever hospital with that of the children's hospital and the general hospital the better for all concerned.

It may be said that with the general decline in clinical severity of the common fevers and the sharing of special difficulties in diagnosis and treatment with a consultant staff, the work of a fever hospital has lost much of its interest for the residential medical officer whose duties are entirely clinical. It is true that given the same powers of observation, tenacity of purpose and descriptive skill, it would hardly be possible for one man to-day to produce from his personal records those rich stores of clinical knowledge of the fevers which are preserved in the classics of Trousseau and Murchison or the famous text-books of Claude Ker and E. W. Goodall. Many of the masterly descriptions in these works are of conditions either no longer to be seen or else of exceptional rarity. Unless he practises fevers abroad, an invaluable experience which fell to several members of the Group during the War, the young medical officer now has few chances for observing the enteric group of infections and none or virtually none for study of those other continued fevers so common in Murchison's day—typhus and relapsing fever. Forty years is a long span, and there must be but few in active practice who can recall the pre-antitoxin era in diphtheria with its fatality rate anything up to ten times as great as it is now. Not many probably can have seen scarlet fever at anything like its worst. My personal experience of fevers goes back a mere 25 years, but only during the earliest of those years did I witness those clean-cut dissections of the anterior triangles of the neck which septic scarlet fever was wont to perform. I can recall

a night nearly at the beginning of my work in a fever hospital, during which there occurred, within a few hours, five cases of uræmia in the scarlet fever wards of which I was in charge. Several years have elapsed since I saw my last case of scarlatinal uræmia. Nevertheless, although the shades may be pastel compared with the cruder colours of the past, there is still very much to be learnt in the wards of fever hospitals by seniors as well as juniors. Few weeks pass during which the old hand does not see something which has never come his way before. As for those who have but recently commenced the study of fevers, they will find no field in which the accurate observation of clinical minutiae is more essential for diagnosis, thus providing an invaluable training for practice in wider fields later on, and few in which opportunities for original investigation are more numerous. Diseases remain common primarily because we do not know enough about them to render them less common, and it should be one of the most important functions of the fever hospital to add to the stock of knowledge whenever this is possible.

Every assistant medical officer should, in my opinion, attempt some piece of clinical investigation. During the last few years especially, the output of papers by the medical staffs of fever hospitals has increased very greatly. Among these papers are some which record original observations of great value. Some, on the other hand, merely repeat the observations of others. The accumulation of data has necessitated considerable labour performed under the genuine impression that the observations were original and, therefore, whatever the conclusions arrived at, worth while. Sir Humphry Rolleston, in one of his charming addresses, recently quoted a witty saying to the effect that in order to be original it is necessary not to have read too much. A little wider reading of the British and foreign classics of infectious diseases, in addition to the relevant periodical literature, would show that some of the brightest original ideas of to-day really possess pedigrees of respectable length. Observations, original or not, of interesting clinical conditions depend for their value upon accuracy and completeness of detail. The published description can only be criticised in so far as these essentials are lacking. But there is a type of investigation which is beset with pitfalls for the unwary, and that is the comparison between the efficacy of two or more modes of treatment of an infectious disease.

Recent continental literature, especially perhaps German literature, dealing with the vaccine therapy of whooping cough is a case in point. Some of these papers are blatant examples of special pleading. Others parade the apparatus and protocols of a scientific paper, but even to such a non-mathematical person as myself it is obvious that a medical statistician, upon the score of inadequacy of data alone, would hardly trouble to calculate the standard error. By such productions trails are started which, followed by the enthusiast, lead nowhere; followed by those advised before and not after the event by the trained statistician, they lead, as often as not, to conclusions diametrically opposed to those first arrived at, but founded, nevertheless, upon a sound scientific basis and, therefore, of infinitely greater value. I have ventured to speak thus plainly because I am anxious that the young medical officer entering the fever service should, when he comes to undertake his piece of investigation, as I hope he may, proceed upon the right lines and produce work of real value, be the results positive or negative. This he can do only if he first makes himself acquainted with the literature of his special subject and, if this subject lends itself to statistical check, seek advice as to a suitable layout of his work before he commences it from those who can foresee the possible fallacies.

It may be claimed, I think, for the fever service that particularly since the War it has contributed its full share to the investigation of methods of specific prophylaxis. At any rate, it has attempted to show what certain of these prophylactic measures are capable of achieving under specially stringent conditions. It cannot do more; the wider application of these methods to open communities is for others to contrive. But prophylaxis in the fever hospital is not confined to the specific immunisation of either staff or patients. The proper care of the ear during the acute specific infections is pre-eminently a prophylactic measure against deafness and deaf-mutism. It would be ungracious and ungrateful to omit reference to the work of otologists attached to fever hospitals. In a word, they have, within the last few years, transformed the problem of the running ear in scarlet fever and measles. It would be difficult to assess the value of the services of the otologist in fever hospitals either in terms of the saving of hearing or in terms of diminished days' stay in hospital. Apart, however, from the salvage of the ear already more or less damaged,

there is the larger problem of the prevention of the running ear. This, I feel sure, will ultimately be brought about not alone by the efforts of the otologist or an otological team but by team work upon the part of the medical administrator, the clinical medical officer and the otologist.

There is other work essentially prophylactic which will in the future be commenced, at least, in the wards of fever hospitals. In the near future I have little doubt that children admitted suffering from measles or whooping cough with broncho-pneumonia, and their numbers are nowadays very considerable, will before discharge be submitted to expert radiological examination of the chest in order to ensure that so far at least there are no incipient signs of one of the grave pulmonary sequelæ of these diseases necessitating further observation after discharge by competent physicians. Such children must not be cast adrift, but assiduously followed up. So far as the London County Council fever service is concerned, complete arrangements have already been made for this to be done.

In the foregoing remarks I have necessarily been able to touch upon a few aspects only of the work of the modern fever hospital. Its clinical material is composed largely of children who, prior to the onset of the specific acute infective process which brought them within its wards, were healthy children. Employing either personally or vicariously all the appropriate resources of medicine, surgery and bacteriology, it is our privilege to restore these children to health and to release them from hospital with safety to themselves and the community as speedily as may be. Many fever hospitals are now, and I hope all will be, adequately equipped and staffed to take their place as worthy auxiliaries amongst the forces arrayed against disease in childhood.

DISCUSSION.

Dr. E. W. Goodall, in proposing a vote of thanks to Dr. Harries for his admirable address, said that it was a curious fact that in some of the fever hospitals erected in the early years of the nineteenth century—and notably in those at Leeds, Cheltenham and Folkestone—the accommodation was provided in a number of small wards of one to four beds apiece. Not all of these beds, however, were intended for the separation of infectious diseases, but for the use of private patients. A point he thought worthy of remembrance in the history of fever hospitals was that the superintendents and matrons of many of these institutions had undertaken the training of women in their special department of nursing long before it was recognised officially and even with little or no encouragement—

at any rate in England—from the local authorities whose servants they were. In respect of the value of training women in fever nursing the English Local Government Board had been behindhand when compared with the Scottish and Irish Boards. If it had not been for the watchfulness and energy of the Fever Nurses Association, the precursor of the Fever Hospital Medical Service Group, there would have been no recognition of fever nurses in the Act for the registration of nurses which was passed in 1919.

Dr. H. Mason Leete (Hull), in seconding the vote of thanks, said that the paper had been helpful to all who were engaged in fever hospital work. Dr. Harries' views on the working of hospitals were original. As an example of their practical value might be cited his insistence on the importance of the upper respiratory tract as a source of infection in wards, and his emphasis on the need for the segregation not only of obvious cases of "cross infection" but of the non-specific pyococcal infections which were a danger in a general ward. His warning, too, that some types of investigations were of little value, should be taken to heart. Too often, as in assaying the efficacy of some line of treatment, it was forgotten that there were three or four or more variables present. Assuming that the point under investigation was the only variable was an error that constantly cropped up, and many published tables, despite the appearance of mathematical precision, were in consequence valueless. Dr. Harries' emphasis of the importance of adequate equipment and staffing of fever hospitals encouraged one to ask for modern buildings, modern equipment and all things necessary for the treatment of the particular illnesses with which the fever hospital physician was concerned. The new presidential badge of the Group showed the arrows of disease disappearing into the sea of oblivion, and that downward drive was accelerated by the dissemination of broad general principles such as those enunciated in the presidential address.

Dr. H. Stanley Banks (London County Council) welcomed the consultant services now becoming available in fever hospitals as tending to bring fever hospital practice into closer relationship with the general stream of medicine. It was difficult, however, to achieve such high standards in the small fever hospitals of 50 beds or less, which still formed the vast majority of the fever hospitals of the country. In the large fever hospital, problems of cross-infection were more acute than in the small institution, but these could largely be counteracted by suitable measures of isolation, immunisation and treatment. He agreed that the grosser forms of infectious disease were now becoming rarer, but the minutiae which should now so largely engage attention in the wards were of immense importance to the future health of their patients. It should be their aim not merely to save their patients' lives but to minimise damage and prevent further disease.

Dr. Andrew Topping (London County Council) said he was particularly interested in Dr. Harries' reference to changing opinions as to infectivity periods: this affected the whole question of the number of beds to be provided. It was obvious that in a fever hospital service there must be sufficient effective beds to deal with peak epidemic demands and that at normal times

the supply would therefore exceed the demand. Did Dr. Harries consider that surplus beds could best be provided by running special hospitals for convalescent fever cases which could be used as overflow units during epidemic periods or did he think that the policy of congregating large numbers of such recovering cases in one hospital was dangerous from the point of view of re-infection, relapse or cross-infection?

Dr. D. Sage Sutherland (Manchester) referred to the important services rendered to the community by the larger fever hospitals at home in the training of nurses in the management of infectious and communicable diseases, and suggested that, in the instruction given through the training schools of fever hospitals, those forms of infectious disease should be kept in view which, although now fortunately rare in this country, might at any time call for experienced nurses abroad. He would recall to memory the need of experienced nurses in infectious disease in South Africa and in France during the Great War. He also referred to the problems of smallpox and the milder type of scarlet fever in relation to modern fever hospital accommodation, and of the importance of considering the adaptability of hospitals to the varying needs occasioned by the epidemic nature of the diseases treated and the change in type of diseases.

THE Society of Apothecaries of London announce that at the examination held on November 18th, 20th and 21st, 1935, for the Mastery of Midwifery (M.M.S.A.), the following candidates satisfied the examiners: Marion Bow, M.B., CH.B. (EDIN.), D.P.H., Fellow, Society of Medical Officers of Health; Maurice William Ginsberg, M.B., B.S. (SYDNEY); Hilda Linford, M.D. (MANCHESTER), F.R.C.S. (ENG.); Hugh Temple Tate, M.B., CH.B. (ST. ANDREWS); Elizabeth Shanks Walker, M.B., CH.B. (EDIN.), D.P.H.

CONGRATULATIONS are offered to the following, who have been elected to the Fellowship of the Royal Sanitary Institute: Dr. J. A. Charles, Medical Officer of Health, Newcastle-upon-Tyne; Dr. R. M. Galloway, Medical Officer of Health, Bolton; Dr. D. H. Geffen, Medical Officer of Health, Enfield; Lieut.-Colonel C. H. H. Harold, Director of Water Examinations, Metropolitan Water Board; Dr. J. W. Miller, Medical Officer of Health, Lewisham; Dr. W. A. Muir, Medical Officer of Health, Gillingham; Dr. Hugh Paul, Medical Officer of Health, Smethwick; Dr. A. H. B. Pearce, Health Department, Suva, Fiji; Professor H. Raistrick, F.R.S., London School of Hygiene; Dr. C. O. Stallybrass, Deputy Medical Officer of Health, Liverpool, and Dr. J. Greenwood Wilson, Medical Officer of Health, Cardiff.

Co-ordination in Preventive Medicine.

By W. E. HAIGH, F.R.C.S., D.P.H., Assistant Medical Officer of Health, County Borough of Derby.

This paper, in which Dr. Haigh gives freely so many of his own views on this subject, is none the less valuable for that reason. It was read at a meeting of the Birmingham and Midland Sub-Group of the Maternity and Child Welfare Group.

IN the strenuous life of studentship and the later days of practice, the doctor in all parts of the world tends to develop an individualistic outlook and to think in terms of disease. In my day few medical schools encouraged consultation and the team spirit in diagnosis (St. Bartholomew's was an outstanding exception) but happily the American idea of "The Unit" is making for progress, and there are also signs that greater emphasis will be given to prevention in the curriculum.

Even in public health practice, with its many specialised tasks, there are officers whose attitude is departmental, rather than that of members of a team, and the clinical officers may devote little thought to the broader issues of prevention.

My personal impression is that the best public health achievements are to be found in small, advanced countries such as Holland, Denmark, Sweden and Norway, but Great Britain is the outstanding example of local government as the basis of all prevention, with all its elasticity for the adjustment of activities to the peculiarities of the *locus*, and we public health workers have great opportunities. The Ministry of Health has been created in part for the control of these local authorities and to establish minimum standards of achievement. The Minister lays down broad outlines of policy in Acts and Regulations but, in the last resort, the development of real co-ordination rests with those engaged in the practice. It is important that we occasionally remind ourselves of our part in what should be a smoothly operating unit, prone as we are to consider that our special job is the most important and other branches of less consequence.

Those who employ us are laymen; they are not in a position to judge of the real work we do or could do, and by their office as elected representatives of the community they are generally on the defensive for the sake of the ratepayers as to costs and salaries; it must be borne in mind that when all the money spent

is taken into consideration they have to foot a big bill.

Cost of Health Services.—May I illustrate from figures for 1932, as obtained from the Ministry of Health Report. The rate fund services for England and Wales are the total expenditures of local authorities under specified heads, after deducting specific income, which income includes government grants. It is surprising to learn that the total is over £50,000,000, more than half of which is for relief of the poor.

RATE FUND SERVICES—ENGLAND AND WALES, 1932.

Hospitals, sanatoria, dispensaries etc.	£
for Tuberculosis	3,472,000
„ Venereal Diseases	434,000
„ Infectious Diseases	3,200,000
General Hospitals	2,904,000
Notification, disinfection, etc. ...	526,000
Salaries (not allocated)	1,758,000
Maternity and Child Welfare ...	2,550,000
Mental deficiency	1,816,000
Mental Hospitals and patients ...	6,998,000
Relief of poor	28,292,000

There is also that portion of the expenditure on education which provides school medical inspection and treatment, for which I have no figures. The maternity and child welfare cost works out at about four pounds per registered birth.

Nutrition.—This has become a live issue. New standards in costs of man-units have been discussed; average working wages just provide enough, assistance or benefit probably less than enough, and the "social services" provided are not likely to diminish in cost if we are to keep the people healthy. The Stockton investigation as to rent charges leaving a smaller margin for maintenance, and more recent nutrition surveys (*e.g.*, Newcastle-upon-Tyne) point to this factor as one of importance, coupled with that of physical damage done by infectious disease, and improper and inadequate diet preventing satisfactory recovery.

The necessity for more effective co-ordination of health services was a potent factor in producing the Local Government Act of 1929. This Act has concentrated in the hands of local authorities a wide range of medical functions previously shared between them and the boards of guardians. It determined in principle the separation from the poor law of hospitals provided for the sick and many other health services, and gave power for the appropriation of institutions used for such.

It encouraged a policy ("An imperative need"—Sir George Newman) of co-operation between local authorities and voluntary hospitals and for adjustments of present or contemplated bed provision.

It contemplated large developments by county councils in public health matters, including better accommodation for infectious diseases and the transfer of maternity and child welfare services. In other words, it envisaged planning, greater general supervision by the medical officer of health and more co-operation over territorial frontiers, and in years to come will be looked upon as one of the chief measures of progress in post-war public health.

There will be many difficulties, especially in county areas: small councils desire to retain their independence of action; they do not desire to send their sick far afield, in spite of the entire change introduced by rapid transport, and there are financial doubts as to recovery of costs of maintenance both local and from other authorities which have slowed down the appropriation of hospitals. Even if not appropriated the medical work carried on therein can be co-ordinated with other services of the council, and the specialist services for, say, maternity and tuberculosis, become available.

Municipal hospitals are providing maternity beds and have accommodation for young children (one thinks of respiratory complications, rickets and other nutritional faults) but the tacit obligation of the Act is upon county areas to think out and provide for such needs.

Until public assistance committees will agree to place the medical officer of health in his proper position as adviser on all the broad issues of health we shall have to mark time. The Minister speaks with no uncertain voice, but I do not know how his views are to be brought before elected members of public assistance and public health committees if

they never read the reports. May I quote from the Fifteenth (1933-34) Annual Report of the Ministry of Health. The general view of the Minister on this matter is:—

(1) That so far as the local authority is concerned, the medical officer of health should not be excluded from the oversight of any medical service, and that care must be taken to secure that a business-like delegation to the committees of executive responsibility for the discharge of current work does not result in a lack of liaison between committees or officers whenever co-operation is essential.

(2) That with increasing growth of the public health work of local authorities it is essential that the medical officer of health should devote a considerable proportion of his time to the general supervision of all the health services, and that it is an important part of his duty to visualise the different sections as parts of a single whole and to ensure that this view is fully appreciated and acted upon by those employed in the individual services.

Need for Preventive Measures.—The State, local government, many charities and, to some extent, the whole of the medical profession are engaged in prevention; each decade is a record of progress. Rough measuring rods as to the standard of achievement in prevention will occur to you.

(a) The mass of sickness and disability which occurs annually amongst insured workers.

(b) The large proportion of rejections in recruiting for military and other purposes.

(c) The defects ascertained in routine inspection of school children, and the varying but large proportion of such defects registered amongst school entrants.

(d) The mortality and morbidity which results during the struggle of child life with its environment, epidemiological and social.

(e) The infantile mortality, largely weighted to the rubrics prematurity, etc., together with the figures for still births, indicating that many pre-natal problems await solution, together with the much-discussed maternal mortality statistics.

You will appreciate that much, much more remains to be done.

The Final Report of the Departmental Committee on Maternal Mortality and Morbidity (1932) is now being widely discussed by the women of all political parties; undue stress or exaggeration and sometimes undue bias tend to appear in debate and Press comment, and the Ministry continues to press for greater co-ordination in the use and application of the means provided.

Such measures of co-ordination would require a full time discussion, but I should like to mention one or two points:—

(1) *Advice and Supervision during Pregnancy.*—One of the duties of health visitors is the visiting of expectant mothers. How are they to know of such? Especially of primi-gravidæ? (Huddersfield alone, I believe, has tried to deal with this by their scheme of voluntary notification of pregnancy.) Ante-natal supervision by experts occurs in some clinics and institutions, but what reference is made to the health department, which alone has the full powers of dealing with *nutrition* under the Act? Only cases attending at ante-natal centres of the local authority seem to come within the scope of its provisions.

It may be, and often is, that the obstetric condition is studied with no knowledge of the home or family problems; the development of maternity homes or maternity-ward delivery leads to cases attending being seen by one doctor, but another doctor is on the rota when the time for delivery occurs. In district work the same may happen, and any visit of a pupil midwife to obtain a sample of urine, etc., cannot be of any great value because such are not trained to assess the problems of the woman's general health and environment.

We see too many children in our child welfare centres who bear the marks of disturbance in the mother's health, and these often indicate that her nutrition was impaired in the earlier half of pregnancy.

(2) *Maternal morbidity after confinement* provides another aspect where greater effort is needed; midwives' cases can rarely be persuaded to consult a private doctor on account of the expense, and if they do the result may be medicine only. Note the criticisms of working women as given recently at a Labour Conference. They say that legislation dealing with maternity services is mainly permissive and that many local authorities fail to make use of their powers; that there is lack of co-operation between the agencies concerned and insufficiency or lack of experience of many doctors and midwives.

There is thus a great field available for co-ordination coupled with the much-needed education of women to present themselves for examination—the obstetric is only one aspect—and the local authority should be able to help by the wisest health visiting without encroachment in the sphere of those respon-

sible for the accouchement. Such a step would ultimately lead to post-natal clinics and to the provision of beds for ante-natal supervision without undue cost falling on the family.

Some areas have the special problem of women workers who will not desist from following their employment until a late stage in pregnancy, and who deliberately avoid medical consultation.

I refrain from discussing midwifery under the control of general practitioners, but one must remember that for *insured women* the general practitioner is *responsible for medical attendance during pregnancy* (Ministry of Health memorandum 156/1930). "For these women ante-natal clinics should be available for any additional care the doctor considers necessary."

Co-ordination in Derby.—The Medical Officer of Health is also School Medical Officer and the splendid hospital in which you are meeting has been appropriated from the poor law authority, so that our services form a combined unit.

In actual practice the possibilities of co-ordination are much greater in a compact area, as compared with county administration; from observation and experience I consider a population not greatly in excess of 150,000 gives the greatest scope, as each departmental head has a chance to know his field, the family circumstances and environment of his clientèle, without a prodigious memory. Beyond 200,000, knowledge of districts and personal contacts become very difficult, and an administrative official has to delegate work to others. As administrative officer for infectious diseases I find that I can develop co-ordination with some facility in our population of 141,000.

A rapid survey of the forms and types of co-ordination we employ will be instructive; needless to say they are not perfect, but give an example of progress.

The municipal hospital has medical and surgical beds for adults and children, a tuberculosis section and a maternity block with consultants for all branches. The maternity beds are in full and increasing demand; each case is seen in the ante-natal clinic by specialists, and provision is made for dealing with pre-natal morbidity. Apart from the legal notifications of birth the maternity and child welfare department is informed when

infants are taken home, so that the health visitors can carry on their work.

The hospital is used for essential surgery of children, under reasonable fees, in association with tonsil and adenoid clinics of the education department and for orthopædic cases which have been referred to the specialist. Thus the great problem of waiting lists for voluntary hospitals has, in part, been solved. Medical cases such as pneumonia and acute rheumatism can be dealt with at once.

The children's wards offer the possibility of "follow-up" of all conditions of ill-health, especially those occurring amongst the poor, after discharge, by information to the appropriate department (maternity and child welfare, school medical officer's, etc.), but this link has not yet been developed to completeness.

Infectious disease can be fully controlled by the rapid transfer of all infection to the isolation hospital; the city hospital is not compelled to keep its infections.

Finally, the tuberculosis officer being a consultant, any suitable case can be transferred for later treatment to the sanatorium, the two institutions forming one whole.

Maternity and child welfare work in Derby is fairly complete in its contacts with the whole population. The maternity and child welfare officer conducts a central ante-natal clinic for midwives' cases, and the infant welfare centres are within easy reach of the principal housing estates.

The Royal Derby and Derbyshire Nursing Association, an old established maternity home and training school for midwives, carries on an extensive midwifery service in the town, with ante-natal supervision and, in the case of one of the four doctors on the rota, post-natal supervision of all his intern cases. The infants born in the district or in the maternity home may attend at a voluntary clinic of the institution of which I am the visiting officer, so that all who require help can be brought within the machinery of the public health services.

The Pre-school Child.—For ten years a special clinic has been available for "toddlers." I conduct two clinics weekly in different parts of the town, and a health visitor is set apart for routine visitation. All infants are transferred to this service at four years of age, and many come within its scope from two years. We have not the facilities for arranging

routine consultation for all, but we reach the major portion of those with obvious defects. This branch is most valuable for prevention, serving as a clearing agency to every branch of assistance, clinical and social.

In all our infant welfare the machinery of co-operation is completely linked with that of the school medical service, so that any child under school age can obtain dental treatment, skin treatment, light treatment, consultations for ear, nose and throat or orthopædic defects without delay.

The last stage in the co-ordination is the direct transfer of health visitors' records and all information from the toddlers' clinics to the school medical department when the child has started its school life.

Derby has an excellent nursery school in a populous district; the children are under regular supervision by the school doctors, and there is a tungsten arc lamp on the premises. Other schools have nursery classes, some of which, with the nursery school, are visited thrice weekly by a school nurse. All are under medical supervision, so that we have an average child population of about 750 of the pre-school group who have been brought under the control of the school medical service.

Infectious Diseases Services.—The administrative and clinical work is in my own hands, so that I am most admirably placed to co-ordinate measures for prevention and for dealing with after-effects.

Derby is one of the few county boroughs in which measles has remained compulsorily notifiable since 1918, and this is a most valuable epidemiological provision. For visitation there is a full-time experienced health visitor who may be backed by a second during periods of epidemic; we have taken this work out of the hands of sanitary inspectors, and relieved the school nursing service of all infectious disease visitation save for mumps. Every list of suspected infectious cases sent in by head teachers is included, so that we obtain very rapid information and the teachers co-operate admirably. Apart from the usual control and co-ordination with the education department for notifiable infections, our work for measles includes provision of home nursing, removal of cases to the isolation hospital (these taking precedence over scarlet fever), revisits of convalescents, both home cases and hospital discharges, and reference to the

infant welfare centre, toddlers' clinic or school medical officer should tonic treatment or light treatment be indicated.

Whooping cough, although not notifiable by doctors, is handled in the same way, and there is a working arrangement with the resident staff of the children's hospital, who furnish periodic lists of all cases coming to their knowledge. Fairly complete co-operation with the superintendent of the isolation hospital is possible, as to convalescents needing follow-up on discharge. It is regretted that we have no convalescent homes, but are dependent on private organisations for special cases, who may be sent to Rhyl, Skegness or Charnwood Forest. There is a real need for a municipal convalescent hospital or home.

The problem of early treatment *quâ* infected tonsils of convalescents from scarlet fever or diphtheria is at present beyond our resources; some local authorities deal with these in their isolation hospitals after suitable serum prophylaxis.

In the matter of diphtheria prophylaxis, advocated on occasion by maternity and child welfare officers, health visitors, or school medical officers at routine inspection of entrants, the responsibility falls on myself, and I am able to use branch school clinics or the schools themselves without calling upon the personnel of the school medical staff. As an office routine, a personal letter is sent to parents of all young children removed to hospital with scarlet fever, advising diphtheria prophylaxis and, on consent, the necessary injections are given in the fever hospital. This approach is always worth the trouble.

The School Medical Service.—This department is relieved from all responsibility for infectious disease; every exclusion on a tentative diagnosis or every positive swab report passes automatically to my personal control, so that our net is broadcast and fine-meshed.

The complete co-operation of other departments with the school medical service is achieved by the use of their light clinics, and the school dentists deal with all mothers, toddlers or infants on reference. Their specialist clinics for tonsils, etc., orthopædic cases and skin diseases are also available for any infant.

What of the Future?—We already have the machinery of co-operation for helping

children recovering from grave illness back to complete health—it remains to be perfected. Medical superintendents are busy people and do not always realise that much can be done after the cases have left their care.

I envisage the possibility, in county boroughs at least, of such new developments as:—

(1) Working schemes of co-operation with the almoners of general and children's hospitals, whereby the maternity and child welfare and school medical departments could follow up the neediest cases, both out-patient and discharged in-patient, without having to find them by chance.

(2) The establishment of simple machinery for similar co-operation between district medical officers of the public assistance services and the health services, until such time as they are fully co-ordinated therein.

(3) A greater concentration on convalescent children for preventive work—so often left to voluntary agencies to provide homes—by the establishment and use of municipal convalescent homes and open-air schools. There are many small-pox hospitals which might be used when not required for their specific task, but the name might prove a great obstacle.

(4) Included in the above are such special branches of remedial and preventive medicine as rheumatic infections (? by voluntary notification), the ravages of influenza with its respiratory complications, middle ear and mastoid damage; all dealt with by the voluntary hospitals without means of following up. Some authorities have started with rheumatism, but the field is wide. I imagine we are just skirmishing against the ravages of the streptococcus and pneumococcus groups of infections in child life, and the future may enable us to develop some practical forms of premunisation.

(5) Mental welfare, the "problem" child or parents, and all new developments on these lines await the advent of trained psychologists available for consultation in each area.

In every advance we need the fullest co-operation within the public health service and with our colleagues in general practice and in voluntary hospitals, so that the ideals of preventive medicine may be more and more matters of actuality.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters).

Psychology and Public Health.

The December meeting of the Society falling just before Christmas is rarely largely attended, but in spite of this, and in spite also of the difficulties presented by the practically general prevalence of fog and frost and snow and ice, the attendance at the final meeting of 1935 was extraordinarily good. This, no doubt, was due to the fact that the subject for discussion—"Psychology in Relation to Public Health"—held something of attraction for a considerable section of the membership. The opening papers by Dr. Henry Wilson of the Institute of Medical Psychology, and Dr. S. W. Savage, Deputy County Medical Officer of Buckinghamshire, provided a great deal of information with regard to the advantages of and necessity for child guidance and clinics connected therewith, if they did not reveal too clearly exactly what and how close was the connection between psychology and public health in the sense generally accepted by members of the Society. Though there was a relationship between one of the readers of the opening papers and the President of the Society that has not been a frequent feature of ordinary meetings of the Society, it was not this alone that led to so warm a welcome to the contribution of Dr. Savage or made it the one upon which the discussion very largely centred. Probably it was because in this paper there was more of actual reference to the work of the school medical officer and encounters with problem children that openings were provided for talk of difficulties met by others. Also, perhaps, because there was in it so much that was general as to the possibility of finding and dealing with root causes that several speakers were led to express their views with regard to the condition and the position of affairs to-day and the conduct of the people, that if they did not help very much so far as elucidation was concerned certainly helped to make the meeting a most interesting one and to justify the according of a very cordial vote of thanks to Dr. Wilson and Dr. Savage for having brought the matter up.

Other Meetings.

Prior to the Society meeting there had been a meeting of the General Purposes Committee, and prior to that a meeting of the Central

Council for Health Education. The Society's house, therefore, had been quite a busy place all day, although neither of the two meetings mentioned attracted anything like a large attendance. The Central Council meeting, indeed, was a rather small one and at it other than metropolitan representatives were conspicuous by their absence. At the General Purposes Committee there was a good proportion of members from the extra-metropolitan Branches, though the fog was responsible for a considerable number of apologies for absence. Amongst those present was Professor Picken fresh from his visit to the United States and full of enthusiasm for what he had seen of public health work in a number of cities and of teaching methods in several of the schools and universities. The General Purposes Committee, though less well attended than usual, got through a vast amount of work and performed admirably the function for which it was created, of making easier and more effective the labours of the Council. In due course just what was done will be reported to that body and particularly that Dr. James Fenton was re-elected Chairman, and Dr. F. T. H. Wood to act for him during his absence in South Africa, Jerusalem, and perhaps also Madagascar if it is as near at hand as Boy Billee averred.

Hutt and Hyslop Thomson's Preventive Medicine.

From one sign and another it would appear that the year just ended was one of great activity amongst those concerned to secure the production of books designed to assist in particular those engaged in acquiring a knowledge of public health and preventive medicine either as students or practitioners. Prominent amongst volumes of this sort there is one British in origin and another from the other side of the Atlantic to which it may not be out of place to make reference. The one originating here is that of Hutt and Hyslop Thomson*. The American

* PRINCIPLES AND PRACTICE OF PREVENTIVE MEDICINE. Edited by C. W. Hutt, M.A., M.D., M.R.C.P., D.P.H., Medical Officer of Health, Metropolitan Borough of Holborn, and H. Hyslop Thomson, M.D., D.P.H., Medical Officer of Health, County of Hertford. London: Methuen & Co., Ltd., 1935. Two volumes, illustrated, price £3 13s. 6d. net.

book is that of Rosenau*, who will, since his is so very senior a production, permit that first attention be given to the "Principles and Practice of Preventive Medicine" for which the late Dr. Hutt and Dr. Hyslop Thomson accept responsibility as editors. And first there must be said that, since completing his share of the work on the book was amongst the last things he did and death came before he had an opportunity of seeing it in book form, this was a circumstance adding further to the tragedy of the death of Dr. Hutt. On the word of Dr. Hyslop Thomson it is given that Dr. Hutt devoted much thought and labour to the work, and by all who knew him and his enthusiasm and diligence this statement will be most readily accepted. The book itself, which is in two volumes, is the work of many hands and in making choice of contributors it is obvious that the greatest care has been exercised in order to find those best qualified to deal with each particular subject. It is a guarantee of excellence and that there is the last word said that in the list there is the name of Sheldon F. Dudley of the Royal Navy, and that of Dr. Bridge of the Home Office; of Dr. Letitia Fairfield of the London County Council; of Dr. Benson of Edinburgh, and of Dr. Harries of London, two of the best-known writers on infectious diseases in the country; of Dr. Savage, President of the Society of Medical Officers of Health; of Dr. C. F. White of the Port of London; of Professor Wooldridge, prominent in veterinary medicine and hygiene, and of many others, including a number of well-known members of the public health service—Dr. E. H. T. Nash, Dr. Shinnie, Dr. Julia M. Browne, Dr. J. J. Paterson and Dr. Struthers. For a book that consists of a collection of contributions rather than a series of chapters by one author, it is remarkably free from anything in the nature of jerkiness or of inequalities. On the contrary, the movement is particularly smooth and there is an excellent balance for which no doubt the editors are in the main responsible. Whether they are or not, they have done their work—which can have been by no means easy—exceedingly well and may claim to have produced a couple of volumes that will be a lasting memorial to the one who is gone and a credit to the one who remains,

* PREVENTIVE MEDICINE AND HYGIENE. By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard Medical School; Professor of Epidemiology, Harvard School of Public Health. London: D. Appleton-Century Co., Inc., 1935. Price 42s.

if not indeed to public health as a whole in Britain.

Rosenau's Preventive Medicine and Hygiene.

Professor Rosenau's book was referred to as senior to that of Hutt and Hyslop Thomson, and it is very senior indeed. Actually, it is the sixth edition of the well-known text-book and appears exactly 21 years after the first edition, that of 1914, was issued to cause, as there still must be many who remember, quite a flutter in many breasts, for it marked a very definite departure from the type of public health manual to which students and practitioners had been accustomed and with which to a great extent they were bred. Both in his choice of matters for reference and in his treatment of the subject as a whole, Rosenau showed an originality and a freshness that seemed almost to lead to re-awakening of interest in the whole practice of public health and preventive medicine. Not for him long opening discussions on air and ventilation, water and sewage disposal. Instead there was a plunge straightway into a consideration of prevention as applied first of all to the communicable diseases: of immunity, heredity and eugenics; of foods; of industrial hygiene; of schools; and lastly, as being of least importance, of disinfection. In the present—sixth—edition there is the same display of originality, and although it has been extensively re-written and reset and on comparison shows a multitude of changes and in many directions signs of astonishing progress, it is still the Rosenau that the older fashioned yet hold in affectionate remembrance. Subjects not thought of in 1914 are fully discussed, amongst them: contraception, maternal mortality, heart disease, diabetes (who thought of these as suitable for reference in a book on preventive medicine and hygiene 21 years ago?) ringworm and periodic medical examinations. Subjects re-written or re-organised include: sex hygiene, heredity and eugenics, vitamins and deficiency diseases, tuberculosis, diphtheria, and many, many more to such an extent that the information given with regard to them is entirely up-to-date—or, in the American phrase, up to the minute—and the Rosenau of 1935 is just as acceptable and just as assured of a warm welcome by all who are interested and engaged in the study and practice of public health, hygiene and preventive medicine as was the red bound and only slightly thinner volume of 1914.

Food Poisoning.

By C. W. ANDERSON, M.B., CH.B., D.P.H., T.D.D., Assistant Medical Officer of Health, Cardiff; W. POWELL PHILLIPS, M.R.C.S., L.R.C.P., D.P.H., Deputy Medical Officer of Health, Cardiff; and H. R. TIGHE, M.D., F.R.C.S.I., D.P.H., Deputy Medical Officer of Health, Swansea.

The symposium on food poisoning, to which these three papers formed an opening, proved sufficiently attractive to induce a number of speakers of importance to take part, amongst them the President of the Society, Dr. W. G. Savage himself. That the papers will be found as interesting by readers as they proved to be at the meeting of the Welsh Branch on October 11th, 1935, at which they were read, is certain.

DR. C. W. ANDERSON.

MORBID conditions attributable to our food have been recognised from the earliest times. The symptoms, varying from slight malaise to severe gastro-intestinal disturbances, and even death, have been noted by many observers. For want of a better name, the term "food poisoning" has been applied to the clinical picture so presented.

The linking-up of the individual cases and the discovery of the incriminating foodstuff, etc., has been and still is one of the most baffling of medical and public health problems. Careful chemical and bacteriological investigations carried out in this and other countries upon the suspected articles of diet have made it possible to classify poisoning due to food into certain well-defined groups. Several of these are only of passing interest to the medical officer of health and he is seldom called upon to deal with them. Others are, however, of considerable practical importance and present him with many administrative and etiological problems.

It is customary to distinguish three main classes of poisoning due to food, *viz.* :—

- (1) The food is in itself poisonous.
- (2) The food contains a chemical poison.
- (3) The food has been contaminated with living pathogenic organisms or their toxic products.

It is, of course, the third group which really interests the medical officer of health, and we will therefore only touch upon the first two classes.

(1) *Poisonous Foods.*—The treatment of illness due to ingestion of such foods usually falls to the lot of the general practitioner. Examples of this type result from eating poisonous fungi, aconite root in mistake for

horse radish, rhubarb leaves for cabbage, etc. Certain poisonous fish and shellfish also fall within this category. Daffodil bulbs mistaken for onions caused severe symptoms in a case brought to my notice last month.

(2) *Food Containing Chemical Poisons.*—Many examples of this may be cited and the route by which the poisonous metallic salt has found its way into the foodstuff has been carefully followed. Thus we have poisoning due to arsenic in beer, lead in drinking water, antimony in lemonade, etc. Various preservatives formerly extensively used in the preservation of foodstuffs frequently resulted in gastro-intestinal symptoms.

So much for these two classes of poisoning by food. It is, however, the third group which is of particular interest to us, *viz.*, that in which symptoms are due to living organisms and their toxic products.

(3) *Food Infections and Toxins.*—This type may be divided into three classes according to the actual source of infection of the foodstuff.

(a) In this the animal from which the food was derived has been diseased. Thus anthrax, tuberculosis, undulant fever of both Mediterranean and "abortus" type, may be contracted by the consumption of food derived from animals suffering from such diseases. Less commonly, diphtheria and scarlet fever have developed from the ingestion of milk from udders infected with the organism of these diseases. Certain worms also may be transmitted to the human being through infected meat.

(b) In this type foodstuff from a healthy source has been contaminated by an organism pathogenic to man. Contamination of the foodstuff here arises from a human case or "carrier." Examples of this type are: cholera from drinking water, typhoid fever

from shellfish, milk, salads, ice-cream, etc., scarlet fever and diphtheria from milk.

(c) In this type, infection of the foodstuff has been by "food poisoning" organisms and their toxins. This type is now recognised as "true" food poisoning, and the former theory that poisonous alkaloids or ptomaines were responsible for the symptoms is now completely discredited. Infection is by the salmonella group of organisms. *Bacillus botulinus* and probably by other organisms which will be mentioned in subsequent discussions.

It is this type of food poisoning the investigation of which falls definitely within the category of the duties of the medical officer of health.

The actual investigation seems to divide itself into three main sections, but each one is closely related to the other and only by the close co-operation of the investigators in each section can satisfactory results be obtained.

(i) The medical officer of health must make efforts to trace all cases; find the vehicle of infection and stop its distribution and consumption.

(ii) The bacteriologist must confirm the diagnosis of cases, type the organism and, if possible, place the guilt on the suspected vehicle.

(iii) The veterinary surgeon must assist in tracing the path of infection and attempt to find its source.

Many comprehensive and detailed reports have been published dealing with outbreaks of food poisoning. Few have described the difficulties which commonly crop up in the investigation of these outbreaks. If in the future we can overcome these difficulties we will come nearer to solving the problem of food poisoning and its prevention.

The recent memorandum on food poisoning issued by the Ministry of Health sets out the steps to be taken by medical officers in suspected food poisoning cases. Matters are, however, not so simple as they would appear from its perusal. Difficulties arise at each step in the investigation.

(1) *Diagnosis.*—There is no doubt that food poisoning is much more common than is generally supposed. The clinical condition is fairly well defined, but too frequently the illness is just considered as a simple attack of diarrhoea and vomiting. Considering the ease with which a faecal swab can be taken, it is

remarkable that the general practitioner does not resort more frequently to this method of confirming a diagnosis. Many more helpful investigations might be carried out were this simple precaution taken.

(2) *Notification.*—Even when the disease is "notifiable," as it has been in Cardiff since 1930, delay in notification is the rule. In three of the recent Cardiff outbreaks notification was only received by the health department after a death had occurred. Only when symptoms are severe or the cases numerous is notification resorted to at a really helpful stage from the medical officer's point of view. Late notification greatly increases the difficulties of the investigator where every hour is of importance.

(3) *Departmental Overlapping.*—In several outbreaks useless delay has arisen through the action of the medical practitioner notifying the police instead of the health department. Cases of chemical poisoning of criminal origin no doubt prompts them to this course of action. By the time the police have made inquiries, valuable time is lost and frequently foodstuffs in no way connected with the outbreak have been seized, while the actual vehicle of infection has been overlooked. Only one department should be responsible for the carrying out of true food poisoning investigations, and undoubtedly the public health department is best qualified and organised for this work.

(4) *Ascertainment of Cases.*—Food poisoning is not necessarily an epidemic disease. Sporadic cases frequently occur but are often missed. Even in epidemics, when the general practitioner's memory of notification is "jogged," many cases must be missed because of the mildness of symptoms. Only in an institution, barracks or at public entertainments is it probable that the true extent of an epidemic can be accurately gauged. Even where a vehicle of infection has been traced to a shop, etc., it is often difficult to obtain the names and addresses of those who purchased the incriminated foodstuff.

(5) *Obtaining Specimens of Foodstuff at the Homes of Patients.*—The ease with which specimens are obtained varies to some extent with the nature of the food poisoning.

(a) Where it is due to preformed toxins in the food, the symptoms are usually early and severe. Such a case frequently resembles acute chemical poisoning, and notification

may be early. Results of investigations in this type, in spite of early notification, are rather disheartening. Although specimens are frequently available the bacteriological results are usually returned as being negative.

(b) Where symptoms are due to actual bacterial infection the onset is usually later and more gradual. When delay in notification has also taken place, the difficulty of even ascertaining a possible vehicle of infection is great and the procuring of an actual specimen of it is often impossible.

(6) *Obtaining Specimens from Patients.*—Little difficulty has been met with in obtaining specimens of vomit, faeces or blood from the cases investigated. Recent events in Cardiff, however, suggest that repeated specimens must be taken of both blood and faeces before one can exclude the disease in an apparently healthy individual. Certain features indicate the possibility of the "carrier" state. In one case positive faeces persisted for several weeks, and in two other outbreaks positive swabs were obtained from two cases in which no symptoms were complained of.

(7) *Description of Foodstuff.*—It is essential to obtain an accurate description of the foodstuffs purchased and their source. It is possible that if correct details of these had been obtained in one of the Cardiff outbreaks, the linking-up of outbreaks at first considered as being quite distinct would have been made possible at an earlier date.

(8) *Typing of the Organism.*—Careful note of the actual strain of organism discovered by the bacteriologist should be made. The similarity of strain in apparently isolated cases of food poisoning may result in the discovery of a single fairly widely distributed outbreak.

(9) *Vehicle of Infection.*—Difficulty is frequently met with in obtaining samples of suspected foodstuff from the shops at which food has been purchased. This is usually due to delay in notification of the case. The usual finding is that all the actual foodstuff has been sold and only samples from the same consignment are available. These have usually given negative bacteriological results.

Shopkeepers, etc., have invariably been eager to assist in any investigation and samples have been freely given. A gentle but firm hint that the sale of a doubtful foodstuff may result in a ruined business is usually all that is necessary to stop the sale of that food-

stuff. Compensation is rarely demanded. It is interesting to note, however, that an increasing number of patients subsequently demand and obtain compensation from vendors of infected foodstuffs. It appears that the fear of damaging publicity is the deciding factor in bringing about a private settlement between the parties concerned.

Although Dr. Savage found that in 100 investigations of food poisoning the vehicle of infection in 42 instances consisted of various tinned foods, this type of food has not been responsible to any extent for recent Cardiff outbreaks. Faggots, artificial cream containing imported egg white and marshmallow, pork, boiled ham, beef and other such prepared or manipulated foods have been the usual vehicles of infection. It must be admitted, however, that in spite of careful investigation no vehicle of infection could be discovered in several of the Cardiff outbreaks. Even where a vehicle was discovered the source or path of infection could not be established. It is here, therefore, that further extensive research seems necessary. Until the actual source of infection is discovered and until these various difficulties are removed it appears that we must continue to depend upon the present means we have at our disposal to prevent food poisoning, *viz.*:—

(i) Careful veterinary supervision of animal carcasses and attention to the general sanitation of the abattoirs.

(ii) A high standard of personal hygiene among the slaughtermen and porters, etc.

(iii) Hygienic transport of carcasses to destination.

(iv) Proper storage, preparation and handling of the foodstuffs in carefully kept premises with attention to rodent extermination.

(v) Thorough cooking of foodstuffs and care in exposure for sale.

(vi) Thorough cleansing of cooking utensils and careful sanitary supervision.

(vii) Early notification and prompt and thorough investigation of all cases.

DR. W. P. PHILLIPS.

BACTERIAL FOOD POISONING WITH SPECIAL REFERENCE TO MEAT PRODUCTS.

Bacterial food poisoning is one of the most interesting problems in public health. It is a subject on which knowledge has considerably

broadened during recent years, but there are still many aspects which require further elucidation. In no problem is it more essential that each step in the investigation should be considered in detail. Meticulous attention must be given to every link in the chain of evidence.

Infection of the food may be due to (i) the presence of living micro-organisms or (ii) toxins produced by micro-organisms. In the former variety the salmonella group are usually the causal factor; in the latter it is probable that a much wider range of organisms may be incriminated. Doubt as to the possibility of toxins causing symptoms of food poisoning has been shown in the past, but in this country Dr. Savage has strongly supported the view that food poisoning may be caused in this manner. Recent work, particularly by E. O. Jordan in America, tends to show that this is a definite factor to be considered.

Where living micro-organisms are recovered from the patient or an article of diet, it should be a relatively simple problem to trace the course of infection from the reservoir of infection, in which the bacteria has its normal habitat, to the patient. None can feel satisfied with the present knowledge on this aspect of the problem. Gaps in the line of evidence are all too frequent. It is well, therefore, to examine critically the common aspects presented in a food poisoning outbreak.

First the question of the extent of the infection among the population has to be ascertained. For each case known there are almost invariably many more which are never recognised. The exception to this occurs when a gathering of persons are affected, such as may happen at a banquet or in an institution. Gastro-enteritis due to this cause is often not recognised as such and does not receive bacteriological investigation. Mild cases often fail to seek medical advice. In order to render this part of the inquiry more fruitful, a useful measure is to make bacterial food poisoning notifiable as an infectious disease. Another means to achieve more general notification of such cases is to inform general practitioners of any increase in prevalence. During an outbreak, inspection of school registers showing coincident absences frequently reveals additional cases. Where an article of diet is under suspicion a list of customers who purchased the food from the shop may give useful infor-

mation, but in practice it is usually found that the retailer is very reticent on this subject as he is only too anxious to avoid any investigations which may cast suspicion upon his premises.

The vehicle of infection is of the utmost importance. Its recognition may be relatively simple; particularly is this likely to be the case where there are a number of associated cases. In sporadic outbreaks it is more frequently impossible to determine with any degree of accuracy the article of diet responsible for the symptoms. Prompt ascertainment of cases is a great factor for success in this direction; any delay makes the task considerably more difficult.

The path of infection is the next stage in the investigation and it is at this point that the majority of inquiries arrive at a full-stop. How does the vehicle itself become infected? This question has not been given the attention which it deserves. Probably this is the point at which the prevention of food poisoning may be most readily accomplished. The food or vehicle may become infected in numerous ways:—

(i) Meat may have been infected before slaughter. As an example, *B. aertrycke* has been recovered from the bone-marrow of a joint of mutton, the meat having given rise to a food poisoning outbreak. More often than not, however, the meat is found to be free from infection before it underwent cooking or preparation.

(ii) The food may be contaminated by infected material, and in searching for this factor it is well to bear in mind that food poisoning organisms produce their symptoms upon the gastro-intestinal tract and that in all probability, with the notable exception of *B. botulinus*, their normal habitat is the alimentary tract. Faecal contamination, whether animal or human, is therefore the probable path of infection.

(iii) Human carriers may contaminate food and while investigations in this direction are almost invariably without success the possibility must not be dismissed. Conclusive evidence is wanting of human carriers causing food poisoning outbreaks; secondary infections as the result of an infected person contaminating food during convalescence are by no means rare.

(iv) Contamination of food by animal carriers or infected animals again has to

be considered in relation to rats and mice. These may be closely associated with man. Matsumura and Meyer in San Francisco examined 775 rats, finding *B. enteritidis* in 38 and *B. ærtrycke* in 30. Savage and White (1923) isolated *B. enteritidis* from 6 out of 96 rats in a slaughterhouse. To give an instance, a food poisoning outbreak was traced to mice in Wigan (1931). The mice were infected by consuming a virus used for their destruction and infected the food by faecal contamination.

(v) The transmission of food poisoning organisms by flies has to be considered, but it is difficult to prove or disprove this possibility.

It next remains to study the reservoir of infection. Salmonella organisms are by no means rarely found in the animal kingdom, and it seems that here the reservoir of infection is to be found. Cattle, swine, sheep and poultry have each been found to be infected with strains of the salmonella group. The consensus of opinion is that these organisms are not saprophytes in the alimentary tract of these animals but the animals are either suffering from an infection due to the organisms or are in a temporary carrier phase following upon an infection. The fact, however, remains that the animals most commonly used for human food are liable to infection with the causal organisms of food poisoning.

Illustrating some of these points, it may be interesting to consider a series of cases of *B. ærtrycke* infection which occurred in Cardiff recently. The cases occurred over a period of three months, July-September, 1935. There were 61 persons affected, of whom two died. Considering these cases they may be divided into two groups: (a) Sporadic cases in which only one person or a single family were affected and in which it was impossible to link up other cases. Twenty-three patients fell into this group. Complete investigations were made but while suspicions indicated certain articles of diet, proof was wanting. (b) The second group numbered 41. They occurred in three outbreaks and it was possible to incriminate the food consumed. Suggestions as to the path of infection are also possible.

Outbreak No. 1 consisted of 19 cases from the faeces of whom *B. ærtrycke* was isolated. The vehicle of infection was roast pork, this being the common article of diet in each case. It was traced to a single shop, but no sample

of the food was available for examination. Search was made for a carrier at the shop where the roast pork was purchased, and apart from the fact that one assistant, who took part in the preparation of the food, gave an agglutination of 1/50 to *B. ærtrycke*, no evidence was available to show that a human carrier may have been the means of infecting the vehicle.

Outbreak No. 2 consisted of eleven cases. The vehicles of infection were jellied veal and pressed beef purchased from a common source. Samples of these preparations taken from the shop proved negative, but *B. ærtrycke* was recovered from a 24 per cent. brine solution in which the meat was being pickled before being utilised in the preparation of the different meat products. It is interesting to note that Professor Craig, of Dublin, states that this organism has been known to survive for 75-80 days in a solution of brine under normal conditions of temperature. Human carriers were again searched for, faecal swabs being taken and also agglutinations being done. One assistant again showed an agglutination of 1/50 to *B. ærtrycke*. Repeated swabs were, however, negative.

Outbreak No. 3 consisted of eleven cases and again jellied veal was the vehicle. Tracing the food to the shop at which this was purchased it was possible to isolate the organism from some of the food on sale, but in this instance it was not isolated from the brine in the pickling tanks. Again an attempt was made to find a human carrier among the assistants at this third shop. One assistant gave an agglutination of 1/50 to *B. ærtrycke*. Faecal swabs at first gave a negative result, but an interesting result was finally obtained when a swab was taken two weeks after the outbreak and was returned positive. This was not the assistant whose blood had previously shown agglutination, and two previous swabs had been negative. The individual was isolated and his blood, which had previously given no agglutination to *B. ærtrycke*, now agglutinated the organism up to a dilution of 1/50. He was released from isolation after a series of negative results and by the end of four weeks his blood showed no agglutination. This case is of particular interest, for while it cannot be stated that he formed the reservoir of infection, he must be regarded with suspicion. At no period did he show any symptoms of a gastro-intestinal upset, but

was in normal health. It certainly emphasises the fact that repeated faecal examinations are required before the possibility of a human source of infection can be entirely disregarded.

Considering the common features of these three outbreaks, in each instance the food was purchased at shops in which the meat products were prepared. The methods of handling in the course of preparation could not be said to be satisfactory. Appreciating that faecal contamination was a probable source of infection of the vehicle, a search was made as to the most likely way in which this might occur. It was noted that pigs' intestines were stored in tanks in each of the three shops. These tanks were adjacent to those in which other kinds of meat were being pickled in brine. The assistants would commonly take strips of intestine from one tank and without washing their dripping hands take meat from the adjacent tanks. The question which at once arose was as to whether or not the intestines were free from possible food poisoning organisms. At the slaughterhouse they had been washed in cold water so as to clear them of obvious faecal material.

The possibility of the pig being a reservoir of infection in the case of *B. ærtrycke* had now to be considered. Faecal swabs were taken from pigs at the municipal slaughterhouse. The faeces of 57 pigs have been examined and in two instances *B. ærtrycke* has been isolated. An important fact is that the pigs in which a positive swab was given were quite normal and showed no abnormality to the meat inspector. It cannot be stated that they were not just temporary carriers which had previously had gastro-enteritis, but the practical point remains that when slaughtered there was no evidence to show that they were a possible source of danger from faecal contamination. It also suggests that the probable path of infection in the three outbreaks was by means of the assistants handling, on the one hand, infected intestines and then meat in the course of preparation. Peckenham (1923) describes a group of cases in which pork pies formed the vehicle of infection and from premises on which these were made, pigs' intestines in a tank give a culture of *B. Derby*.

In order to minimise the risk of bacterial food poisoning an essential step is to secure a greater measure of control over premises on which meat food products are prepared. The

staff should be instructed as to the dangers likely to result from the careless manipulation of food and particularly those kinds of food likely to be contaminated. Close collaboration with the veterinary officer is an essential feature in investigating for the probable reservoir of infection, and the prevention of food poisoning is largely a veterinary problem demanding close attention.

DR. H. R. TIGHE.

OUTBREAKS OF FOOD POISONING IN SWANSEA.

There have been four outbreaks of food poisoning in Swansea in the past 15 years.

(1) The first occurred from June 26th to 28th, 1926, and affected 39 persons in eleven households. Strong circumstantial evidence indicated "pressed beef from a certain shop" as the cause. This meat was noticed to be "not very nice." Only three persons were known to have eaten the meat without becoming ill. Those members of the households attacked who had not partaken of the meat escaped.

The suspected meat was prepared by a firm at Burton-on-Trent, the meat being chilled meat obtained from London, but pickled and pressed at Burton. About 20 times the amount of the Swansea consignment was distributed to various parts of the country without complaint.

A 22 lb. lot was received at the Swansea shop on June 24th, packed in grease-proof paper with wooden discs at the top and bottom, and enclosed in wooden boxes. It was stored under good conditions in the paper. On arrival the lower portion was noticed to be "soft and jelly-like," and complaint of this was lodged and the price reduced.

The health department did not hear of the outbreak till June 29th, by which time none of the meat was obtainable. However, several wooden discs were discovered amongst which were thought to be the discs of the suspected meat. One of these discs yielded large numbers of salmonella-like colonies, but no true salmonella was detected. The other discs were negative (Ministry of Health laboratory). *Salmonella morbificans bovis* was isolated from the patients and was the cause of the outbreak. The symptoms were nausea, vomiting, colic, shivering, diarrhoea, headache, and in all cases the illness incapacitated from work and required medical attention. There were no deaths.

The incubation period was from 12 to 15 hours and, in a few cases, 24 hours.

(2) The next outbreak was a few days later—July 1st, 1926—and affected a picnic party of the staff of a ladies' dress establishment. There were 17 persons in the picnic and all became ill except three who did not eat of certain egg sandwiches. Some remaining sandwiches were eaten by two persons not in the picnic and these also became ill. The eggs were obtained locally and came from the open market at Llandilo and Carmarthen.

The egg of the sandwich as well as the eggshell (the latter obtained from dust-bin) yielded salmonella, mutton strain, which organism was also isolated from the patients.

The incubation period was about 17 to 24 hours, and the symptoms were vomiting, colic, diarrhoea, giddiness, and pain in the limbs. All were confined to bed. There were no deaths.

These two outbreaks from their proximity in time, at first thought to be connected, were due to entirely distinct organisms.

Some Liverpool rat virus investigated in connection with the second outbreak did not yield salmonella.

Also casual cases of diarrhoea reported by private doctors about the same time were all negative.

(3) On July 5th, 1929, ten persons became ill with the following symptoms: nausea, diarrhoea, colic, headache and giddiness. All had consumed jellied veal which came in tins from Holland. Streptococci were obtained from the suspected veal as well as from other tins of the same brand. A few were also obtained from the stools of a convalescent patient. It was not established that the streptococci were the cause of the symptoms.

(4) About 12.15 p.m. on Saturday, September 14th last, we were notified by two doctors in different portions of the borough of illness which appeared to be food poisoning, and which in each case was in a child which had been to a treat given by the local 'bus men.

The facts ultimately ascertained were as follows:—

On Thursday, September 12th, between 4 and 6 in the afternoon, the 'bus men of the local transport services had given their annual treat to children. Owing to a strike the children were not taken for a drive but were gathered together at various centres for a feed—the majority at the Swansea Market and

others at Thistleboon Orphanage, Mumbles; Unemployed Welfare Halls at Bonymaen and Peniel Green, and the Labour Hall, Morriston. In all, about 1,000 tickets were issued.

The children at the Market were given sandwiches, cake, fruit (apple, orange or pear) and sweets, all contained in paper bags. The same food was issued to the other centres, but was contained in cardboard cartons. The Market children were given tea; the others "pop" or milk.

About 250 cases in all became ill. Only those who ate the sandwiches were taken ill, no illness being associated with the other food alone. Also, where sandwiches were taken home and eaten by other members of the family, they became ill as did some fowls, which ate sandwiches thrown to them. All who ate sandwiches did not become ill, the incidence being higher in some districts, though all districts were affected. The incidence was high in the Mumbles, none of the Orphanage children escaping.

A salmonella *ærttrycke* was isolated from the stools of the patients, and from the meat of the sandwiches. All the organisms were agglutinated to the same degree by the serum of one of the patients which also agglutinated a specific strain of *ærttrycke*. The infection was in the meat of the sandwich and not in the butter or bread. All the sandwiches were not positive, but large numbers of bacteria grew from all, so that negative results were quite likely due to swamping of salmonella rather than to their absence.

The meat was obtained from local butchers' shops on two days—Wednesday and Thursday. On Wednesday, uncooked mincemeat was obtained from four butchers—beef in each case except one where pork was mixed. Brawn was also obtained but was consumed by the helpers alone.

On Thursday, minced meat was obtained from two other butchers—from one cooked mincemeat, from another raw mince, while from a third butcher brawn was obtained, the last again for the helpers only. The cooked mince was of chilled beef and fresh pork; the raw mince of chilled beef and fresh beef.

The Wednesday's supply was cooked and the sandwiches prepared and papered at the home of one of the 'bus men. The Mumbles supply was from this source. Thursday's supply was prepared at a model bakery to which the meat was taken direct. The remainder of

the Wednesday's meat was also taken there, but was not used as it was found to have become hard and unworkable.

The infection was evidently in the Wednesday's meat and was conveyed to the other meat by some manipulation at the bakery. No illness was discovered amongst the helpers or their families prior to the picnic.

A jug full of solidified fat remaining from meat cooked on Wednesday at the 'bus man's home was sampled twice. The first sample yielded salmonella, the second was negative.

No cases of food poisoning were reported apart from those connected with the picnic.

The clinical features of the outbreak were:—

A VERY warm welcome is offered to the *West Riding Dental Journal*, the first number of which appeared in December, 1935. Consisting almost exclusively of abstracts from articles on dental subjects and matters, and quotations from annual reports of school dentists, it has a peculiar value and it may be hoped for it that being useful it may have a long career. Dr. T. N. V. Potts, Medical Officer of Health of the West Riding of Yorkshire, in a foreword claims for the new journal that "it should constitute a useful instrument in securing the best possible co-operation, not only among members of the dental staff themselves but also between the dental surgeons on the one hand and the school medical and nursing staffs on the other." As this is an important sphere of usefulness, it is an additional reason for offering the *West Riding Dental Journal* a welcome and wishing for it a long life.

THE Right Hon. Sir Kingsley Wood, M.P., Minister of Health, has consented to act as President of the Health Congress of the Royal Sanitary Institute, which is to be held at Southport from July 6th to 11th, 1936. He will deliver his inaugural address on Monday afternoon, July 6th. The deliberations of the Congress will be divided among seven sections dealing with: preventive medicine; engineering, architecture and town planning; maternity, child welfare and school hygiene; veterinary hygiene; national health insurance; hygiene of food (in conjunction with the Food Group of the Society of Chemical Industry); and tropical hygiene. In addition, there will be conferences of representatives of sanitary authorities, medical officers of health, engineers and surveyors, sanitary inspectors, and health visitors.

Incubation period: 23 per cent., 12 hours or less;

50 per cent., within 24 hours;

some, 36 to 40 hours or more.

Symptoms—nausea, vomiting, colic, diarrhoea, headache, drowsiness, pyrexia 101° to 103°.

Many were seriously ill, and two or three would probably have died if they had not been admitted to hospital where they arrived in a collapsed and dehydrated condition.

[The bacteriological data contained in Dr. Tighe's contribution was supplied by Dr. A. F. Sladden.]

THE Henry Saxon Snell Prize was founded to encourage improvements in the construction or adaptation of sanitary appliances, and is to be awarded by the Council of the Royal Sanitary Institute at intervals of three years, the funds being provided by the legacy left by the late Henry Saxon Snell (Fellow of the Institute). The prize in the year 1936 will consist of fifty guineas and a Silver Medal of the Institute, and is offered for an essay describing suggested improvements in the construction or adaptation of sanitary appliances. Competitors are reminded that what is required is constructive suggestions for improvements in sanitary appliances and not merely an account of the developments that have already taken place. Details and general conditions applicable to entries for the prize may be obtained from the Secretary, Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1.

THE Board of Education have now issued a catalogue of the Grenfell Collection of works on physical education. This valuable collection was made by Captain F. H. Grenfell, D.S.O., R.N., formerly the Board's Staff Inspector of Physical Training, and on his retirement from the Board's service Captain Grenfell most generously presented the collection to the Board's library where it is now available for reference by members of the public. The collection includes sections dealing with the history of physical education, with hygiene and physiology and with gymnastics, dancing, athletics and games in a large number of countries. The catalogue is on sale, and copies of it may be obtained direct, or through any bookseller, from H.M. Stationery Office, price 2s. (by post 2s. 2d.).

The Society. Reports, Proceedings and Announcements.

NOTICES.

FEVER HOSPITAL MEDICAL SERVICE GROUP.

An ordinary meeting of the above Group will be held on Friday, January 31st, at the house of the Society at 4 p.m., when papers on "The Serum Treatment of Typhoid Fever" will be read by Dr. A. Felix, of the Lister Institute, and Dr. C. J. McSweeney, Dublin.

A meeting of the Group Council will be held at 3 p.m.

A. JOE,

Hon. Secretary.

North-Western Hospital,
Lawn Road, London, N.W.3.

MATERNITY AND CHILD WELFARE GROUP.

A visit has been arranged on Saturday, January 18th, to take place at 3 p.m., to the Willesden Municipal Maternity Hospital, Honeypot Lane, N.W.9. Mr. Arnold Walker, F.R.C.S. will speak on "The Working of a Maternity Hospital Unit." The Hospital authorities have kindly invited members to tea.

Routes to the Hospital—(a) Train from Baker Street (about every 10 minutes) to Kingsbury; change at Wembley Park. Allow 50 minutes. (b) Hampstead and Edgware Tube to Hendon Central Station and thence by 183 bus to Kingsbury. Allow one hour from central London.

The Group will also meet at the house of the Society on Friday, February 21st, at 8.30 p.m., when Dr. Andrew Topping, Senior M.O., Public Health Department, L.C.C. (formerly M.O.H., Rochdale) will read a paper on "Certain factors influencing Maternal Mortality and the part played by publicity in combating them."

(Mrs.) MURIEL RADFORD,

1, Manor Way, *Hon. Secretary.*
Potters Bar, Middlesex.

DENTAL OFFICERS' GROUP.

A meeting of the Group will be held at the house of the Society on Friday, January 10th, 1936, at 8 p.m. Subject for discussion, "Symposium on Dental Caries," to be opened

by G. Graham Macphee, Esq., M.A., M.D., CH.B., L.D.S. (GLAS.). Dr. Sim Wallace will also take part.

Members and Fellows of the Society are heartily invited to this important meeting, and to take part in the discussion.

J. F. PILBEAM,

Dental Clinic, *Hon. Secretary.*
Lodge Road,
Croydon, Surrey.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, December 20th, at 5 p.m.

The President (Dr. W. G. Savage) was in the chair and there was an attendance of over 20 members.

The minutes of the last meeting having been approved and signed, the next business of the meeting was the unanimous election of the following under Article 12 as fully-paid Life Fellows of the Society: Dr. T. W. Naylor Barlow, O.B.E. (on the recommendation of the North-Western Branch), and Dr. Edward Walford (on the recommendation of the Welsh Branch).

The following candidates, having been duly proposed and seconded, were elected to membership of the Society:—

As Fellows:—

Begg, Liliias, M.B., CH.B. (EDIN.); Boyes, Kathleen, M.B., CH.B. (MANCH.), D.P.H.; Braid, Frances, M.D. (ST. AND.), M.R.C.P. (LOND.); Burnet, William Stevenson, M.D. (GLAS.), D.P.H.; Burnett-White, Margaret Catherine, M.B., CH.B. (EDIN.), D.P.H.; Chandler, Irene Elizabeth, M.R.C.S., L.R.C.P.; Dickson, Mary Gladys Harriet, M.R.C.S., L.R.C.P., D.P.H.; Forsyth, Edith Mary, M.B., B.S. (LOND.); Elliott, Alfred, M.D. (BIRM.), D.P.H.; Gunn, Alistair Livingstone, M.D. (WALES), F.R.C.S. (EDIN.), B.S.C., M.C.O.G.; Hatherley, Bessie, M.B., CH.B. (SHEFF.); Huss, Charles Bertram, M.R.C.S., L.R.C.P., M.B., B.S. (LOND.), D.P.H.; McDowell, Margaret Martin, M.B., CH.B. (EDIN.), D.T.M. & H., D.P.H. (LOND.); Makepeace, Dorothy, M.A., M.D. (LOND.), D.P.H.; Parry, S. Chalmers, M.R.C.S., L.R.C.P., D.P.H.; Ringrose, Doris M., M.B., CH.B. (EDIN.), D.P.H.; Selkirk, William Joseph Burns, M.A., M.D., CH.B. (EDIN.); Smith, Frances E., M.B., CH.B. (EDIN.), D.P.H.; Wildman, William W., M.B., CH.B. (EDIN.).

As Associates:—

Pomeroy, Stanley Edwin, L.D.S., R.C.S. (ENG.); Salusbury, Herbert Morris, M.R.C.V.S., D.V.H.; Smith,

Arthur Geoffrey, L.D.S., R.C.S. (ENG.); Woodhead, Evelyn Collingwood, M.R.C.S., L.R.C.P., L.D.S.

A number of nominations were received for the next election of members.

There followed a discussion on "Psychology in Relation to Public Health," opened by Dr. Henry Wilson, M.R.C.P. (Physician, Institute of Medical Psychology), and Dr. S. W. Savage (Deputy County Medical Officer of Health, Buckinghamshire). Others who spoke were Drs. Maitland Radford, T. W. Hill, Irene M. B. Green, C. F. White, A. T. Smyth, and the President, who conveyed a hearty vote of thanks to the opening speakers.

A full report of the opening papers and discussion will appear in a later issue of PUBLIC HEALTH.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.

Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held in the Public Health Laboratory, York Place, Manchester, on December 13th, 1935, the Vice-President (Dr. Herd) occupying the chair in the absence of the President. Eighteen members were present.

A letter was submitted from the West of England Branch requesting the support of the Branch for the nomination of Dr. Ernest Ward for the Presidency of the Society. It was resolved to defer discussion of the nomination until the meeting to be held on February 14th, 1936.

Dr. James Bennett (Medical Officer of Health and Public Vaccinator for the Warrington Rural District) read a paper on "Parental Vaccination and Transmissible Immunity." After briefly reviewing the history and relationship of variola major to variola minor and the history of smallpox in isolated communities, Dr. Bennett referred to two outbreaks of smallpox in Warrington in 1903-4 and 1927-28. During both of these epidemics many girls between the ages of 15-20 were vaccinated or re-vaccinated. As time went on some of these girls became mothers of children who were submitted for vaccination. He found that their children up to the age of four months were more difficult to vaccinate successfully than were the children of mothers who had not been recently vaccinated and even after four months the reaction was modified. When four insertions were made by

the public vaccinator "failure to take" was rare and there were very few insertion failures, the average number of successful vaccinations being 99 per cent. and the insertion successes being 97 per cent. On only three or four occasions in tens of thousands of vaccinations has it been necessary to vaccinate a third time and then always with success. These results tend to confirm the opinion that failure to obtain successful vaccination in the children of recently vaccinated mothers cannot be attributed to lack of care or skill on the part of the public vaccinator. After the 1927-28 epidemic of smallpox, during the three and a half years while the four-mark insertion continued, his experience during the years following the earlier epidemic was repeated. During this period a note of the vaccinal condition of the mothers was inserted in the registers. In 36 instances out of 51 failures during this period the mother had been revaccinated within the preceding three to five years. The figures are of necessity small as the field of observation is limited to the children of recently vaccinated mothers, who form only a small proportion of the total child-bearing mothers under review—1,400. The fifteen failures among the children of mothers not recently vaccinated is approximately the normal percentage of failures, namely, 1 per cent. A noteworthy feature is the fact that after four months of age, *i.e.*, six to eight weeks after the initial failure, the reaction of the children of recently vaccinated mothers is less vigorous and retarded when compared with other children. These facts suggest that some degree of protection is capable of transmission and the question arises whether this transmission can be in any way responsible for the modified form of smallpox known as variola minor. In all the more civilised and therefore well-vaccinated countries, smallpox which was formerly of the major type is now definitely of the minor variety, while in Asiatic and African countries which have never known complete vaccination, the disease of the major type is, even to-day, endemic. If it is admitted that parental transmission of immunity does exist and that each successfully vaccinated parent hands down some degree of protection to its child then, after the long period of vaccination, there must be a "bred-in" immunity amongst those now living which will take one or more generations to breed itself out. While this "bred-in" immunity lasts, variola major is unlikely to become epidemic. If this can be relied upon, the costly procedure for dealing

with smallpox may be modified with perfect safety. Unless, however, efficient infantile vaccination is carried out persistently in every generation and a transmitted immunity maintained, smallpox will revert to the old type, requiring all the elaborate administrative machinery for its control.

In opening the discussion on Dr. Bennett's paper (which it is hoped will be published in full in a later issue of PUBLIC HEALTH) Dr. Herd pointed out that it was generally accepted that acquired characteristics could not be transmitted, and it was difficult to fit in Dr. Bennett's facts with the accepted views of inherited immunity. Drs. Stallybrass, McClure, Watkins, Ashcroft and Berry took part in the discussion. Dr. Stallybrass thought that Dr. Bennett's figures were statistically significant. He thought that the transmission of immunity was less likely to occur through the germ cells than by the presence of antibodies in the maternal blood, establishing a passive immunity in the offspring. He also referred to the co-existence of both variola major and minor in the same community.

On the proposition of Dr. C. O. Stallybrass, seconded by Dr. McClure, a hearty vote of thanks was accorded to Dr. Bennett for his most interesting paper.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.
Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of this Branch was held in the Town Hall, Barnsley, on November 29th, 1935. The President occupied the chair, and there were six members present.

The West of England Branch had written stating that they were nominating Dr. Ernest Ward for the Presidency of the Society, and asking the Yorkshire Branch to support his candidature. It was decided to defer consideration of this letter until a later date.

The Executive Secretary had asked the Branch to give immediate consideration to the scheme for a municipal midwifery service, prepared by the Joint Council of Midwifery, and to forward their observations and criticisms thereon to the Society not later than the end of January. It was decided that a special meeting should be held for this purpose, the date to be fixed by the President and the Honorary Secretary.

The Hon. Secretary of the Veterinary Group

had intimated that Mr. H. M. Salusbury, D.V.H., M.R.C.V.S., Chief Veterinary Officer of the City of Sheffield, had been elected the veterinary representative on the Branch Council.

The question of re-admission to membership of the Society of persons who had been dealt with under Article 11 of the Constitution was considered, and it was resolved that the Branch re-affirms its decision that such persons should not be re-admitted, and also recommends the Council that where an application is received for re-admission the Secretary of the Society should bring specifically to the notice of the Council the fact that the candidate had been dealt with under Article 11.

The question of advertisements in PUBLIC HEALTH was again considered, and it was resolved that the Council be recommended to instruct the Executive Secretary to prepare a communication to all Fellows of the Society setting forth the claims of the Journal to be regarded as an advertising medium not only for official notices, but also generally, and to issue with this communication a note with regard to rates.

The members then proceeded to take part in the sessional meeting of the Royal Sanitary Institute.

THE WELSH BRANCH.

ASSISTANT MEDICAL OFFICERS' AND SCHOOL DENTISTS' SUB-GROUP.

President: Dr. Amy L. Jagger, Assistant School Medical Inspector, Glamorgan County Council.

Hon. Secretary: Mr. Quentin A. Davies, L.D.S., Assistant Dental Officer, Glamorgan County Council.

A meeting of this Sub-Group was held in the Institute of Preventive Medicine, Cardiff, on December 6th, 1935. The President occupied the chair, and sixteen members and guests were present.

Dr. A. G. M. Severn (Medical Officer of Health, Pontypridd) delivered an address on "Public Health in the U.S.S.R." Dr. Severn, who has made four visits in the last ten years, has seen almost every corner of Russia, and so was able to make some comment on the progress being made in recent years. He described how medical practice was originally carried on by unqualified men in great numbers, but after the revolution Lenin soon established a public health scheme and formed a Ministry of Health. The medical profession became state officials, and are now drawn mainly from the working-

class and contain a very large proportion of women. Dr. Severn showed how the various branches of medicine had developed. Crèches and kindergarten schools, birth control clinics, legalised abortion clinics, centres for the psychological treatment of children, physical culture centres, and forest schools and sanatoria for tuberculosis patients were present in great numbers. A later development were night-sanatoria where tuberculous, delicate, gastric and such cases spent their non-working hours. Venereal disease was being cut down by propaganda and rescue homes. Dr. Severn described the scheme as theoretically excellent but owing to the vast numbers and varieties of types, the prevalence of flies and vermin, the poor water supply, bad food and almost entire lack of milk, it was very difficult to get the results it deserved.

Drs. Jagger and Gordon and Mr. Oliver joined in the discussion that followed, and a hearty vote of thanks to Dr. Severn for his extremely interesting address was accorded, on the proposition of Dr. David Lewis.

THE MATERNITY AND CHILD WELFARE GROUP.

BIRMINGHAM AND MIDLAND SUB-GROUP.

Chairman: Dr. Henry P. Newsholme, M.O.H. Birmingham.

Hon. Secretary: Dr. Agnes Young, ASST.M.O., Warwick C.C.

A meeting of this Sub-Group was held on November 30th, 1935, in the Child Welfare Centre, Lancaster Street, Birmingham. Dr. Newsholme presided, and twenty-five members were present.

The Chairman delivered an address entitled "An Aspect of Maternal and Infant Ill-Health." At the annual meeting of the British Medical Association this year a resolution was adopted which included the assertion that "the publicity which maternal mortality is receiving to-day is tending to terrify child-bearing women, and is in itself a cause of increased mortality." It was around this assertion that Dr. Newsholme constructed his paper. He dealt with his subject in an original manner which was intensely interesting and very thought-provoking and it is hoped that address will be published in full in an early number of PUBLIC HEALTH.

Dr. Morris Jones, while expressing the thanks of the members for the opportunity afforded to them by listening to such interesting opinions,

congratulated Dr. Newsholme on his enjoyable address. Dr. Hamilton Wood associated himself with Dr. Morris Jones's remarks, and the vote of thanks was accorded with enthusiasm.

A tour of the centre was then made and included a visit to the venereal diseases clinic for women and children which occupies the top floor of the building.

THE FEVER HOSPITAL MEDICAL SERVICE GROUP.

President: Dr. E. H. R. Harries, Med. Supt., North-Eastern Hospital, London County Council.

Hon. Secretary: Dr. Alexander Joe, D.S.C., North-Western Hospital, London County Council.

The opening meeting of the session 1935-36 of this Group was held at the house of the Society on November 29th, twenty-five Fellows of the Society being present.

The retiring President (Dr. H. Stanley Banks) presented the Group with a presidential badge. This was received with acclamation, whereupon Dr. Banks installed his successor, Dr. E. H. R. Harries, in the chair, at the same time investing him with the new badge which was thus worn for the first time. Dr. Banks was warmly thanked by the President for his valuable gift, and also received a hearty vote of thanks from the meeting for his conduct in the chair and his exertions on behalf of the Group during the past two years.

It was decided to hold a provincial meeting of the Group on May 22nd, 1936, provided arrangements could be made.

Dr. Harries delivered his presidential address entitled "Fever Hospital Practice in Retrospect and Prospect," which appears elsewhere in this issue.

A vote of thanks to the President was proposed by Dr. E. W. Goodall, O.B.E., and seconded by Dr. Mason Leete, and Dr. Harries having indicated that his address was open for discussion, Drs. Banks, Topping, Sutherland and Powell made various observations.

"The Sanitation and Planning of Flats" will be discussed by Mr. John Wilson, F.R.I.B.A., Chief Architect, Department of Health for Scotland, at a meeting of the Royal Sanitary Institute to be held on Tuesday, February 11th, 1936, at 5.30 p.m., at 90, Buckingham Palace Road, London, S.W.1.

THE JOINT TUBERCULOSIS COUNCIL.

A meeting of the Joint Tuberculosis Council was held at the house of the Society of Medical Officers of Health on November 23rd, 1935, Dr. Lissant Cox occupying the chair. Twenty-three members were present.

Dr. G. Lissant Cox was nominated for election as Chairman of Council for 1936; Drs. S. Vere Pearson and L. S. T. Burrell as Vice-Chairmen; Dr. Ernest Ward as Hon. Secretary; Dr. G. Jessel as Hon. Treasurer; and Dr. D. P. Sutherland as Hon. Auditor.

After discussing the vacancy created by the resignation of Mr. Girdlestone, it was decided to invite the Association of Thoracic Surgeons to appoint a representative on the Council.

Dr. McDougall presented the 1935 report of the Employment Committee, and various suggestions for his consideration were brought forward. Dr. McDougall was heartily thanked for his arduous work in compiling this report, and it was decided to leave the circulation thereof to the British Legion Press.

A note was presented by Dr. Blackmore on behalf of the Institutions Committee with reference to Dr. Heaf's memorandum on "Tuberculosis Institutions and Chest Hospitals." Dr. Blackmore was thanked, and it was resolved: "That this Council is of opinion that the benefits of major surgery for both tuberculous and non-tuberculous conditions should be available to every patient in need of such treatment, and considers that steps should be taken by local authorities to provide facilities at tuberculosis institutions if adequate arrangements have not or cannot be made at other institutions."

On behalf of the Milk Committee, Dr. Hawthorne reported that the Conference of the National Association for the Prevention of Tuberculosis at Southport had expressed high opinions of the value of pasteurisation in the production of safe milk, and the Ministry of Health Report took the view that this process did not impair the nutritive value of the milk.

A pamphlet on blood sedimentation tests, produced by the Association of Clinical Pathologists, had been circulated to members and was discussed. A committee comprising Dr. Heaf (convener), Drs. R. R. Trail and

W. H. Dickinson, and Professor S. Lyle Cummins, was appointed, "to consider and report to the next meeting of Council on the standardisation of blood sedimentation tests."

Dr. Brand gave an account of post-graduate courses held in 1935. One course had been held at the City of London Hospital for Diseases of the Heart and Lungs, at which there were twenty-two participants. A study tour in Denmark from June 1st to 15th, 1935, was followed by ten members. Dr. Peter Edwards had held six short intensive courses, and from November 4th to 9th, 1935, a course had been held at Brompton Hospital. For 1936, Dr. Brand was trying to arrange a course at Alton by Sir Henry Gauvain, another at the Victoria Park Hospital, and intensive courses by Drs. Peter Edwards and R. R. Trail. Very high appreciation was expressed of Dr. Brand's hard work on these courses.

A letter had been received from the College of Nursing asking for advice as to the precautions to be taken to prevent tuberculous infection among nurses. A committee comprising Drs. Esther Carling (convener), Jane Walker and James Watt was appointed to report to the next meeting on this matter.

Saturday, February 22nd, 1936, at 10 a.m., were the date and time fixed for the next meeting of the Council.

"The Choice of a Hearing Aid".—The purpose of this booklet, which has been approved by the Hearing Committee of the Medical Research Council and by the Medical Committee of the National Institute for the Deaf, is to protect people who are unfortunately deaf from exploitation by firms dealing in aids to hearing whose business methods are grossly unfair to them. Not only is money thus lost but hopes are crushed and lives, already saddened by deafness, are made even more unhappy. The price of the booklet is threepence, which is extraordinarily moderate having regard to its origin and the value of the advice it contains. The claim made for it that it may save many a deaf person from loss and disappointment is well founded. Copies may be obtained from the National Institute for the Deaf, 105, Gower Street, London, W.C.1.

The Central Council for Health Education.

EIGHTH ANNUAL CONFERENCE, NOVEMBER, 1935.

THE Eighth Annual Conference on Health Education, organised by the Central Council for Health Education, was held in the Lecture Theatre of the London School of Hygiene and Tropical Medicine, on Thursday, November 21st, 1935.

The Conference created a new record in the number of delegates appointed to attend. The total number of tickets issued was 255, which included those of 121 delegates representing local authorities, 26 delegates representing health associations, 19 delegates representing insurance committees, members of the Central Council, and holders of complimentary and press tickets.

Dr. A. Salusbury MacNalty (Chief Medical Officer, Ministry of Health and Board of Education) opened the morning session, and, in the course of his introductory address, said: "I should like to express the appreciation which we feel both at the Ministry of Health and the Board of Education for the work of the Central Council for Health Education. That appreciation, I know, is fully shared by local authorities and their medical officers who find the stimulation and advice of the Council most valuable in promoting the health education of the British public. The subject 'Health Education in Schools' is a far-reaching one for there is a wide diversity of schools. One thing, however, is clear that, whatever the type of school, the study and practice of health should form the first part of the everyday life and education of the scholars. At the same time a balance must be preserved. We do not want children to grow up unduly introspective and fussy about their health. That is the way to encourage a community of neurotics and valetudinarians. The teaching given must be tactful and sympathetic. Lurid films, scathing denunciations and descriptions of the diseases and ill-effects which may follow neglect of the laws of hygiene defeat the ends of health education. The sensitive child is terrified or repelled; the callous one remains uninfluenced by such fustian. Hygiene in the school must be a training in habit, a discipline as well as a culture, concerned directly with the life of the child, his family, and the community. Much of the teaching of hygiene in the elementary school must be indirect and given as an integral part of school

life. For children between seven and eleven years of age formal lessons in hygiene are of minor importance compared with the formation of right habits through training in those practices which are the foundation of a healthy life—cleanliness of hands, face, teeth and hair; posture; breathing; rest, sleep and exercise; responsibility for cleanliness of classroom and ventilation. It is most important that the school premises should provide a civilising environment favourable to the foundation and practice of healthy habits—roomy classrooms with abundant sunlight and ventilation; well-arranged and properly equipped offices and lavatories with a supply of hot water; suitable uncrowded cloakrooms; facilities for drying clothes and boots; and adequate playgrounds. Well-arranged dining-rooms, properly served school meals, clean and well-arranged school kitchens, with facilities for exercise and rest, are all powerful agents in health education. For children over eleven, instruction in elementary physiology and hygiene, developing out of the lessons in biology, is desirable. It falls under three heads: personal hygiene, hygiene of the home and general hygiene (public health). For girls it should also include mothercraft. In the teaching of hygiene even more than in the older academic instruction, the age-long question haunts us: "Shall these dry bones live?" The answer depends almost entirely on the personality and the example of the teacher. He or she is the keystone of the arch and if uninspired by zeal for health education, any façade or appearance of instruction is a sham. Fortunately, most good teachers are enthusiasts for health. They realise that they, as well as the doctors, have much to contribute to the health of the future community and that preventive medicine depends in great degree upon the education of the future citizen. Like Charles Kingsley they say: 'I am going to throw myself into this movement.' The only way whereby the practice of everyday life can come nearer to the already ascertained truths of health lies through popular education."

Dr. James J. Paterson (Medical Officer of Health, East Berks.; School Medical Officer, Maidenhead) opened a discussion on "Health Education in the Schools," in which he said: "Though not very complimentary to our

system of education, it is nevertheless substantially true to say that the children in our schools know more about the parts and pieces of a motor-car or of a wireless set than they do of their own bodies. It requires no long train of thought to appreciate the fact that the sum of human knowledge is well contained in that terse, philosophic phrase, 'Know thyself,' yet in comparison with external things, the general knowledge of the body, its care, culture and well-being, is meagre in the extreme, for we do not, seriously and individually, study the culture and capabilities of our own bodies. Occasionally when something goes wrong, we seek expert advice and hope to be 'made well' again, but the positive pursuit of health is a very different proposition from the merely negative avoidance of disease. That quest demands free-will study and practice such as we are wont to bestow upon our hobbies and not simply the academic study usually applied to a class subject. The State, through the agency of the public health service, endeavours to secure a wholesome and congenial environment for each and every person of whatever social status, and one cannot but admire and praise the magnificent work that is being done in that direction nowadays, but the scheme is far from complete. Welfare clinics, school medical service, national insurance, housing, sanitation in its various branches and all the devices for safeguarding the public health are but externally operating agencies and their work cannot be regarded as complete unless it elicits a corresponding reaction on the part of the individuals towards whom these beneficent efforts are directed. This reaction must be founded upon knowledge—knowledge of the body and its requirements. Co-operation is called for, and to be effectual it must be intelligent co-operation. How far have we progressed in securing this essential mutuality? Do the people amongst whom the public health agencies are most active understand and appreciate the value of what is being done for them? Do they realise what progress could yet be made if they themselves were equally whole-hearted in the effort to obtain a wider and fuller enjoyment of life, and that, after all, is the true aim of the cult of health? We hear and read much about diminishing death-rates, longer expectation of life, healthier surroundings and so on, but on the other hand we have unmistakable evidence that meretricious pleasure and excitement are regarded as the height of enjoyment while the expression 'having a good time' is commonly

used to denote the acme of physical delight, oblivious of the fact that it usually connotes the very conditions that are inimical to health. The setting up of these false standards of value is a sure indication of faulty education, and this failing is equally well illustrated in the open-mouthed attention paid to the blatant advertisements that promise radiant health, rejuvenation and green old age by the absorption of some wonderful nostrum, whereas it should be known that these *desiderata* can be attained only as a reward for life-long adherence to the rules of health. In what does health consist? Not merely in robust animal liveliness nor in the negative phase of freedom from defects, deformities and disease, but in cultivating and developing the latent as well as the active properties of the body and mind, co-ordinating them so that they answer to will as a well-disciplined team, alert, balanced, responsive—a complete and perfect unity. Clearly this is not a matter of dosing with drugs, vitamins or sunbaths but a life-long study and practice for each individual. However complex and distant the end may seem, the beginning is plain and simple. The first step obviously is to acquire some knowledge of the plan and purpose of the human body. True, this is an endless study which no one can complete for himself, but by the teamwork of competent teachers, *i.e.*, those who have already travelled far, the task may be proportioned to the capacity of those who are willing to learn, but the will to learn must be stimulated into activity at an early age. It is never too early to begin. As soon as the child becomes conscious of different parts of the body and their uses, so should one begin to teach their further capabilities and development; in short, graduated lessons and exercises should begin not in a haphazard 'leave it to Nature' sort of way but with a far-reaching and lofty aim in view. Later, when capable of appreciating volitional effort, the 'do it yourself' principle should be introduced, thereby laying the foundations of self-reliance and personal responsibility. The first day at school introduces the child to a new environment that calls for considerable adaptation and re-adjustment of reactions. These should be carefully watched and guided in the right direction. Self-control is called for and there is ample scope for its exercise in the new surroundings. At quite an early stage a beginning should be made on teaching the child to see itself as others see it, that is to say, to regard itself objectively and for that purpose a full

length mirror is a necessary adjunct to the equipment of the classroom (it will also prove useful in drill, breathing exercises and such like). As soon as the child is accommodated to the new environment lessons in health or hygiene may be begun and here, with regard to method of approach, you have a useful analogy in the teaching of handicraft. Just as the first lesson in any of the handicrafts consists in naming, describing and explaining the use of the tools to be used, so should the child be taught the names, uses and functions of the parts of the body most commonly called into action in school work. The next lesson is usually devoted to the care and maintenance of the tools or implements in good condition, and the same sequence may be observed in the series of health lessons, with particular emphasis on personal cleanliness, tidiness and the exercise of the natural functions of the body at proper times. Naturally these lessons must be graduated to the comprehension of the pupils and spread over a considerable period of time but the continuity, the environmental and personal relationship, should always be preserved. The event of a 'cleanliness survey' or a dental or medical inspection affords special opportunity of linking up the school health lessons in a practical way with the school medical service, and later a similar occasion may be employed to introduce the elder pupils to the wider scope of public health activities in general. In any case it should be borne in mind that health or hygiene ought not to be taught as a set and separate entity, kept in its own box so to speak and brought out for display on occasions. Health in the proper sense is not a subject for *in*-struction, a thrusting in of certain cold facts into the pupil's memory, but a matter for *e*-ducation, a leading out of their own activities and facilities—a process continually in operation which comprehends and establishes contact with all points of their environment. Thus, the teaching of health should be related wherever possible to the more formal school subjects, for example, in an elementary class an object lesson on a domestic animal may be made the occasion of pointing out the greater differentiation and consequently greater diversity of function of the corresponding limbs in the human subject. Dignify this by the title of 'comparative anatomy' if you will, but make it clear that these greater gifts of function entail a greater responsibility for their effective use and remember that the parable of the talents has a strictly biological

significance. This co-relation of health teaching with other class subjects is rightly stressed in the 'Hand-book of Suggestions' issued by the Board of Education, where ample illustration is given of how it may be allied with such diverse subjects as arithmetic, history, geography and, of course, with organised games, handwork and domestic subjects. Pursuing the idea further, it should be borne in mind that the cultivation of health should not end with school days any more than, say, the teaching of reading and writing. The closure of school days is the opening of a larger sphere of activity with the added responsibility of self-government for which school was but a preparation. The primary task of earning daily bread not only for ourselves but for our dependents now fills the major portion of the horizon and though it tends to obscure other considerations it nevertheless emphasises the stern necessity of preserving the health of the breadwinner. Thanks to modern conditions and inventions there are now many opportunities of escaping from the confines of daily and deadly routine but it cannot be said that we have learned how to use these advantages for the benefit of our physical and intellectual lives. In certain continental countries much more so than at home the cult of the simple, healthy, open-air life has of late come into prominence. It is practised from early school days onwards and is used as a welcome relief and a wholesome antidote to the artificiality of industrialised town life. There is still a great gap between what we are and what we might be, a gap too great to be bridged over in our time, but we can at all events set about laying the foundation stones by instilling into the young generation a knowledge of, and a respect for, our physical bodies. Call this ideal the 'Building of an A1 Nation' if you like but it reaches far beyond that, for it contemplates the chief end of Man that he should live to the glory of his Creator and rejoice in his being in harmony with the revealed works of Nature."

Dr. Paterson was followed by **Mrs. E. V. Parker** (National Union of Teachers) who read a spirited paper of which the following is a summary: "'To-day,' wrote Sir George Newman in his Annual Report of 1933, 'there can be no question that public opinion demands that whatever else is taught at school, the art of living shall be taught.' In the same year the Board of Education issued, for the first time, a 'Handbook of Suggestions on Health Education.' 'A knowledge of its contents,' ran its

preface, 'should be regarded as part of the necessary equipment of every teacher.' Nineteen hundred and thirty-three, in fact, we may regard as a year of awakening at the Board of Education to the need for adequate, systematic and suitable teaching of health and hygiene. In the nation's schools we teachers welcomed the awakening. Throughout our teaching careers we had been very much aware of the futility of trying to train the mind while neglecting the body. Nearly all the pioneer work in the teaching of health and hygiene had been the result of the initiative of teachers themselves. We welcomed the 'Handbook of Suggestions,' for it was a useful pocket guide to the practice with which we were already familiar. But, let us confess it frankly, we welcomed it with reservations. Like the Israelites in captivity, we know what it is to be told to make bricks without straw. We read in the 'Handbook of Suggestions' that 'the Government accepts no responsibility for any of the statements appearing in this publication.' The extent to which the neglect and inaction of successive Governments render it impossible for us to carry out the suggestions makes us wonder whether perhaps this is not more than a formal phrase. As Sir George Newman wrote: 'The lessons on hygiene seem detached from actual life. . . . We teach that cleanliness of body is essential. Yet there are often no ready means of securing cleanliness at home or at school.' The handbook tells us that children should be taught that it is 'advantageous to drink water when thirsty.' 'Advantageous' is delightfully Whitehall! But however advantageous it may be to drink when thirsty, or to wash when dirty, it is not easy when every drop of water has to be fetched in a bucket from a pump a hundred yards or more down the road. You may yet see, as I have seen, children on their way to many a rural school carrying a medicine bottle full of water, with whose tepid contents they may advantageously quench their thirst during the day. 'Hands should be kept clean,' we are asked to tell them, 'so that school-books and papers are not soiled.' Even in schools with a water supply, we find too often but one tap, one basin and one towel for the use of two or three hundred children when they come in from recreation in a dusty gravelled playground. The handbook tells us that 'children should be taught to take pride in their classroom and in the school generally.' Of the 21,000 elementary schools, 1,200 are still on the black list which was compiled so many

years ago. 'How can we teach children to take pride in a blacklisted school? By its reduction of building grants the late Government made it much more difficult for local authorities to make schools tolerable. 'The continued need for strict economy,' said the Board in this year's Report, 'resulted in a consequential decrease in the amount of capital expenditure by local education authorities which was approved by the Board.' 'Thus, saith Pharaoh, I will not give you straw.' It is not my wish to weary you with examples of this kind. One other instance I feel I must mention. 'Instruction should be given,' we are told, 'in the proper use of the sanitary closet, the importance of privacy and decency, the need for scrupulous cleanliness and use of toilet paper.' But there are hundreds of schools with earth closets, or with ranges of closets through which run an open disposal pipe, with no doors fitted to the closets, and certainly with no knowledge of toilet paper. The inaccessibility of the closets is often a grave defect, especially in infants' schools where the little ones have to cross an open yard, sometimes for long distances, in all weathers. The first essential if the teaching of health and hygiene is to be effective and real is that our schools shall, wherever necessary, be reconditioned, so as to make them places where health and hygiene may be practised as well as talked about. To pretend that they are such places now would be sheer humbug. The second essential is that the new entrants to the teaching profession shall not only be well grounded in the theory of health and hygiene, but experienced in its application. There is a strong tendency, where school conditions differ radically from the ideal, for what is learned in the training college to be discarded in the rough and tumble of school work. It is not enough that the training college should provide its lectures, or examine its students, in the theory of hygiene. Almost every student has passed through a secondary school, and it is upon their secondary school training that the college must build. In the secondary school, however, it is rare that hygiene forms a part of the curriculum. My colleagues in the secondary schools have often assured me that there is no provision even for instruction in the simple rules of health. It is not—and here seems to be the root of the trouble—an examination subject. Of 66,000 pupils sitting for the school certificate last year, 458 only took either domestic science or hygiene. Only 11 per cent. took biology. Such figures confirm my

own impression that the teaching of health and hygiene is sadly neglected in our secondary schools. We should take steps to ensure that health and hygiene teaching has its proper place in the curriculum of every secondary school, so that, among other beneficial results, our future teachers may be well grounded in both principle and practice. The third essential is that we shall be able to start at the beginning. And the beginning, for hundreds of thousands of the nation's children, should be in a nursery school. Here are the ideal conditions in which to form health habits, and this is the proper time at which they should be formed. But we have only 59 nursery schools, with a total accommodation for 4,825. Nearly half of these are provided by voluntary effort. It is, however, in infant and nursery schools where we see this training at its best. It is, of course, merely a question of the rudiments, and even these are approached as practical ways of behaviour rather than as theoretical principles. The child at this stage is egocentric and is closely interested in his own body, of which he is becoming more and more aware. He is not able, however, to apprehend a generalised idea. Practice must precede precept. Probably all who have visited one of our newer infant schools must have been made conscious of the good work that has been done in developing in the children a love of beauty and cleanliness. The infant school is free from the pressure of academic endeavour. The keynote of its work and curriculum is the development of the individuality of each child. It is not so easy, however, in the older schools, or in the large classes which are still often regarded as quite appropriate in an infant school. Accommodation still tends to be assessed according to the space requirements of a sedentary child. The success of the infant school, notwithstanding these difficulties, is partly due to the fact that the practice of health habits lends itself more easily than most school work to drill technique—handkerchief drill, breathing exercises, hand display, and so on. The activities of the infant, too, are less robust than those of the older child, and he does not so easily get dirty. In the junior school we continue the practice of health habits, combined now with rather more definite talks. The individual contacts between teacher and child enable much valuable work to be done, too. The junior school, as a result of re-organisation, is likely to develop its own characteristics and its own traditions, and to emulate the splendid

work done for a generation in the infant nursery school. It must be relieved, however, of the burden of large classes. We must all regret the view of the Board that: 'It is anticipated that a material drop in the number of pupils will result in a further reduction in the teaching establishments in the near future.' Until classes are reduced in size, there should be no pressure from the Board to reduce teaching establishments. The junior school curriculum, moreover, if it is to give adequate attention to health and hygiene, must be freed from the influence which is exerted by the examination for free places to secondary schools, taken at the age of eleven. It is very disturbing to find an education committee, quite recently, urging the need for homework at this stage, and the establishment of parallel top classes—presumably 'scholarship classes'—in order that so-called successes may be achieved in this examination. As the secondary schools show us, where an external examination looms large, the teaching of health and hygiene suffers. It is in the senior school that the teaching of health and hygiene can first assume a more formal character. The child is no longer in the egocentric stage of development. He has learned to understand others, and thus to understand himself. He has learned to exchange ideas and to check his own ideas as a result of this exchange. He has learned to grasp a general principle. The principles of health and hygiene can now be discussed, in general terms, and the child is able to project them against a background of a practical experience of daily life. I have myself found that children of this age are intensely interested in these matters. They are very practical young persons. Here, they seem to think, is something real. They take a share and interest in mother's shopping and in mother's cooking. Food values, for example, are discussed in class with great keenness and appreciation. Here is material to our hand. An understanding of the process of digestion leads to an appreciation of the need for a balanced diet, of clean food, properly prepared, and of the dangers of constipation. For a proper understanding, however, of the scientific principles involved, they must be approached in the scientific experimental way. The experimental study of the importance to plant life of sunlight, fresh air, warmth and transpiration leads so easily to an understanding of the conditions needful for healthy human life. A very recent enquiry into the science syllabuses of

senior schools in London showed, however, that in boys' schools the experimental science is almost always confined to the physical sciences. These sciences have their value in health understanding. The simple experimental physics of ventilation, or the conduction and radiation of heat energy, for example, have their direct applications to hygiene. It is a great pity, I feel, however, that generally speaking the boys are too exclusively occupied with the physical sciences, and more attention to biological science in boys' schools would seem to be very desirable. But how difficult it is, even in many a re-organised senior school, to teach any experimental science at all. There is often no special room, or room fitted with gas points, water supply or sinks. To teach senior pupils the principles of health and hygiene without the experimental study of these principles is to run the danger of mere verbalism. We should urge that a sufficient provision should be made, in every senior school, of space and equipment for such experimental science as alone can bring reality and conviction to our teaching. We are told by some that they regard it as essential that the whole of the school curriculum should be permeated by a definite spiritual atmosphere. It is equally important to those of us who are enthusiasts for the teaching of health and hygiene that the implications of such teaching should permeate the whole curriculum. The time devoted to physical training should in particular be so spent as to help in our endeavour. I understand that experiments are now being conducted, at the instance of the Board, in several secondary schools in order to discover the result of devoting more time to physical training. I understand, also, that these experiments are likely to show that the children benefit, not only physically but mentally, from a greater provision of physical training. There are many signs that we shall see a great extension of physical training in our schools, following the examples already set by Germany, Italy and, quite recently, China. Physical training, however, is not in itself enough. It must be associated with the definite teaching of health and hygiene if it is to serve the needs of the rising generation. With the raising of the school leaving age, and the consequent retention by the school of early adolescent children, the problem of sex education will become more and more important. There is no doubt whatever that, given the right conditions, the teachers are enthusiastic believers in the teaching of health and hygiene. We

rejoice in the happy co-operation which exists between the school medical service and the teachers. We have every guarantee of its continuance in the personal qualities of the Board's Chief Medical Officer. But we must be rid of the mockery of our efforts which is offered by the perpetuation of existing conditions in thousands of our schools. It took any number of plagues to change the heart of Pharaoh. We, too, see our country visited by plagues—the plague of unhealthy and unserviceable lives, the plague of maladjusted social instincts. 'Thus, saith Pharaoh, I will not give you straw.' Let us hope that Pharaoh will no longer harden his heart, and that the day of our deliverance will not be longer delayed."

Many speakers took part in the subsequent discussion and there was unfortunately insufficient time to allow all those who wished to speak to contribute to a very interesting discussion.

Dr. W. G. Savage (President, Society of Medical Officers of Health; County Medical Officer and School Medical Officer, Somerset) after dealing with some of the difficulties he had met with in trying to get health education taught in that county, said the important factor was the quality of the instruction given to teachers in their own training schools. Until recently it was extraordinarily bad. In Somerset they got over the difficulty by holding refresher courses every year, and tried to make it clear that health education should not be in the form of set lessons, but by means of a definite permeation of the whole education. He did not think they would get health education taught in the schools as it should be taught until the teachers themselves could be taught to think in terms of preventive medicine. A good many teachers were developing that type of preventive mind. All that was implied in the term "health education" must be in the teachers' mind and in their very bones. A growing number of H.M. School Inspectors now made it clear that they regarded health education as an important subject, and education authorities, too, were beginning to attach greater importance to it. Many teachers complained that their schools were bad hygienically, but they should not forget that where their schools were bad they could use that fact as an object lesson of what required to be changed. He did not see anything in the way of getting a really sound health education taught in the schools, and he did not know anything so important as health education. He regarded a child who left school without a knowledge in his bones from health teaching as fundamentally uneducated.

Dr. W. Allen Daley (Principal Medical Officer, London C.C.) held that teaching should be positive by impressing on the children the importance of a sound healthy body. In his view the teacher should tell the children what were the requirements of good health, irrespective of the difficulties of their home lives and their environmental conditions.

Mrs. Marjorie Hayman (Health Lecturer, Borough of Kensington) considered that close co-operation was still lacking between the schools and the local authorities in the matter of health education in its application to the subject of mothercraft. In the teaching of mothercraft she thought it would be a good thing if every girl visited a health centre or, if possible, a day nursery during her last term at school. In that term also every girl should bathe a baby and make a set of model clothing for a baby.

Dr. J. Greenwood Wilson (Medical Officer of Health, Cardiff) stated that in marking essays he had been amazed at the knowledge of health matters shown by some of the children.

Mrs. Neville Rolfe (Secretary-General, British Social Hygiene Council) said that instruction should be based on a foundation of the biological knowledge of the teacher. It would be helpful if all local authorities would insist upon teachers having a good biological knowledge.

Dr. Henry E. Herd (School Medical Officer, Manchester) suggested that school medical officers could do a great deal to impart health knowledge by quarter-hour talks to the older children during their visits to the schools in their districts. Even nurses and dentists could do something by way of informal talks. One healthy sign he had noticed was a demand for talks to mothers. Alluding to the need for health instruction to teachers, Dr. Herd mentioned that in several schools he had visited he had found the doors and windows almost hermetically sealed, and no fresh air entering the class rooms.

Dr. E. H. T. Nash (Medical Officer of Health, Heston and Isleworth) agreed with Dr. Savage that there was room for considerable improvement in the health teaching in training colleges if the best results were to be obtained in the schools. He, too, had gone into quite modern schools sometimes when the temperature outside was about 75° and had found classrooms almost hermetically sealed.

Dr. Paterson, in reply, said he agreed with the view that health education was not an academic matter, but one for the teacher to live personally first of all before imparting the knowledge to the children.

Mrs. Parker, who also replied, said that one point brought out in the discussion was that teachers, generally speaking, were in definite need of special training in biology and hygiene. She hoped that fact would be borne in mind by the Board of Education in relation to the curriculum of the training colleges. There was a risk of too many specialists being brought into the schools, with the possible result that the teacher might lose personal contact with the children.

The Chairman, in winding up the discussion, said he had been much impressed with what he had heard, and he thought it would be of immense importance to all of them.

Dr. Drummond Shiels, in proposing a vote of thanks to the Chairman, said that in the past the reports of the Ministry of Health had been the chief channel of national education in preventive medicine. He thought the prestige of the high office and the practical usefulness of those reports would not be diminished during Dr. MacNalty's term of office.

Dr. Charles Porter (Medical Officer of Health, St. Marylebone) in seconding, said that he desired on behalf of the whole audience and the Central Council, to convey to Dr. MacNalty their warmest thanks for the admirable way in which he had conducted the proceedings.

During the first part of the afternoon session the chair was taken by **Dr. James Fenton** (Chairman of the Central Council for Health Education) who reviewed the history of the Central Council since its inception.

"Throughout the year," he said, "the Council has carried out the necessary preliminaries to its re-constitution as an incorporated body under the Companies Act, 1929. For this purpose the Council has re-modelled its constitution and rules of administration and embodied these in Memorandum and Articles of Association. It has thus been able to carry out the complete re-organisation of all branches of its work necessitated by the increased demand on its services by public health authorities. At this stage it would seem appropriate to review the history of the Council up to the eve of an incorporation which will, we hope, lead to an intensification of our work. In 1925 a deputation was received by the Minister of Health. The deputation represented that they in their capacity as men of scientific training in constant touch with the general public had found that there was an urgent need for further propaganda directed more than propaganda is at present to the general improvement of health rather than to the combating of special diseases. They thought that statutory provision should be made for local authorities to carry on health propaganda. As a next stage a central body should be set up to advise local authorities, who sought their help on the way in which propaganda should be carried out locally, and to assist them by the provision of lecturers, literature and other means of propaganda which could best be organised by some sort of central authority. The Minister then stated that he proposed to take steps to have the necessary powers conferred on local authorities. This was done by the Public Health Act, 1925. The Minister also agreed that some sort of central body could give valuable assistance and when the necessary legislation had been passed he would give careful consideration to the question of the proper constitution of such a body and the functions which should be assigned to it. After the passing of the Public Health Act, the Central Council for Health Education was

formed to assist and co-ordinate the activities of local health authorities in connection with Section 67 of the Act, and the Ministry of Health appointed an observer. A part-time officer was appointed and he proceeded immediately with the work of assisting medical officers of health with their educational schemes. The Council embarked on a health journal, which rapidly attained a circulation through public health departments of a quarter of a million. It sponsored a film, which was shown to crowded audiences in the cinemas in all parts of the country. It edited and approved the literature of health associations and insurance companies to be used by local authorities in their fulfilment of the educational clause in the Public Health Act. In 1932 the Council embarked on what has become one of the most important features of its work, namely, the organisation of health weeks and exhibitions on behalf of local authorities. The Council undertook this health week service in order to save local authorities the necessity of employing commercial organisers whose activities tended to become identified with purely commercial interests. In the past three years the Council has gained valuable experience in the administration of such campaigns. In co-operation with recognised national health associations it has built up an exhibition of genuine educational value and adaptable to local requirements. In 1934 the Council undertook yet another regular and important service for the assistance of local authorities in their educational work. The Minister of Health handed over to local authorities 500 poster frames, formerly used by the Empire Marketing Board, in order that these might be employed in the furtherance of health education. At the request of the Ministry, the Council has, in co-operation with its affiliated associations, supplied posters monthly for display on these frames since January, 1934. Generally recognised as containing some of the best health propaganda posters which have so far been produced in this country, this series has dealt with the various branches of the public health services in addition to the simple rules of personal and positive hygiene. The Council hopes that they will be used even more than at present. The Council feels it a matter for regret that only 300 of the 500 poster frames handed over to local authorities by the Minister of Health for health propaganda purposes are being used for these posters. There are also many poster frames on privately owned sites of which

no use is being made for any purpose. If acquired by local authorities these might be used for the display of these posters. Apart from the importance of bringing these educational posters before as large a public as possible, the cost of producing pictorial posters in small quantities is exceptionally heavy and a material reduction in price could be made if the effective demand were greater. A whole-time staff has been working since the commencement of the Council's year in October, 1934. Over 150,000 people have been through the Council's exhibitions since the Conference last met. Over 3,500 poster sets have been distributed. Over 200,000 copies of *Better Health* have been distributed monthly throughout the year. One hundred and eleven thousand copies of a health week magazine have been distributed in connection with the Council's health week campaign during this autumn. Two thousand square feet of exhibition stands have been built in a permanent and portable form for use by local authorities in health exhibitions. The Council agrees with the statement made by the Society of Medical Officers of Health in 1923 that 'public health education is the cheapest and probably the most effective of all forms of public health work.' In the Council, local authorities have a machine which is capable of extension and increased output in this form of public health work. The Council desires the co-operation of local authorities in two ways: (1) By making still further use of the services available of the Council's health week exhibitions service; of its poster service; of its monthly journal, *Better Health*. The greater the demand for these services, the more economically can they be run. In the supply of propaganda material every increase in output involves an economy in production. (2) By providing that financial support which constitutes the lubricant of the machine. The Council is obliged to endeavour to make services such as health week exhibitions self-supporting. For the remuneration of its staff, for its office and administrative expenses and the initiation of new schemes the Council is entirely dependent on subscriptions from local authorities. The appeal issued by the Ministry to associations of local authorities in 1934 has resulted in increased subscriptions. It is of vital importance, however, that this support should be maintained and increased if the Council is to maintain and increase its work of health education. Local authorities have had powers conferred upon them to engage in the

work of health education. Granted a financial support from every local authority, proportionate both to the population and to the importance attached by that authority to health education, there is no reason why the Council should not be of service to every local authority in organising health education in its area. The Council is making a further appeal and expresses the hope that every local authority represented at this conference will declare its appreciation of the importance of health education by increased financial support."

Dr. Fenton was followed in the chair at 3 p.m. by the **Rt. Hon. Sir Kingsley Wood, P.C., M.P.** (Minister of Health), who was cordially received. In the course of a stimulating address he said:

"I would first like to congratulate you on the whole of your work, and particularly on your determination to place the Council upon a firmer basis by becoming incorporated; and I want to tell you at once that I shall be pleased when the time comes to appoint three members of your Council, as I hope it will be my duty and pleasure to do. I think that I can say this, that you have striven hard and worked successfully for one of the greatest objects which we can have as a nation, namely, the improvement of the health of the people, and by that I think we all mean an abundant life for men, women and children; and you play undoubtedly a special and important part in helping all sorts and conditions of people to appreciate and understand those elementary things which underlie a healthy way of life, and to ensure good thinking about health and the best way to attain it. I have looked at your propaganda, and particularly some of your posters, as I have a special interest in posters. I must congratulate you upon that side of your work, and I certainly hope that you will be encouraged to go on with that particular method, which I believe is very essential to-day. I think we want at this juncture to make a great combined effort to raise still further the general standard of the health of the nation, and especially that of the younger generation. It should be a simultaneous attack on many fronts, and I think we want to deal with those matters which particularly affect the younger generation at the present time. I am rather an admirer of the younger generation, and I think they are rightly demanding at this time more and better opportunities for a healthier life, for physical training and health exercises. For, much as we appreciate

their services, good health does not wholly or solely depend upon doctors or the health services. The new generation are learning more and more the art of living. Many young men and women to-day appreciate, much more than many of their forefathers did, the value of fresh air, exercise, rest and cleanliness and, speaking of the nation as a whole, I think we have now a greater understanding of the needs of the body. I know there are a number of people who allege that Great Britain is physically deteriorating. I very much doubt that myself; I think there are many facts that show that our high health standard of recent years is being well maintained and I am glad to think that there is from all parts of the community a demand for an open-air life. Undoubtedly one of the best signs of the time is the increasing provision—which I hope we shall be able to continue and extend—for playing fields and swimming baths, and I think it is a striking and encouraging fact that last year loans totalling well over £2,000,000 were sanctioned for these purposes alone by my Department. I want to refer also to the steps that the Government are contemplating, not only to develop statutory health work, but, if possible, further to encourage the voluntary activities of a number of associations up and down the country in order to secure physical fitness for our people. Our aim, I think, must be and should be that every child should receive the best training of mind, of hand, of eye and of body from which he is capable of profiting. I do not think that we should relax our efforts in all those connections when school time comes to an end. In climbing the educational ladder, we should, at any rate, do our best to see that the young man or the young woman has, in the first place, the physical stamina to climb it. I believe also we want to widen the rungs of the ladder and I am glad to think that we are about to remove restrictions with regard to admission to secondary schools and increase the number of State scholarships tenable at universities. I think it also a very good thing that we are going to encourage further the nursery school in which good food, fresh air and skilled training are available to our youngest children; and also, for all children, to do all we can to encourage systematic physical training, whether on school premises or in the open air; and, although I mention it last, I consider it by no means the least, that we are determined to do all that we reasonably can to encourage clubs and other voluntary organisations so that when young

people leave school for the office or the workshop they will receive greater encouragement in good health living at a time when I think they most need it, and when they most desire and require opportunities of keeping up their physical exercises. We have also got to take, and are going to take, all those steps which are necessary to give a good, secure health foundation, and in that I certainly include what I believe is one of the best foundations of good health—to secure as large a number of good and decent homes as possible for our people, and to clear away the slums and to deal with the evil of overcrowding. I feel myself that the excellent work that this Council is doing will be a tremendous help in all the plans that I have outlined and I know that I can with confidence rely upon their encouragement and their support.”

Lt.-Col. Sir Arnold Wilson, K.C.I.E., C.S.I., C.M.G., D.S.O., M.P., in opening a discussion on “**Health and Physical Education**” said:

“The term ‘physical education’ is generally assumed to mean physical drill, eurhythmics, organised games and the like. I am myself chairman of a sub-committee of the British Medical Association which deals with this subject; and it is clear that not only in our country but in others a vast amount of time and money, energy and good-will is expended, with disproportionately small results, upon this sort of ‘physical education.’ The proper function of a layman on such an occasion as this is to stimulate discussion. I hope that in this, at least, I shall be successful, for I wish to raise what I believe to be fundamental issues. To begin with I wish to draw attention to the extent to which, in this country, the public mind is diverted from the true principles of health by advertisements. How many millions of pounds are spent every month by commercial firms pushing patent foods, patent medicines, drinks, tooth-pastes, soap and the like, I do not know. But no one can fail to notice a growing tendency of recent years to arouse fears, and to create apprehension of illness and sickness which it is falsely represented may be warded off by using the goods advertised. Every dentist knows that the progress of dental decay is not affected in the smallest degree by the use of any dental preparation whatever. Every doctor knows that health is not promoted, and recovery may often be retarded, by the use of almost any advertised remedy. Every doctor knows that light and air, good fresh natural food, light clothing and an erect carriage, cheerful sur-

roundings and good friends are worth more than any advertised foods, drinks or drugs. Yet the British Medical Association refuse to re-issue their treatise on secret remedies and we allow the fears of the public to be played on by every advertiser who seeks to make yet more money by implied, or constructive, misrepresentation. The expenditure on drugs of all sorts is greater than on alcoholic drinks if the tax be deducted on either side, and it does far more harm. The sum realised by the medicine stamp duty grows less every year, as the quantities consumed grow larger. It is about half what it was six years ago. When national health insurance started in 1911 the tax realised £320,000 or so. In 1928-9 it was £1,333,000 which, after allowing for the fact that the rate of duty was doubled, shows a great increase. It has fallen year by year, owing to the ingenious devices used for avoidance of the stamp duty, to £777,131 or by 50 per cent. The psychological effect of all this is bad: it suggests, almost irresistibly, that health may be maintained or regained, by eating or drinking or using some advertised commodity and that what children or adults do or eat in the course of their daily life is of minor importance. We must guard against creating the belief that physical health in normal children or adolescents can be ensured by exercises, however carefully done and whatever the skill of the teacher, unless the children and young people and their parents play their part all day and every day, and unless every teacher in the school takes a personal interest in the bodily health of every pupil in the class. Routine inspections by school doctors and school dentists and school oculists have their uses: I should like to see them developed, and conducted on more leisurely lines. In this connection I believe there is a strong case to be made out for a preliminary inspection by a trained nurse or male assistant who would make a note of cases which required medical attention. The weakest side of our national health insurance system is the inadequacy of the dental service and the absence of any attempt to inculcate the preventive aspect as developed by the researches of Mrs. Mellanby. On the importance to physical health of the teeth there is a little propaganda—probably quite useless for, according to expert opinion, no amount of tooth brushing affects the progress of caries; what matters is the general health of the body and the food that is eaten in childhood. The average upper class child has as bad teeth as the poorest. The care of the eyes is another matter which

needs less expert than lay attention. Is it a good thing to give glasses to all children that need them and to leave it at that. Would not exercises designed to strengthen the muscles of the eye do more good in many cases: would not many children be better off when of full age if they had not been given glasses? I do not pretend to answer these questions. I wish to do no more than to suggest that physical education is a much wider subject than is generally supposed and that parents and teachers alike can do far more than at present to help their expert advisers—the doctor, the dentist and the oculist. Entering any school, public, elementary and senior or private or preparatory, the first thing that generally strikes me is that the benches and forms are, more often than not, ill-adapted to the individual child and not as a rule adjustable. The centre line of the seat is that of the desk whereas, of course, the latter should be several inches to the right. The ink-pot is often in the wrong position. The normal position of the average child in most schools is not one of ease or comfort but of constraint. Chairs are better than fixed seats. To my mind every seat and desk should be adjustable; the child's feet should never be off the floor and, I am inclined to think, physical development would gain greatly if the adoption of a physiologically healthy posture by the child were regarded at all times as an essential part of the educational programme. We shall soon be having bigger children than at present in the schools: let us make sure that the furniture is made to fit each one. Most school class-rooms are built on lines which commend themselves to the adult eye level. The average picture is hung at the right height for an adult to see it; the windows are at a height convenient for adults. Physical education must, of course, begin at home, but I should like to see teachers encouraged far more than at present to make it their primary responsibility. The emptying of the bowels and the bladder, cleanly and frequently; the washing of hands and face; the use of the handkerchief—these are essential parts of physical education. The inculcation of good habits of breathing and of posture when walking and sitting is of quite first-class importance. If children were taught for 10 minutes a day to breathe long and deep and slowly, to walk erect, to sit easily and to keep the paper on which they write or the book they read at a proper distance and angle, would not their health be greatly improved? None of us dream of writing at sloping desks; why

should we inflict them on children? Lack of sleep is probably one of the major forms of malnutrition among most children in towns and a very large proportion of adolescents. The child in a small village or country town has a great advantage; the middle and upper class child gains immensely from the fact that the parents can and do insist on their children going to bed early and, on balance, the rooms in which they sleep are less noisy. I believe this to be more important than cubic feet of air—the open window can remedy a shortage of space. Physical education, as I understand it, excluding the period of infancy and the nursery school period, should be a primary responsibility of teachers and parents at every stage and not of experts whose functions should be to inspect, to advise and to observe. Not a select few but all teachers should be qualified to watch the bodily as well as the mental growth of their charges. To teach children and adolescents how necessary is sleep, how to hold the body and how to treat it, in and out of school, to ensure that it is well treated in every part in school, and that as much attention is paid to the body as to the brain in school hours—this constitutes the greatest part of physical education. What practical steps can we take to this end? I suggest that physical fitness should be one of the subjects for which marks should be given at all public examinations. Prizes should be awarded for it in every school, not to those whose natural physical endowments are greatest but to those who have done most to improve their own bodies and bodily habits. In the routine inspection of schools the physical fitness of the pupils should be a subject of special inquiry and report. In the award of scholarships slovenly bodily habits should be a disqualification; and marks should be given for physical fitness on a liberal scale. This may at first sight seem unjust and to run counter to the object of examinations. But those whose first instinct is to oppose the idea may feel drawn to it on fuller consideration. Speaking before the National Association for the Prevention of Tuberculosis a few years ago, Dr. C. G. R. Goodwin, Medical Superintendent of the Barrasford Sanatorium (Northumberland) expressed his belief that tuberculosis in adolescents was largely due to overwork between the ages of 18 and 25. It was not, he said, that the hours of work laid down were too long, but that so many adolescents tried to do other things as well and became over-tired. The scholarship system leads to much over-work in secondary

and public schools. Dr. Valentine's valuable monograph of 1932 shows the consequences—an almost complete absence of correlation between the order of merit, as shown by examination results, of a set of individual pupils, at successive ages, and a general feeling that in after-life, holders of scholarships do not shine as was hoped—they have been physically exhausted—for mental exhaustion is, in fact, physical exhaustion. These facts, which are well established, show how greatly our whole educational system suffers from the absence not of physical exercises but of physical education which is necessary to enable young people themselves to guard against, or to correct betimes, the consequences of mental fatigue—itsself often the consequence of a series of errors—insufficient sleep, lack of fresh air, too much as often as too little, physical exercise, and an unbalanced diet. Some countries like Sweden and Norway and Denmark and Germany have for many years included systematic physical exercises in their educational programme. There is no evidence that the health of the children has been affected one way or the other; there is little evidence, if any, that normally healthy adolescents have gained in health as a direct consequence of physical drill and strenuous and systematic exercises in German universities, though those whose health and physique are below the average unquestionably gain great benefit where, as at Leipzig, they receive careful and systematic individual attention. This to my mind should be the aim of all future official steps to encourage physical education. To be of value it must be based on careful study of individuals; it must be based on careful periodical photographic and observational records. It must never develop into routine. It must not be divorced from the general system of education but must be an integral part of it, and must be freely and generously recognised as such by the whole educational hierarchy not only by word, but in action, by awarding marks, prizes, and honour not only to the physically fittest but to those who have done most to conquer inherited defects."

Dr. Dunstan Brewer (Medical Officer of Health, Swindon) continuing the discussion, stressed the importance of using the right methods in awakening the public by means of the press, posters, pamphlets, etc. Propaganda should not attempt to teach a code, but should attract people's attention in a simple manner.

Dr. Drummond Shiels (Medical Secretary, British Social Hygiene Council) said he specially appreciated

what Sir Arnold Wilson had said with reference to patent medicines. He thought, however, that he was addressing his appeal to the wrong body. It was a matter for legislation. Sir Arnold Wilson had gone into the subject of physical education with knowledge and common sense. He thought rest was one of the most important factors and that it was particularly interesting to see children sleeping in the afternoons in the nursery schools. He emphasised the importance of quiet periods in the school curriculum. A little physical exercise every day was more important than mass formation and if the love of exercise could be inculcated into the children it would be a great benefit in later life.

Dr. J. J. Paterson stressed the need for engendering an interest in and a sense of responsibility for the proper care of the body. A proper balance in intelligence, food and exercise was required. A start should be made by teaching the teachers. The Central Council, he said, was doing an inestimable amount of extremely valuable work, which was not appreciated as yet at its full value, by helping to co-ordinate the knowledge which was lying loose and to weave it into a pattern for others to proceed upon.

Sir Francis Fremantle, O.B.E., M.P., in proposing a vote of thanks to the Minister and Sir Arnold Wilson, expressed his appreciation of the Minister's intention to use all his powers to advocate the cause of health education.

Captain G. S. Elliston, M.A., M.P., in seconding the vote of thanks, referred to a bill which was under consideration by the Minister with reference to patent medicines, which he believed would establish an effective control of the worst forms of patent medicine advertisement.

Mr. W. T. Creswell, K.C., (late Chairman of Council, Royal Sanitary Institute) referred to the fact that 3,000 medical men lent their names to such advertisements. In certain cases he suggested that the medical man might have some remedy against this through the General Medical Council.

Dr. Arthur Massey (Medical Officer of Health, Coventry) said that it should be recognised that whatever was done by way of organised endeavour, the individual of the community was to a large extent the arbiter of his own state of health. Individuals should take up physical exercise and do it for themselves. Organised physical training was appropriate for schools, but not for persons after school life.

Dr. Griffin (Institute for Gymnastic Training) made special reference to posture and stated that something would have to be done in this respect. They did not know, however, on what lines to go, and they required help as to the best exercises to advise, especially with regard to sitting posture, breathing, and the curing of asthma by breathing exercises.

Sir Arnold Wilson answered certain points which had arisen in the discussion.

The meeting then adjourned to a private theatre at Film House, Wardour Street, where a sound film dealing with "Physical Education" was shown.

The Literature of Preventive Medicine.

Practical Suggestions for Spiritual, Mental and Physical Health. By H. E. BUTLER.

Birmingham: Hudson & Son. pp. 113.

Price 1s. post free.

The suggestions offered are contained in chapters having such headings as: methods for obtaining perfect health—to put the digestion in order—regeneration, the source of life—the cause of inharmony in marriage—the law of association of men and women. Amongst other rewards promised to those who adopt the suggestions are that, after two years of faithful adherence, they will never be sick and never be in need of money or friends. *Hiram E. Butler* is the name of the author, and the book originally was published by the Esoteric Publishing Co., Apple-gate, California, U.S.A. This is the "first English edition."

Insomnia and other Disturbances of Sleep. By

EMANUEL MILLER, M.A., M.R.C.S., L.R.C.P.,

D.P.M., Psychiatrist, West End Hospital for Nervous Diseases; etc. London:

John Bale, Sons & Danielsson, Ltd., 1935. pp. 88. Price 2s. 6d. net.

This is one of the pocket-monographs on practical medicine, and may be accepted as a useful and interesting addition to the series. The author writes well and clearly, and provides a body of information in a very small space on the causation and treatment—general, pharmacological and psychotherapeutic—of a condition which those engaged in the practice of medicine only too frequently encounter and are called upon to deal with. The book is one that may be recommended and commended as certain to prove a helpful guide.

How are your Kidneys? Bladder. By DR.

ETHEL MELLOR. London: Methuen and Co., Ltd., 1935. pp. 56. Price 1s. net.

This is one of a group of small books describing themselves as "commonsense books on health and ailments." Its title is exactly as set out, others published or promised bearing such titles as: "How is your digestion? Constipation"; and "How is your back? Limbs." The name of the author also is as set out. Amongst the doctorates held is that of "Doctor of Osteopathy, Kirksville College of Osteopathy and Sur-

gery, Kirksville, Missouri." She has no medical qualification and appears to prefer manipulation to medical treatment. In the case of acute nephritis she advises: "The throat requires careful examination, and the possibilities of causes and results most adequate consideration. It is wise in any case not to paint the throat but to improve the circulation of its blood and lymph by delicate manipulation from the outside."

The Treatment of Rheumatism in General Practice. By W. S. C. COPEMAN, M.A.,

M.B., B.CH., M.R.C.P., Hon. Physician,

British Red Cross Society's Clinic for Rheumatism, London, etc. Second edition.

London: Edward Arnold & Co., 1935. pp. 228. Price 9s. net.

The first edition of Dr. Copeman's book was exhausted within a few months of publication, which suggests that it was just what doctors needed and might have ordered. One of the effects of the rapid exhaustion of the first edition was to encourage the author to undertake the task of revision early and to put into operation his second thoughts while they were still fresh. Also it gave opportunity to make early reference to new therapeutic methods and to provide wider scope for their trial. As the book would appear to have received general acceptance and is certain to go through numerous editions it is unnecessary to do more with regard to this one than to chronicle its appearance.

Individual Health. Vol. I. Biochemical Tech-

nique. By E. OBERMER and R. MILTON.

London: Chapman & Hall, Ltd., 1935. pp. 244. Price 15s. net.

"The primary concern of the physician of the future will be to prevent disease by the promotion of health or maximum functional efficiency." This is the view of the authors of this volume just as it is the hope of those engaged in the preventive branch of medicine. A further view of the authors is that the future physician will require a very comprehensive technique, since "only by an exhaustive study of each individual will it be possible to arrive at an understanding of the part played by all those environmental factors, both physical and psychological, which hinder or promote efficiency, resistance to infection,

and longevity without senile loss of elasticity." The object of the authors has been to try to assist the "preventive" physician to learn and take advantage of it, and to that end they devote one part of the volume to a discussion of methods of collection of specimens and their preliminary distribution. In another part details of analytical technique are given, and the hope is expressed that these may prove useful to analytical workers in other fields—public health, physiology, pharmacology, agricultural chemistry, industrial and other laboratories for analytical chemistry—who have to deal with large numbers of specimens.

The Medical Cookery Book. By DOROTHY SEWART. Bristol: John Wright & Sons, Ltd. London: Simpkin Marshall, Ltd., 1935. pp. 136. Price 2s. 6d. net.

This book has been compiled chiefly for the use of those who are responsible for providing foods and beverages for invalids, convalescents and children. To these it quite safely and warmly may be commended, as it may be also more generally, Miss Sewart having sought to describe such methods of preparation as will ensure that the maximum amount of food value is obtained. The book, as the title indicates, is purely a cookery book and does not pretend to be in any sense a treatise on dietetics, and since the recipes are simple to prepare and of an economical nature it deserves and should have a great success.

Unfit Houses. By H. G. CLINCH, F.S.I.A., M.R.S.I., Chief Sanitary Inspector, West Ham; and B. G. BANNINGTON, Sanitary Inspector, West Ham. London: H. K. Lewis & Co., Ltd., 1935. pp. 78. Price 3s. 6d. net.

From the sub-title of this volume it is gathered that it is intended to serve as a guide to Part II of the Housing Act, 1930. Of this the authors clearly have a very poor opinion, finding it full of defects, the result of the failure on the part of the legislative body to give heed to the "skilled advice of technical officers experienced in dealing with the difficulties it sets out to solve." As to who are best fitted to keep the legislative body right the authors have no doubt, and in this little volume they set out to describe the procedure required to be adopted "in a lucid and logical way as free as possible from legal jargon." It is for colleagues in the health

service they have performed this service and for local representatives who, it appears, are made to "writhe in impotent fury" by the Act and decisions of the courts thereunder. A great deal of care and trouble have been expended in the preparation of the book and doubtless it will be found helpful by those for whom it is intended. It is unfortunate that the authors should have permitted themselves to adopt a tone so unnecessarily superior, and to indulge in comments so terribly scathing with regard to the legislature, legislators and the law courts.

Triple Challenge, or War, Whirligigs and Windmills. By HUGH WANSEY BAYLY, M.C. London: Hutchinson & Co., 1935. pp. 396, illustrated. Price 18s. net.

In this autobiography, Dr. Wansey Bayly shows himself no more egotistical than anyone who sets out to produce such a thing has the right to be. He has produced, indeed, a volume that is interesting and entertaining on a great variety of matters touching the Great War, of which he had experience both in the Navy and Army; politics, of which he had some experience as a candidate for Parliament in opposition to Lady Astor; and medicine. In respect of the last-named he has done a deal of fighting also, and a great part of the book is devoted to indicating the things he fought for—professional secrecy for one thing, and the right of the public to receive information on such matters as the prevention of venereal disease for another—and the methods he adopted. Dr. Wansey Bayly, it is clear, has always been inspired by the seriousness of his purpose, and it is because the book reveals this so fully that it has a quality of readableness.

A SESSIONAL meeting of the Royal Sanitary Institute will be held at Rochdale on Friday and Saturday, January 24th and 25th, 1936. On Friday, at 5 p.m., in the Technical School, there will be discussions on "The Housing Act, 1935," to be opened by Mr. Harry Bann, Town Clerk, Rochdale, and on "Municipal Baths and Water Purification," to be opened by Mr. S. H. Morgan, M.INST.C.E., Borough Surveyor and Architect, Rochdale. On Saturday, visits will be made to the municipal hospital, housing estates, new school, etc. Dr. John Innes, Medical Officer of Health, Rochdale, is acting as Hon. Local Secretary of the meeting.

• In the Annual Reports.

MEDICAL OUT-RELIEF.—During the year the Council attempted to establish a "free choice" system to replace the part-time medical officers in three districts of the city. It was suggested that a panel of practitioners willing to do this work should be formed, and that payment should be made for their services *pro rata* from a pool to be made of the salaries of the three medical officers who were displaced. However, the proposal did not meet with sufficient support from the local medical practitioners, and it was therefore abandoned.—*Dr. T. Peirson, Plymouth.*

SPECIAL SCHOOLS?—I would stress here that not only in the case of eye defects, but in all cases it is preferable for abnormal children or children suffering from physical defects to be retained in elementary schools if they can be taught there without harm to themselves or the other children. The abnormal child or the child with a physical defect will have to live and earn its living with normal children when it leaves school, and it is wrong to segregate such children during school life if it can be avoided. The ideal is for these children to remain in elementary schools participating in that part of the school programme from which their physical defect does not bar them, but receiving care and education in special classes in those subjects for which special methods of education are necessitated by their defect.—*Dr. Dennis H. Geffen, Enfield.*

SCHOOLS FOR SCHOLARS.—In some cases, unfortunately, children are still expected to sit at old-fashioned desks without backs to the seats, although it is gratifying to note that in many schools these old-fashioned desks have been done away with and no doubt they will shortly be entirely eliminated. Prolonged posture is definitely bad for the children, but frequent intervals in the open air for drill and games help to combat the ill effects. Some schools seem to favour the old type long benches, these being conveniently moved when the school is used for evening entertainments. Surely the primary object of a school is for the education of the children under hygienic conditions, and the letting of the school for other purposes a very subsidiary matter. Doubtless evening lettings of the village school may be advantageous both from the point of view of earning a little revenue and from the fact that the schoolroom is frequently the only venue for the village dance. From a health point of view the practice is greatly to be deprecated. In the winter months when evening lettings are frequent, it is almost impossible for the caretaker to keep the school clean, the time from 4 p.m. being occupied in clearing out desks, etc., and setting the school for the evening entertainment. In one particular school representations had to be made to the managers with respect to the dirty condition of the floors, walls and windows. The managers were good enough to close the school for a week so that it could be thoroughly cleaned in the absence of the scholars, but unfortunately the school was permitted to be used during the week for evening entertainment.—*Dr. Herbert E. Marsden, West Lancashire R.D.*

SULPHUR DIOXIDE AS A PRESERVATIVE.—Two jams were condemned for an excess of sulphur dioxide, as also was one sample of sweetmeats (clear mints). Although the excess of sulphur dioxide in jam was small, yet it is necessary to take notice of these technical breaches of the regulations, otherwise the tendency will be for SO₂ to be used to an increasing extent, a practice which it is very necessary to avoid. Of the sweetmeats examined, one variety called "clear mints" contained large amounts of sulphur dioxide in several instances, and in one case the sample was condemned for an excessive amount. It seems extremely undesirable that such quantities of SO₂ should be ingested with such a popular sweetmeat, but in the present position of the preservative regulations, the amount of SO₂ allowed in the finished product of a mixture of sucrose and glucose syrup is 70 and 450 parts per million respectively. Although the greater part must be expelled during the process of manufacture, it is more than probable that this amount of SO₂ is additional for bleaching purposes.—*Mr. F. E. Needs, Public Analyst, Bristol.*

SCHOOL HYGIENE.—The provision of good sanitation in schools, of fresh and bright classrooms, is more than a mere matter of convenience. It is a lesson in environmental hygiene. Thus, any form of sanitation which exists should be the best of its kind. If a village school has earth-closets, they should be well constructed and efficiently managed, and the children should be taught the principles of their use. If the water supply is from a well there is ample scope for an object lesson in the care of the pump and its surroundings, and the protection of the source from contamination. Children should be taught cleanly methods of conserving water when the supply is not abundant. They should learn to use hand-basins when the supply is not laid on; to preserve cleanliness when restrictions are in force. They should understand the need for taking special precautions with drinking-water, especially when a more abundant supply of water is available for other domestic purposes. . . . External sanitation in schools, however, is not limited to drains and water supplies; it extends with equal force to the cleanliness of floors, desks and windows; to fresh air and good lighting; and to the colour of the walls.—*Dr. J. M. Mackintosh, Northants.*

THE PHILOSOPHY OF EPIDEMICS.—Nothing is worse for a community than long periods of apparent freedom from the endemic infections, though some people consider this as evidence of good public health administration. I have said on many occasions that a periodic epidemic of scarlet fever of the mild type which has been universal for the last decade is distinctly favourable for the health of a population, and I shall maintain further that periodic prevalence of the endemic infections at short intervals is highly desirable, for symbiosis between man and his endemic parasites is persistent and unalterable, and unless the communal immunity is kept up by continuous activity of the parasites, the field in which they work when they are introduced is highly detrimental to the hosts.—*Dr. Dunstan Brewer, Swindon.*

CLEAN MILK.—It has been a long-held contention that clean milk does not necessitate expensive equipment, but is dependent upon scrupulous methods. This has been more than borne out by the experience gained in the operation of the schools milk scheme. To illustrate this, the following table indicates the bacterial counts obtained from certain of the supplies, before and after the improvements suggested had been carried out. It will be observed that the majority of these suggestions relate to improved methods rather than improved equipment or premises, while the resultant bacterial counts are well within the Grade "A" limit.

Primary Sample.	Suggested Improvements.	Second Sample.
Over 500,000 bacteria per 1 c.c.	1. Refuse to be removed from cow-yard. 2. Udders to be washed and flanks groomed. 3. Foremilk to be rejected. 4. Stools to be maintained in a cleanly condition. 5. Less litter to be used. 6. Not to force hay down to cow-shed from loft above.	3,200 bacteria per 1 c.c.
B. Coli present in each of three 1/100 c.c. tubes.	7. Dairy to be used solely for purposes connected with milk production, and not as a general store. 8. Cooler to be thoroughly cleaned after each time used.	B. Coli absent in each of three 1/100 c.c. tubes.
Over 500,000 bacteria per 1 c.c.	1. Refuse to be removed from cow-yard. 2. Floors, roof and walls of cow-shed to be maintained in a cleanly condition.	1,200 bacteria per 1 c.c.
B. Coli present in each of three 1/100 c.c. tubes.	3. Udders to be washed and flanks groomed. 4. Reject foremilk. 5. Less litter to be used. 6. Install cooler.	B. Coli absent in each of three 1/100 c.c. tubes.
Over 500,000 bacteria per 1 c.c.	1. Improve ventilation and lighting of cow-shed. 2. Floors, roof and walls of cow-shed to be maintained in a cleanly condition. 3. Remove refuse from cow-yard.	500 bacteria per 1 c.c.
B. Coli present in each of three 1/100 c.c. tubes.	4. Cows' udders to be washed and flanks groomed. 5. Foremilk to be discarded. 6. Dairy to be reconstructed. 7. Sterilising apparatus to be installed.	B. Coli absent in each of three 1/100 c.c. tubes.
414,000 bacteria per 1 c.c.	1. Effective steam sterilising. 2. Pails to be covered in course of transit from cow-shed to dairy.	8,000 bacteria per 1 c.c.
B. Coli present in each of three 1/100 c.c. tubes.		B. Coli absent in each of three 1/100 c.c. tubes.
5,500,000 bacteria per 1 c.c.	1. Wash udders and groom flanks. 2. Discard foremilk. 3. Remove refuse from cow-yard.	12,000 bacteria per 1 c.c.
B. Coli present in 1/1000 c.c.	4. Install cooler. 5. Care in sterilising utensils.	B. Coli absent in 1/10 c.c.

—Dr. T. Ruddock-West, Norfolk C.C.

IMMUNISATION OR SANITATION?—Is it the proper line of action to launch a vigorous immunisation campaign (anything less would appear to be of little value) or to appropriate the money and labour involved towards other more tangible public health activities? In considering a possible national drive for diphtheria immunisation, if this be the proper course, it is well to bear in mind that, unless 60 to 70 per cent. of the child population is immunised, the aim of a protected community cannot be realised. At present, we know that a large number of children are so-called diphtheria carriers (I say "so-called" because they are usually not carrying virulent diphtheria bacilli) and consequently as children enter school they probably receive infinitesimal doses of infection, thereby obtaining a certain degree of herd immunity. This is indicated by work that has been done in the East End in testing children as to their susceptibility to diphtheria, from which it would seem that 60 to 70 per cent. are insusceptible, thus leaving us with about 30 to 40 per cent. susceptibles. When one adds to this analysis the difficulties experienced relative to vaccination, it is questionable whether the response to voluntary immunisation would be sufficient to produce any more appreciable effect in a district like Bethnal Green. In all circumstances, the weight of evidence seems to me to be decidedly in favour of the second of the two courses indicated.—*Dr. Vynne Borland, Bethnal Green.*

COMPULSION AND THE DEFAULTER FROM TREATMENT.—Upon previous occasions the view has been expressed that in order to deal with the defaulter, some element of compulsion is necessary. The argument which is generally advanced against this is that it would drive patients away from the clinic. In order to test the validity of this, arrangements were made to take the opinions of the patients themselves upon the matter. Voting papers were, therefore, issued to patients; and they were asked to answer "Yes" or "No" to the following questions:—

QUESTION No. 1.—Should a person suffering from a venereal disease be compelled to receive treatment provided it is given confidentially and free?

QUESTION No. 2.—Should the parents or guardians of children suffering from venereal disease be compelled to have such children treated provided it is confidential and free?

The results were:—

Sex.	No. 1.		No. 2.		Total.	
	Yes.	No.	Yes.	No.	Yes.	No.
Male ...	295	5	295	5	590	10
Female	134	—	134	—	268	—
Total	429	5	429	5	858	10

In other words, the opinion among patients is overwhelmingly in favour of compulsion being exercised on the defaulter.—*Dr. E. Tytler Burke, Venereal Diseases Medical Officer, Salford.*

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GEORGE V.

King and Emperor: May 6th, 1910—January 20th, 1936.

King George V died at 11.55 on the night of Monday, January 20th, 1936, in the seventy-first year of his age and the twenty-sixth year of his glorious reign.

With all the people of his realm we join in lamenting his passing. To him his people were "my very dear friends," and he was to them a just and beloved ruler whose whole concern was their health, happiness and well-being.

His loss to the country is great: to his Queen, Mary, and his family it must appear overwhelming. To them in their great sorrow, most respectful sympathy is offered.

Editorial.

King George V—King Edward VIII.

IT seems only yesterday that the climax of the celebrations of the Jubilee of King George V was reached, and that in this place opportunity was taken to express, on behalf of all concerned in the maintenance and safeguarding of the public health, thankfulness that His Majesty had been spared to see completed twenty-five years of sovereignty, and a heartfelt wish that he might be spared for many years to reign over his Empire. Yet to-day, not much more than half a year later, it falls to take part in the general mourning into which almost it seems not only his own people but all the peoples of the earth have been plunged by the untimely death of a greatly beloved monarch, and to endeavour to give expression to something of the sorrow that is felt at a loss that in a sense is irreparable. There was something other than sadness in it, however, that death should have come so rapidly on the heels of a period of national rejoicing and in the wake of a spontaneous and magnificent display of affection and loyalty amounting almost to reverence: that it should have come so soon after King George himself had spoken to all his people words so warm and moving that left no doubt as to his belief in the sincerity of their devotion to and trust in him or that it meant much to him that they should know he valued both; lived but to deserve them and to reciprocate. Pathetic as it may appear that death should have come at such a moment, it is possible to regard it otherwise: as, that there could have been no finer end to a life that had almost from the beginning been given to service than when those to whom the service had been rendered had shown how greatly they had appreciated it. In such a thought as this there is consolation both for the family of King George, Queen Mary in particular, and for the nation. In an obituary of His Majesty, appearing in another journal, by one for whom it was claimed that he was personally associated with the King for many years, it was said that "health, indeed, was a talent with which from end to end of his reign the King was apt to trade." In all probability this is true (perhaps it is the case with all who are vowed to the service of the public) and many a time in recent years that in what he did, it was duty and not his own health

and strength that His Majesty had in mind, was clear. At the same time, however, if he made sacrifices of his own health it was equally clear that before him always as one of his greater concerns was the health and well-being of his people. That much of the wonderful progress in public health that marks the years of the late King's reign could be traced to His Majesty's expressed wish or initiative is certain. To some extent because of this the loss of King George must be regarded as a personal and very serious one by all engaged in the health service of the public.

Amid the gloom cast as a result of the untimely end of his late Majesty, came a gleam from the knowledge that in King Edward VIII there was one who would fill his place adequately, and who would be no less mindful than he had been of the needs of the people. Of all that, His Majesty has given the fullest possible proof in a multitude of ways. As Prince of Wales over and over again he showed how deep was his sympathy for those whose health needs were greatest, and how intense his concern to ensure that these needs should be met. It is an open secret that it was because of pressure brought to bear by King Edward, having been to see for himself, that the tremendous activity in relation to slum clearance, housing and rehousing schemes was initiated and maintained. It is not improbable also that it was because of strong views held and expressed by the King that the necessity for attempting to deal with the problems associated with the feeding and nutrition of the people was recognised. In all these things there is assurance that in the reign of King Edward VIII, which all pray may be long and happy, the care of the public health will be a matter of first concern, and that the progress made will be equal to, if not indeed greater than, that which marked the period of the sovereignty of the ruler the nation now mourns. As one amongst a great number of reasons for the belief that is held that as monarch King Edward will enjoy the affection, loyalty and esteem of his people throughout his reign, and that that reign will be a happy and prosperous one for all the nation, this may be offered. It may be offered also as a reason for feeling that, heavy as the

burden of grief cast by the death* of one so esteemed as King George has been, there is room for happiness in the thought of a successor so well able to bear the responsibilities of the position as King Edward VIII, in whom so much confidence is reposed and for whom so much of affection and devotion is entertained.

The Consolidation of Health Laws.

TO many members of the public service, interesting as was the first report of the Local Government and Public Health Consolidation Committee—which dealt generally with local government and was accompanied by a draft Local Government Bill—the second, issued early in January, must appear infinitely more so. The reason for this is, of course, that it actually deals with consolidation, a subject that has for many years exercised the minds of health officers of all ranks. As in the case of local government, so here the committee have prepared not only a report on the subject of consolidation* but, in addition, a draft of a bill—the Public Health Bill.† In their report the committee make references to the magnitude of the task with which they were faced, and health officers who have for years struggled with a mass of provisions distributed through a multitude of statutes and other measures will appreciate this more probably than any: more certainly than the generality even of members of the legal profession, whose acquaintance with the complexities of the laws relating to public health possesses nothing whatever of intimacy.

The two main questions considered by the committee, when they saw the magnitude of the task before them and set about its accomplishment, were: (1) whether it would be more convenient to consolidate the "enactments relating to the public health" in a single bill or in a series of bills; and (2) how much of the existing law, though not technically part of the public health code, could conveniently be embodied in the consolidating bill or bills. Wisely, having regard to the fact that it seemed certain that a total of clauses amounting to not less than 1,000 would be required to deal with all the subject matters of a public health nature, it was decided that the case was one not for a single

* Cmd. 5059. H.M. Stationery Office. Price 2s. net.
† Cmd. 5060. Price 3s. 6d. net.

bill but for a series of small bills, consisting at the outside of not more than 350 clauses. The first of the series—that prepared and issued along with the report—actually contains 334 clauses and, in addition to representing a consolidation of what are collectively known, and sufficiently, to health officers as "the Public Health Acts, 1875 to 1932," includes also, and most interestingly and appropriately having regard to recent trends, such acts as the Maternity and Child Welfare Act, 1918, the Nursing Homes Registration Act, 1927, the Canal Boats Acts, etc. Such acts as the Midwives Acts are not included, nor are the acts relating to housing, though they are both definitely enactments relating to health. The reasons given for excluding them, for example that they are more or less self-contained and if further consolidation were necessary could be consolidated separately, are sound.

The draft bill, as indicated, contains 334 clauses. In addition, however, there are a number of schedules. Historically, at any rate, that setting out the enactments to be repealed is of almost the greatest interest. Actually the number of acts dealt with is some 55 and of sections 550. The number against which, as the extent of repeal, the words "the whole act" appear is very considerable, amongst them such enactments as the Infectious Disease (Notification) Act, the Cleansing of Persons Act, the Isolation Hospitals Act, 1901, the Notification of Births Act, the Public Health (Tuberculosis) Act, 1921, the Maternity and Child Welfare Act, etc. The acts commonly recognised as Public Health Acts, that of 1875 and those amending it up to 1925, though very drastically dealt with and left as little more than skeletons in some cases, are not completely repealed.

The arrangement of the clauses, it is noted, results in the formation of twelve parts: Part I contains clauses relating to local administration; Part II deals with sanitation and buildings and contains clauses relating, amongst other matters, to sanitary conveniences for buildings; sewers and drains, etc. In this connection it is noted that the committee have endeavoured finally to dispose of the old sewer *versus* drain problem. This they have done without interfering with the definitions of "drain" and "sewer" to any extent, but mainly by altering the provisions with regard to the vesting of sewers in

the local authority, a distinction in the matter of procedure being made between those in existence at the coming into operation of the new provisions and those already in existence at the time. Other provisions in this part that have called for comment are those relating to building byelaws, the peculiarity about them being that they make it a definite duty of local authorities to possess byelaws and limit their operation—most helpfully—to a period of ten years, thus ensuring that progress shall be made and not held up as may, and unfortunately does, happen at present.

Provisions relating to nuisances and offensive trades are given a place in Part III, and those relating to water supply in Part IV. None of these calls particularly for comment, any more than do those in Part V—prevention, notification and treatment of disease—though the fact that there is still a group of provisions relating to disinfection of premises and articles may be mentioned. In Parts VI and VII, hospitals, nursing homes, notification of births, maternity and child welfare and child life protection are provided for, a number of existing provisions being re-enacted. The provisions in Part VIII have reference to baths, washhouses and bathing places, while those in Parts IX and X deal with common lodging houses and canal boats, respectively. Houses let in lodgings, it will be noted, are no longer to be considered in Public Health Acts, being more suitable for treatment in Housing Acts. Diseased and unsound food provisions similarly have been given no place, having been deferred no doubt for consideration when the whole question of food legislation is reviewed. Parts XI and XII, as is commonly the case with ultimate and penultimate parts, are reserved for miscellaneous and general provisions.

Definitions, which in the 1875 Act were placed in the forefront, now, following the more usual procedure, are contained in one of the latest clauses. Some of those given are in terms similar to those the older Act had made familiar; several, however, have undergone a certain amount of alteration, while others are new. The expression "drain," for example, has come merely to mean "a drain used for the drainage of one building and of any yard and subsidiary buildings appurtenant thereto." Amongst new definitions, it is worth noting there is one of "workplace" which "does not include a

factory or workshop, but save as aforesaid includes any place in which persons are employed otherwise than in domestic service." Also there is "prejudicial to health" which "means injurious, or likely to cause injury, to health."

How long it may be before the bill comes before Parliament, what changes it may undergo in its passage, and how long that passage may take it is, of course, impossible to say. That even as drafted it would be a suitable measure and would simplify the work of health authorities and their officers may safely be accepted.

Smokeless Fuels and the Smoke Problem.

THE National Smoke Abatement Society has drawn the attention of many local authorities to the action of the Manchester City Council in appointing, and in approving the report and recommendations of, a special sub-committee to consider the desirability and practicability of increasing the use of smokeless fuels (including gas and electricity). The Society suggests that other local authorities should do as that of Manchester did, and appoint committees of their own councils with similar terms of reference.

The Manchester Committee regards the nuisance of industrial smoke as one which is amenable to control in a well-administered local government area, and suggests that the greater problem of the present day is that due to smoke from the domestic fire. The adoption of smokeless fuels for household use is only regarded as practicable in so far as their cost in relation to raw coal will commend their use in preference to coal. The committee received reports from the Manchester Gas and Electricity Departments as to the steps taken to cheapen and popularise their respective services, but the excellent salesmanship shown by gas and electricity undertakings throughout the land makes it unnecessary to quote the reports at length here, or to dwell upon the merits or demerits (for each has both) of gas and electricity as heating agents.

New light is shed by the report upon solid smokeless fuels, upon which such great hopes are based, and it is clear that there is not a sufficient quantity of these commodities available in Great Britain to meet the potential demands of domestic consumers. Gas coke

is regarded as an excellent fuel subject to the conditions that the moisture and ash contents are low, and the grates and ranges are of special and suitable design for burning it.

At the Public Health Offices at Salford, fires of solid smokeless fuel, including gas coke, are to be seen burning in grates of firebrick, without metal parts, and this type of heating is reported to be extremely satisfactory from the standpoints of economy, health and comfort.

The committee visited a housing estate at Chadderton, in which the use of raw coal appears to have been eliminated altogether. Electricity and gas are used, and in the dining-rooms are grates for solid smokeless fuel, ignited by gas jets which are turned off when ignition is complete. An appendix to the report, written by Mr. Arnold Marsh, the General Secretary of the National Smoke Abatement Society, gives useful particulars of the various types of solid smokeless fuel prepared by the "low temperature carbonisation of coal," and now being made by a number of different processes.

It may be permissible, perhaps, to suggest that those who have been disappointed by trials of one or other of these solid smokeless fuels in the past, would be well advised to try again, now that many of the difficulties of manufacture have been overcome. The bright glow of an open fire of solid smokeless fuel is an attractive thing. At the same time, however, manufacturers would be well advised to avoid the temptation to cheapen the product by the use of poor coal with a heavy ash content, as disappointment from this cause has been known to occur, though less frequently of late than formerly.

The committee recommended that the Manchester Corporation should equip fifty houses on its estates with grates adapted for coke instead of coal, and should afterwards report on the results of the experiment from the efficiency and economy standpoints, and that experiments with coke and other solid smokeless fuels should be conducted in the offices at the Town Hall. A further suggestion was that the Gas Committee should consider the desirability of manufacturing a fuel by low temperature carbonisation of coal, with a view to stimulating its use in the city.

The National Smoke Abatement Society is to be congratulated on the steps it is taking to bring the Manchester Report to general

notice. The suggestion that similar investigations should be made by the local authorities of other districts is a wise one. The findings might differ from those of the Manchester Committee because of special local conditions, and if so, knowledge of the subject would be enlarged. If nothing new were discovered, the investigations would still have been useful in focussing the attention of councillors, officials and the general public upon a subject which usually receives less attention than it deserves.

Working at high pressure, as so many health officers do to-day, there is a temptation to delay smoke abatement efforts in the hope of an easier to-morrow, sustained by the comforting excuse that few towns have the problems of Manchester, Leeds and Sheffield to solve.

Yet it is probably only in respect of industrial smoke that Manchester, Sheffield and Leeds have their special problems, and these are being well tackled: every large centre of population has its household smoke nuisance, and the sooner this fact is recognised and advertised, the sooner will be achieved that state of atmospheric purity which the National Smoke Abatement Society is so earnestly striving to reach.

Draft Milk (Special Designations) Order, 1936.

THE Minister of Health has now issued the draft Milk (Special Designations) Order, 1936, and with it a circular (1518) addressed to county and county borough councils, the Common Council of the City of London, and metropolitan borough councils. In this the intention is expressed of securing that the Order shall come into operation on April 1st, 1936. The draft Order contains some thirteen clauses, but there are several schedules. Chiefly it is concerned to prescribe four special designations for milk, namely, "Tuberculin Tested" and "Accredited" for raw milk, and "Certified (Pasteurised)" and "Pasteurised" for milk which has been pasteurised. The new designation "Tuberculin Tested" will replace the existing designations "Certified" and "Grade A (Tuberculin tested)"; "Accredited" will replace "Grade A"; and "Certified (Pasteurised)" milk will be Tuberculin tested milk which has been treated by the pasteurising process.

Further, the draft Order provides that licences

authorising the use of the designation "Tuberculin tested" by producers shall be granted by county councils (outside London) and the councils of county and metropolitan boroughs and of the City of London. The hope is expressed that councils will make the necessary arrangements to enable them to deal without delay with any applications that may be received for such licences to come into operation on or after April 1st next. The Minister proposes to refer to the appropriate council any application for a licence for the sale of milk as "Certified" or "Grade A (Tuberculin tested)" under the existing Order which is received by him too late to be dealt with before April 1st.

Licences granted by the Minister and in operation on April 1st authorising the sale of milk as "Certified" or "Grade A (Tuberculin tested)" will continue in operation (subject to the provisions of the new Order) until December 31st, 1936, as if they were licences authorising the use of the new designation "Tuberculin Tested." During that period the Minister will continue to exercise the necessary supervision and control over the licences, but their renewal at the end of the year will be a matter for the council.

According to the circular, the Minister will address a further circular to all local authorities when the Order is finally made. At the same time probably he will give further details with regard to the method of carrying out of the methylene blue reduction test which, except in the case of pasteurised grades, is to take the place of tests involving bacterial counts, after January 1st, 1937.

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The Hospital Service of the London County Council.

SIR FREDERICK MENZIES, the London County Council Medical Officer of Health and School Medical Officer, makes the introduction to the Report for 1934 on the Hospitals and General Medical Services under the control of the Hospitals and Medical Services Committee of that body* the opportunity for telling something of the progress of the hospital service in the metropolis during the reign of King George the Fifth, and a very wonderful story it makes. It is true that during the first twenty years the public hospitals of London were

administered by the poor law authorities, but the Local Government Act, 1929, transferred the functions of these authorities to the London County Council and by that body the hospitals have been administered since April 1st, 1930.

Actually it was the passing of the Poor Law Act of 1867 that enabled separate accommodation to be provided for the sick poor in workhouse infirmaries. Since that year there has been a gradual development of the accommodation provided for the sick poor, and an increasing tendency to make such provision on hospital lines. In the early years of the present century gradual progress was made in improving the poor law infirmaries. The improvements were, of course, more marked in certain hospitals than in others, particularly in London, where no fewer than twenty-five boards of guardians were responsible for the administration of the hospitals, and considerable diversity was inevitable.

The Local Government Act of 1929, however, by placing the poor law infirmaries under the control of the County Council, furnished an opportunity in London of unifying the hospital service and bringing the different establishments up to a uniform standard of efficiency. The Act also made possible the final stage in the evolution of the modern municipal hospital from the old poor law infirmary by conferring upon local government authorities power to acquire or "appropriate" hospitals for the reception of the sick, unfettered by the poor law. The Council quickly took advantage of the opportunity, and on April 1st, 1931, "appropriated" most of the general hospitals which had been transferred to its control a year earlier. The remainder have since been appropriated. These hospitals are now administered under the Public Health Acts as municipal hospitals, and the proportion of patients admitted under a relieving officer's order, formerly the great majority, is steadily decreasing, until in 1934 it was less than 18 per cent. of the total number of admissions.

On April 1st, 1930, when the London County Council assumed responsibility, there were no fewer than 76 general and special hospitals and institutions containing more than 42,000 beds and a staff of nearly 20,000, each establishment constituting something of a problem; buildings which were out of date, or on other grounds unsuitable or inadequate for their purpose, required to be adapted or demolished and rebuilt; existing equipment needed to be overhauled or replaced, and much new apparatus was required; the staff, of many grades and

working on differing conditions of service, had to be assimilated into one service. During the period since April 1st, 1930, it is shown, considerable progress has been made in dealing with these problems. New hospital blocks have been built and reconditioning works carried out, and a continuing programme of structural alterations is gradually bringing the hospitals up to a high standard of modern efficiency. Improved facilities have also been provided to enable advantage to be taken of the latest advances in medical and surgical science, while out-of-date equipment is being replaced where necessary by up-to-date appliances.

Striking progress has been made in maternity and ante-natal work. There were 723 maternity beds in the Council's hospitals in 1934, and, of the 56,853 births in the whole of London in that year, no fewer than 12,738 took place in the Council's hospitals. Further developments have been the organisation of a scheme of consultant and specialist services covering every branch of medicine and surgery, and of a pathological service providing all the necessary facilities in this important branch of medical work. Finally, there has been considerable extension of the facilities for medical and nursing instruction, the most notable development in medical education being the establishment at Hammersmith Hospital of the British Post-Graduate Medical School. The opening of the School will undoubtedly mark one of the most important steps in medical progress.

As evidence of the progress made in the case of the general hospitals, it may be mentioned that the number of beds, which in 1910 was 12,899, had risen to 19,037 in 1934: and the number of admissions from 63,393 to 155,915. The number of medical staff, excluding consultants, was in 1910, 73 (1 to 176 beds), and in 1934, 238 (1 to 79 beds), the nursing staff numbering 1,620 (1 to 8 beds) in 1910, and rising to 6,076 (1 to 3 beds) in 1934.

As regards the special hospitals, it is noted that these were the hospitals of the late Metropolitan Asylums Board and were taken over under the provisions of the Local Government Act, 1929. In 1910 there were 13 hospitals for infectious diseases other than smallpox. This latter disease was dealt with in what are now known as the River hospitals, situated at Dartford, and during the whole of the last twenty-five years the greater part of the accommodation provided in the River hospitals, when not required for smallpox, has been used or has been available for other infectious diseases. One of

the infectious diseases hospitals was in 1912 converted into a mental hospital. It is interesting to note that measles and whooping cough were first admitted to the infectious diseases hospitals in December, 1910.

In addition to the infectious diseases hospitals, the late Board had a number of special hospitals and schools for various classes of poor law children. These the London County Council took over and now use for various purposes. Queen Mary's Hospital for Children, Carshalton, Surrey, which formed one of the special hospitals for children belonging to the late Board, now contains the largest physically defective school of the Council, with a staff of about thirty-five teachers. The Council has appropriated all the special hospitals for public health purposes, and has thereby removed them from the category of poor law establishments. The organised treatment of tuberculosis on an extensive scale is a development which has taken place entirely during the period under review, and at present the Council is able to accommodate in its own special hospitals and sanatoria about 2,300 tuberculous patients. Other special diseases for which the late Board had provided accommodation, such as venereal diseases in girls and in parturient women, and ophthalmia neonatorum, the London County Council continue to deal with. The number of admissions to the special hospitals for 1910 and 1934 are shown to have been as follow:—

	1910	1934
Fever and smallpox hospitals	15,248	53,577
Children's hospitals and homes	5,170	7,519
Tuberculosis hospitals	None	4,516
Others	None	847
	20,418	66,459

Since the transfer of the services to the Council in 1930, as laboratory and research work have so greatly increased, five additional group laboratories and a histological laboratory have been provided to meet the needs not only of the special hospitals, but also of the general hospitals. This is another and one of the more important directions in which progress has been made, as it has taken place also in regard to the production of diphtheria antitoxin and other material used in the diagnosis and treatment of infectious disease. So great, indeed, has the increase been that arrangements are now being made for the provision of extra accommodation at the Belmont laboratories where the work is done,

*Annual Report of the London County Council. Vol. IV (Part I). London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. No. 3141. Price 2s. 6d.

For the enterprise they showed in tackling the task that faced them there is no doubt that the London County Council deserve congratulation. At the same time, however, it cannot be gainsaid that it occurred very fortunately that at the time the work had to be done there was a man of the type and ability of Sir Frederick Menzies, and to him must go a very great part of the credit for the wonderful service that the Londoner now finds at his disposal.

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The Educational Development Programme.

CIRCULAR 1444*, which the Board of Education issued to local education authorities on January 6th, 1936, records the plans of the Board for carrying out that part of the government's educational programme which does not require legislation. The fields of state-aided education covered include nursery schools, elementary school buildings, transport of children to school, special places in secondary schools, state scholarships, the school medical service, and physical education.

While stressing the view that the natural place for children under five years of age is the home, the circular recognises that there are many young children whose mothers, unfortunately, are unable to give them at home the care and attention which they need. Local education authorities, it is suggested, should survey the needs of their areas from this point of view in order that they may provide, where necessary, either nursery schools or special accommodation in the infant departments of public elementary schools for children under five. In whatever is done, however, as regards the planning and the equipment of the accommodation and its maintenance, simplicity should be the outstanding feature.

In regard to elementary school buildings, it is explained that the existing grant which the Board of Education make to local education authorities on account of the cost of the sites, building or reconstruction of public elementary schools provided by them is 20 per cent.; no grant, either from the Board of Education or from local education authorities, is at present available to the churches in respect of these items in the case of voluntary schools. Raising the school leaving age and re-organisation of the schools on the lines of the Hadow Report, together with reduction in the size of over-large classes and remedying defective school

premises, will involve many local education authorities in a considerable building programme. In order to assist authorities with these programmes, the Board's grant to them in respect of elementary school buildings will be raised, as from January 1st, 1936, from 20 per cent. to 50 per cent. in respect of contractual commitments entered into on or after that date and up to a date to be determined later. Grant at the increased percentage will also be paid to local authorities on account of any financial assistance which they give towards the building or reconstruction of voluntary schools under such powers as may be conferred on them by the bill for raising the school leaving age.

Another grant to be raised is that in respect of transport expenses. In this case, as from April 1st, 1937, the grant will be increased from 20 per cent. to 40 per cent.

In the matter of special places in secondary schools an increase is provided for, so that the former maximum limit, normally 50 per cent. of the previous year's admissions, is abandoned. Local education authorities and governors will thus, if they so choose, be at liberty to replace the system whereby so many pupils are admitted as fee-payers and so many as special pupils by a system whereby all pupils admitted are treated as special pupils, and their payment, if any, by way of fees is graduated according to their financial circumstances.

Provision is also made for more state scholarships to enable students in grant-aided secondary schools to proceed to the universities for a full university course. In future, the number offered will be 360 in place of 300 annually, and they will be open to candidates from any secondary school in England or Wales. Further, whereas in the past the maximum maintenance grant payable to the holders of these and other state awards was £80 per annum, the maximum will now be increased.

A very important request made is that authorities should survey the needs of their areas with a view to making good deficiencies in the school medical service, particular reference being made to the school dental service. That this is seriously incomplete in most parts of the country is admitted, and it is shown that the staff at present employed is probably not more than half the minimum number required. Similarly, provision for orthopaedic treatment and aural treatment is not complete, and there is a great need for additional day open-air schools. The circular records other develop-

ments in the school medical service which are desirable.

In the matter of physical education, the circular indicates that the Board are anxious that local education authorities should consider the framing of comprehensive schemes of physical education covering all types of school. That there is a proposal shortly to issue a detailed circular dealing with the whole question, including the physical education of adolescents who have left school, is noted.

By way of conclusion, the circular points out that there is recognition on the part of the Board that the substantial advance proposed can be achieved only with "the cordial co-operation of all their partners in the educational system, whether local education authorities, voluntary bodies or teachers, and they do not doubt that such co-operation will be readily forthcoming." With these views and expectations all members of the health service, and more particularly the school medical branch, will cordially agree.

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Anæsthetic Explosions.

IN a Ministry of Health circular (1512) covering the memorandum (Memo. 191/Med.) dealing with this matter, and addressed to county and county borough councils, these bodies are not only pressed to adopt the precautions recommended, but to distribute copies of the memorandum setting them out to the authorities of all voluntary hospitals, nursing homes and other establishments in which surgical operations are performed. The precautions suggested are based upon a study of conditions present at the time of certain accidents in this country known to the Ministry, showing the need for precautionary measures, and in the memorandum they are discussed under various headings. Amongst dangerous anæsthetics are:—(a) *Ether-air and ether-oxygen*.—A rich ether-oxygen mixture is more dangerous than a corresponding ether-air mixture, and a very small spark suffices to cause ignition. (b) *Nitrous oxide*.—Although this gas is not itself inflammable, mixtures of ether vapour with air or oxygen are made not less, but even more, inflammable if nitrous oxide is added. (c) *Ethyl chloride*.—This yields a vapour which forms an explosive mixture with air, and its use is dangerous in proximity to flames or apparatus likely to involve a spark or hot wires. (d) *A.C.E. mixture*.—The ordinary A.C.E. mixture may yield an explosive mixture with air, and present dangers if used under the conditions

mentioned in connection with ethyl chloride. (e) *Ethylene-oxygen*.—With this mixture the explosion resulting from ignition is very destructive. Methods of anæsthesia which are available when explosion risks may be anticipated include:—basal narcotics; local analgesia; nitrous oxide; chloroform. These may be used in their usual combinations and with oxygen. Chloroform is, however, not always advisable, and if local anæsthesia is impracticable the risk of ether may be minimised by limiting its administration to the induction of anæsthesia. After an interval sufficient to ensure that all ether vapour has been practically eliminated, the use of electrical apparatus is admissible, anæsthesia being maintained with chloroform or nitrous-oxide-oxygen. Risk of ether explosion may in general be lessened by the employment of a rigid closed circuit method of administration with carbon di-oxide absorption. Under such conditions, with a tightly fitting mask, no anæsthetic should escape into the air.

Almost as important as the choice of anæsthetic is selection of apparatus. In some types it is possible for an explosive mixture containing ether to be delivered, although the valve or tap is set to admit chloroform or nitrous oxide only. This is due to evaporation combined with the slight suction effect of the gas flow, and its occurrence is more likely if the ether bottle is surrounded by a hot water jacket. In this type of apparatus, the casual emptying of the ether container is no safeguard but possibly an added danger. The ether bottle should be altogether detached and not replaced until all trace of ether has been removed, or it should be fitted with an effective valve which closes the outlet from the bottle when ether vapour is not required. It has been established by experiment that ether-oxygen mixtures can ignite along a tube such as that employed in intra-tracheal administration or in conjunction with a mask. If ignition occurs at the outlet, therefore, flame may reach the ether bottle, causing a burst with ejection of burning ether. Enclosed suction pumps should be so constructed that the exhaust delivery is outside the motor case; otherwise in nose and throat operations it is possible to suck in the air containing ether until concentration within the explosive limits is reached.

In relation to electrical apparatus, the memorandum makes reference to surgical diathermy, noting that experience has shown that it is unwise to use diathermic apparatus if ether must be administered. The essential feature of

* H.M. Stationery Office. Price 2d. net.

this apparatus is the cutting arc or spark at the electrode which is definitely capable of igniting ether-air or ether-oxygen mixtures. The employment of a blanket or other form of screen between the patient's head and the point of application of the electrode is in no sense a reliable safeguard, and further risk of ignition arises from the spark gaps within the cabinet, and from the fact that the patient may be at an electrical potential, with consequent risk of sparking to the operator or other conducting bodies such as the table or anæsthetic apparatus.

With X-ray apparatus careful consideration of the electrical construction and method of connecting the apparatus is essential if its use in the presence of an inflammable anæsthetic is required. Sparking may occur in consequence of a defect in insulation, at switches, regulators, fan cooling motors, or plug and socket connectors, the degree of danger depending on the ventilation and proximity to the patient.

Discussing surgical lamps, it is explained that as these instruments in general must be of small dimensions, a form of construction which, comparatively, is not robust and therefore tends to become unreliable with use, has had to be adopted. Sparking may be caused by accidental short circuiting of exposed terminals, or may occur in consequence of defects such as failure of insulation or intermittent contact and also at switches, including those of the regulating type. Such sparking is particularly dangerous in connection with nose and throat operations where anæsthesia is maintained by ether-oxygen. It is very desirable that those connected with the design, construction, maintenance, and use of surgical lamps should realise the explosion risk and endeavour to minimise it. The first two points are for the manufacturer, but the best designs may be rendered ineffective unless the maintenance is both careful and competent. The danger of ignition is less when small low voltage dry cells are used than where other forms of supply, such as accumulators, transformers, motor generators and large dry cells are employed. In general the voltage of the source of supply need not be appreciably more than that for which the lamp bulbs are rated, common values being 2.5, 2.7 and 3.5 volts. Grave risk of electric shock and sparking is introduced by the arrangement of a surgical lamp, in conjunction with a regulating resistance, for direct connection to public supply mains. These considerations apply also to lamps intended for attachment to the surgeon's head, and other forms of light projectors, the degree of risk

depending on ventilation and the distance from the point of administration (or leakage) of the anæsthetic.

In respect of cauteries, it is shown that in addition to the possibility of electrical sparking the heat of the cautery may in itself be sufficient to cause combustion of ether vapour. Ether-oxygen vapour will, under conditions quite compatible with those under which anæsthetists use such a mixture, ignite by contact with hot metal 300°-350° C. below visible red heat.

Even from the general electrical installation, which includes wiring, lighting and heating apparatus with the necessary switches and plug sockets, there may be risks of anæsthetic ignition, *e.g.*, at a heater element, or in consequence of switch spark, or a defect. Here again the risk is dependent on the ventilation and situation, and attention to these latter factors should result in material diminution of the danger.

Discussing static electricity as a source of danger, it is pointed out that under ordinary conditions there is sufficient humidity in the atmosphere of this country to prevent dangerous static electrification. On days of exceptional dryness, however, or in theatres to which only warm dry air is delivered by a ventilating plant, the possibility of electrification and consequently of sparking is present. The latter condition is becoming more common and the number of theatres at risk is therefore increasing. Insulated apparatus such as rubber-tyred patients' trolleys or portable anæsthetic equipments can be electrified in various ways, as, for instance, by drawing a dry blanket or towel across them. Such charges usually leak away after a few seconds but discharge by sparking to the person or adjacent objects is capable of igniting ether-oxygen mixtures. This source of danger may be eliminated by artificial humidification of the air. Where this course is undesirable it is advisable to earth insulated apparatus, such as rubber-tyred trolleys or operating tables, and in general a light trailing chain between trolley metal-work and floor will usually be effective. Static electrification is readily discharged by earth connections, even those of comparatively high resistance, and this point is of some importance if it is considered undesirable on account of shock risk to introduce "dead" earthed apparatus into a theatre where current supplied from public mains is used.

In regard to prevention of accidents, the matter of extreme importance is ventilation, and when risk of anæsthetic explosion is under

consideration the first point for attention is the adequacy, or otherwise, of the ventilation. It may be possible to devise local means of extracting air and vapour from the immediate vicinity of the patient which may considerably diminish general diffusion of anæsthetic vapour in the theatre, a point which, apart from reduction of explosion risk, may be of physical advantage to the surgical staff.

The memorandum stresses that accidents actually have been few, those of recent occurrence being, in fact, only three. Lest the having of an anæsthetic should come to be regarded as a very serious adventure, it is well that the smallness of the risk should be stressed, as well as that precautions are available, a fact that the memorandum clearly reveals.

Vital Statistics for 1935.

THE Registrar-General has issued the following table of vital statistics for the year 1935:—

ENGLAND AND WALES.

Birth-Rates, Death-Rates and Infant Mortality during the year 1935. (Provisional figures.)

	Rate per 1,000 resident population.		Deaths under 1 year per 1,000 registered live births.
	Live births.	Deaths. (Crude Rates.)	
England and Wales ...	14.7	11.7	57
121 county boroughs and great towns, including London ...	14.8	11.8	62
140 smaller towns with estimated resident populations of from 25,000 to 50,000 at the 1931 census ...	15.1	11.4	55
London Administrative County ...	13.1	11.3	58

The birth and death-rates for England and Wales as a whole are calculated on the estimated mid-1935 population, but those for the towns aggregates and for London are calculated on the estimated mid-1934 populations.

England and Wales.—The 1935 birth-rate is 0.1 per thousand below that of 1934, and is 0.3 above that of 1933, the lowest recorded. The crude death-rate is also 0.1 below that of 1934, the only years with a lower or similar

record being 1923 (11.6), 1926 (11.6), 1928 (11.7), and 1930 (11.4). The infant mortality rate is the lowest recorded, the previous record years being 1934 (59) and 1930 (60).

The Physiological Bases of Nutrition.

THE report of the meeting held in London, November 25th-29th, 1935, of the commission of experts appointed by the Health Committee of the League of Nations, has now been published.* It is entitled: "Report on the Physiological Bases of Nutrition by the Technical Commission appointed by the Health Committee." In the series of League of Nations publications it is III, Health, 1935, III, 6. In it the commission sets out its findings. These are in two parts: Part I dealing with the requirements of energy-giving foods; Part II with mineral and vitamin requirements. In addition, there are set out certain general recommendations as well as a variety of tables forming a dietary schedule for the pregnant and nursing woman and outlining specimen diets for various child age-groups. The general recommendations are to the effect that although a simplified diet may be so constituted from a few protective foods as to be satisfactory, it is a general principle that variety in diet tends to safety, provided it contains a sufficiency of the protective types of food materials. White flour in the process of milling is deprived of important nutritive elements. Its use should be decreased and partial substitution by lightly milled cereals and especially by potatoes is recommended. The consumption of an excessive amount of sugar is to be condemned, and in this case also partial replacement by potatoes is urged. Milk should form a conspicuous element of the diet at all ages. The commission commends the tendency manifested in some countries to increase the daily intake up to one litre per day for pregnant and nursing women, as well as to provide an abundant supply for infants, children of all ages and adolescents. The practice of providing milk either free or at a reduced price to these is highly recommended. The commission desires to draw attention to the high nutritive value of skimmed and separated milk, which, although deprived of its vitamin A through removal of the fat, retains the protein, the B and C vitamins, the calcium

*London: Allen and Unwin. Price 6d.

and other mineral elements. The commission deplors the large wastage in many countries of this valuable food. Fresh vegetables and/or fruit should always be constituents of the normal mixed diet. Adequate provision of the vitamins other than vitamin D can be readily accomplished by inclusion in the diet of optimum amounts of protective foods. Where these are not available, only such vitamin preparations as are officially controlled and approved should be permitted. The commission emphasises the need for provision of extra vitamin D, either as cod-liver oil or as irradiated products, wherever and whenever sunshine is not abundant, especially in the period of growth and during pregnancy.

The commission, it is interesting to note, consists of the following members:—

Austria.

Professor A. DURIG, Professor of Physiology at Vienna University.

United Kingdom.

Professor E. P. CATHCART, Professor of Physiology, Glasgow University;

Professor E. MELLANBY, Secretary-General of the Medical Research Council, Professor of Physiology at the Royal Institution, London;

Sir JOHN BOYD ORR, Director of the Imperial Bureau of Animal Nutrition, Reid Library, Rowett Institute, Aberdeen.

United States of America.

Professor E. V. MCCOLLUM, Professor of Biochemistry, Johns Hopkins University, Baltimore;

Dr. Mary SWARTZ ROSE, Columbia University, New York;

Dr. W. SEBRELL, Chief of the Department of Nutrition, National Institute of Hygiene, Washington, D.C.

France.

M. J. ALQUIER, Secrétaire général de l'Institut scientifique d'hygiène alimentaire, Directeur de l'Institut national agronomique, Paris;

Professor L. LAPICQUE, Professor of Physiology at the University of Paris, Faculté des sciences, Sorbonne, Paris.

Scandinavian States.

Professor AXEL HOJER, Generaldirektor, Medicinalstyrelsen, Stockholm;

Professor C. SCHIOTZ, Professor of Hygiene at the University of Oslo.

U.S.S.R.

Professor B. SBARSKY, Director of the Central Nutrition Institute, Moscow.

Amongst problems recommended for further study are:—

- (a) Assessment of the nutritional state of children.
- (b) Nutritive food requirements during the first year of life.

- (c) Minimum vitamin and mineral requirements.
- (d) Minimum fat requirements.
- (e) The nutritive and "supplementary" values of the different protein-containing foods, to determine to what extent and in what forms animal protein is necessary for growth and health,
- (f) The relative nutritive value of different cereals according to the degree of milling.
- (g) The extent to which the increasing consumption of sugar is detrimental to health.
- (h) Influence of climate on food requirements.
- (i) The extent to which diets in common use fall below the standards recommended in the report of the commission.

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Tuberculosis in Birmingham.

BIRMINGHAM is a busy centre and possesses an active and progressive tuberculosis department, and medical officers of health will not unnaturally expect to find in the 1934 report of Dr. G. B. Dixon, who is in charge of it, information of interest and value. The population of Birmingham numbered at the last census 1,002,413; there are 6,404 tuberculosis cases on the current register; there were 1,398 new cases notified in 1934, and 814 deaths provide a mortality rate of 0.79 per thousand of the population. The city possesses 601 beds for the treatment of tuberculosis, of which 36 are reserved for observation. It is very encouraging that only 23 out of 732 deaths from pulmonary tuberculosis were unnotified before death, but this figure for a large urban population is often lower than for more scattered districts.

Disinfection of houses has been employed extensively, and 1,734 houses were disinfected after the death or change of address of a tuberculous patient. It is still a little doubtful how far a special disinfection, as opposed to an ordinary spring cleaning, furthers the prevention of tuberculosis, but it certainly helps to impress upon the public the danger from infection.

The composition of the care committee is unusual; it is not mainly a lay body with a medical chairman or adviser, but comprises two members of the medical staff, two members of the health visitors' staff, two

administrative officers and one lay social worker. Through this organisation 127 persons received beds or bedding either on loan or by hire-purchase, 34 sleeping shelters were loaned, 73 families obtained better houses, and 98 grants of clothing or other necessities were made. In addition to this, grants of food* were made to 117 patients, Christmas dinners were provided, and patients were put in touch with the public assistance department or independent charitable organisations. The same care committee has organised work under appropriate conditions for young people from 15 to 19 unfit to re-enter competitive employment. No wages are paid but profits from the marketing of the material produced are divided among the patients. It is not said how many have taken advantage of this arrangement. A care committee built on the Birmingham lines would certainly avoid the risks of the troublesome lay interference with patients and medical officers which sometimes takes place with other care committees, but it misses what is perhaps the most important function of care committees, namely, to serve as liaison between official medical work and the general public, and by that means to inform and educate the public at large. Moreover, a number of the activities of this committee could be equally well performed single-handed by the tuberculosis officer, and are so carried out in many districts.

The report contains many interesting and valuable statistical tables, and gives the general impression of hard and conscientious routine work.

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Population Changes and the Social Services.

IN a booklet entitled "Expected Population Changes and their Effect upon Social Services,"* which is one of a series of studies promoted by the Institute of Public Administration, the author, Mr. Norman Wilson of the Department of the Medical Officer of Health of Birkenhead, submits a careful study of the trends of population, both in total and in age-groups, and commends it to all who are interested in the social services, whether central or local. Very concisely (the booklet runs to 36 pages only) he sets out the great changes which may be expected in the coming decades.

* London: The Institute of Public Administration, Palace Chambers, Bridge Street, S.W.1. Price 1s.

These changes, he shows, will have far-reaching effects on social services, and succinct examination is made of the probable effects on the services relating to housing, education, the blind, tuberculosis, school medical services, maternity and child welfare and on contributory and non-contributory pensions.

Two of the striking conclusions of Mr. Wilson are that, although the population will be practically stationary for the next ten years and will then decline substantially, the number of separate families requiring houses will increase; and that although there will be a large reduction in the number of children of school age, it will not be possible to effect a corresponding reduction in expenditure.

It is not too much to believe that knowledge of the probable changes and effects is essential for all engaged in public administration, and Mr. Wilson is to be congratulated on this extremely useful attempt to provide that knowledge.

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Obituary.

MABYN READ, M.D., D.P.H.

THE Society records with regret the death of Dr. Mabyn Read, for 38 years Medical Officer of Health of the City of Worcester. Born in 1855, he gained a scholarship at Christ's College, Cambridge, taking the Natural Science Tripos in 1876. He qualified M.R.C.S., from St. Bartholomew's Hospital in 1879, took the Cambridge M.B. a year later, and proceeded to the M.D. degree in 1884. After a period of private practice, Dr. Read became Medical Officer of Health of Worcester in 1891, and held the appointment until his retirement in 1929.

JAMES WOOD, M.D., D.P.H.

With great regret the death, at the age of 62 years, of Dr. James Wood, of Chadderton, is announced. Born at Oldham and educated at Wesley College, Sheffield, and the University of Manchester, he graduated as M.B., Ch.B. in 1896, and proceeded later to the M.D. degree, taking also the D.P.H. of the Irish Royal Colleges. After a short period of private practice, he was appointed Assistant Medical Officer of Health of Oldham in 1911. He held office as Medical Officer of Health of Chadderton from 1913 to 1934, when he was given leave of absence on account of ill-health, and never resumed duty.

An Aspect of Maternal and Infant Ill-health.

By H. P. NEWSHOLME, M.A., M.D., F.R.C.P., B.SC., D.P.H., Medical Officer of Health, Birmingham.

This very thoughtful and thought-compelling paper of Dr. Newsholme formed the address he delivered as Chairman of the Birmingham and Midland Sub-Group of the Maternity and Child Welfare Group, at a meeting held in Birmingham on November 30th, 1935. The questions with which it deals had some time to be dealt with by a medical officer of health and, as the address truly reveals, it could not have been done better than Dr. Newsholme has done it.

AT the annual meeting of the British Medical Association this year a resolution was adopted which included the assertion that "the publicity which maternal mortality is receiving to-day is tending to terrify child-bearing women, and is in itself a cause of increased mortality." It has seemed to me that to look at and about that statement might be appropriate to the present occasion.

We can assert at the outset that it is not the application of scientific knowledge and the detection of causes of maternal mortality, in the individual and as a whole, that the British Medical Association are here deprecating, but the glare of publicity in which the whole subject is enveloped. We can, therefore, dismiss from our minds any question of obscurantist policy on the part of the medical practitioners of the country, and address ourselves to the implication that a factor in the increased maternal mortality has been fear of the consequences of pregnancy with its culmination in the stressed danger of the confinement. To what extent can we subscribe to this association between an alleged fear of injury and death and the production of injury and death?

When such a suggestion has been raised, I have heard on occasion the reply, regarded as a conclusive one, that fear is inadmissible as a factor of importance in maternal mortality, because the vast majority of maternal deaths prove on careful enquiry to be connected with quite obvious physical disease in the mother, or physical complications in the confinement, or lack of skill or attention on the part of doctor or midwife. But natural though that argument may be and true though it be in part, it is not convincing as a *complete* statement, for it may mean only that the problem has not been penetrated to a sufficient depth.

It is a truism that pregnancy brings stress and thence can produce disease in various maternal organs; and that the detection of these conditions of organic stress and disturbed

function is of the utmost importance, in itself justifying all the emphasis laid nowadays on the provision of ante-natal examination and supervision, whether through public or private channels. But it is worth while to look a little further at the question of these organs under stress and strain, on the assumption that the mother is also anxious and fearful about herself or about her household. What can be the effect of such a condition of mind? One has only to consider one's own bodily functioning to draw a conclusion. Any intense or prolonged pre-occupation withdraws the mind from its regulative control of the bodily habits; and those habits, in the absence of that superior control, tend to become slovenly and ineffective, involving a growing load of effort for a diminishing return of efficiency. The pre-occupied walker becomes more apt to stumble; the harassed provincial loses the acquired varnish of an Oxford accent and reverts to his native dialect; the wielder of knife and fork, of pen, of violin bow, all become in some degree clumsy and inaccurate if the mind is withdrawn too long or too intensely from its post of central control. But that which is true of these habits acquired in our individual lives is true also of habits stamped on the mind and body during our racial lives, in those functions of organs and tissues and cells which have been established as habits long back in our genealogical table. Pre-occupy the mind, remove it from its toning, relaxing and stabilising influence over the system, and the whole system tends to feel the strain of running without that controlling mind, while particular parts of the system will become specially disturbed, such as those with habits of function least well laid down, or most recently and, therefore, probably least stably laid down, or with habits of function particularly complex and most liable, therefore, to disturbance. Following on disturbance of habit of function, changed function may lead to change in structure of systems, organs, tissues

or cells. Thus we can justifiably say from first principles that fear and anxiety on the part of the mother will emphasise bad function in portions of the body which already find it hard to work correctly or which are already working incorrectly; while such mental conditions may go further in creating a secondary dysfunction not previously manifest even in minor degree. That may apply to functioning of the body during pregnancy; it may apply with equal force to the processes of delivery. The mental state may encourage halting function of kidneys, of endocrine glands, of heart and lungs during pregnancy; and it may similarly be a factor, major or minor, in the inertia or the rigidity, the hæmorrhage or the laceration, or the imperfect reaction to infection which yields a manifest puerperal sepsis. To me it would appear incapable of contradiction that the British Medical Association's dictum is true, that publicity of the character which this particular subject has received, must create fear and that such fear must create an ill-balanced action of organs and tissues making for increased morbidity and mortality. And that is true quite apart from the distinct and separate problems, on the one hand, of inefficient or inconsiderate or unconscientious work on the part of those responsible for bringing the woman safely through her pregnancy and confinement; and on the other hand, of deformity or disease already present which the most complete absence of fear during pregnancy and labour could not have eliminated.

It is clear, then, that we are not involved in an argument against the best ante-natal care possible. It is rather an argument against hysteria in the press and on the platform and a demand for a right attitude on the part of doctor or nurse who has to examine and advise the patient. It is an assertion that, while it is desirable that the expecting mother should know of systemic weaknesses that need care, it is very undesirable for her to know of these if she is not going to be still more impressed with the still more important fact that she is a woman going through what countless other women are at every moment going through somewhere in the world, and that she will go through it well and happily as do the vast majority of her sisters. If the doctor or nurse cannot be sure of conveying and maintaining that attitude, then either they must give the instructions without any suggestion that these imply something amiss, or they must alter their own outlook and method of approach. And I

would submit that it is that personal outlook of the doctor and nurse that matters, quite as much as that of the patient. If they are concerned primarily and solely for the patient's welfare, and in particular for her to experience the happiness and sense of personal dignity in the fulfilment of high purpose which should be the accompaniment of child-bearing, then they are likely so to frame their comment and advice as to help and not to disturb her. If, on the other hand, they have a personality too intent on underlining their own importance and ability or on asserting their own masterfulness, they are all too likely to satisfy personal pride at the cost of bringing apprehension and fear of the outcome into the minds of their patients. Here, if anywhere, the direction "Physician, heal thyself" is applicable as the first step towards avoiding danger to the patient. The expansion of ante-natal work and of the correspondingly increased contact of the expert, whether doctor or nurse, with the patient during pregnancy makes this question of the personal outlook of these advisers one involving them in the gravest responsibility. The extension of ante-natal care will be a blessing in proportion as the men and women who advise these patients are selfless in their outlook. It will be a catastrophe to the extent that selfishness in one form or another so colours their minds that they are obtuse to the basic needs of their patients for encouragement and insensitive to the apparent trivialities of speech and way of expression which can convey discouragement.

I do not propose to deal further with this problem thus presented to us for dissection by the British Medical Association. But I should like to pursue it into a province which their resolution did not touch, namely, the health of the unborn child, and the prevalence of morbidity and mortality in the young child. Here we have a large mass of conditions of congenital debility, of premature birth, of pre-natal defect, which in bulk forms the largest and most intractable element in infant mortality and in early morbidity. Is it possible that this is not after all as intractable as it has seemed to be, but that we have been applying our energies at the wrong point? Are these also conditions in which the mother's state of mind plays its part equally with her state of body and that of a long line of forebears? Even if they are in part the product of hereditary defect, have these defects been magnified and even made fatal on occasion by the mother herself?

Consider the state of affairs with the develop-

ing child *in utero*, fed by the foodstuffs osmosing through from the maternal circulation *via* the placenta, pouring its waste products back into that same bloodstream. Assume a mother fearful as to her present condition or as to the outcome of the coming birth for her and for the family. Has the mother's state of mind any reaction on her circulatory system?

There may be direct evidence, but I am not aware of it. We may, however, find some indirect suggestions of significance. The nursing mother under severe emotional stress can poison the nursed child. The secretory process and its secretion have been adversely affected by the mother's state of mind; whether through the nervous or the circulating system, or both, has not, so far as I know, been determined. But fear can have such deep and far-reaching effect on the tissues—secretory, muscular, nervous—that it does not need much imagination to infer the possibility and the likelihood of the product of such an influence reaching the circulation; and if reaching the circulation then involving an impact on, perhaps a passage into, in any case an assault on, the placental circulation which forms an all-important element in the environment of the developing child. I will ask you for the moment to assume the fact of such entry of emotionally-produced poisons into the maternal circulation, in order to see to what conclusions it can lead.

We have already used the principle of habit-formation as a useful means of looking at questions of organ and tissue-function. It may help to utilise it again in relation to the developing embryo. The embryo has to unfold, establish and develop a vast number of habits of tissue and cell and organ function which it has received in potential form from its ancestry. The establishment of these habits as a part of the general functioning of the bodily and nervous system in this developing embryo depends on two main factors; on the one hand on the degree of energy which the as yet embryonic will of the embryo can apply to the task of opening up, establishing and rendering actual these potential habits; on the other, on the degree in which the environment is good or bad, helping or hindering such habit-formations. And these will hold good as main factors in the child's development, no matter whether the potential habits conveyed from the ancestry are in themselves intrinsically good or faulty habits, well or poorly laid down by those ancestors.

The young child who has to develop the habit of speaking, of drinking from a cup, of dressing,

of walking, finds it difficult to learn, and perhaps learns it imperfectly as well as slowly, if exposed to a distracting or disorderly atmosphere during the time when the habit should be learnt. A habit partially learnt may vanish into thin air, a habit reasonably well learnt may become imperfect if subsequently exposed to a distracting environment. The adult is sufficiently familiar with this in its relation to the bad, external environment created by noise, or the bad internal environment presented by evil passion or other absorbing emotion.

This must be as true of the individual before birth, and the environment provided by the mother's circulatory and nervous relation to the child must be a vital factor in helping or hindering the habit-development which is a synonym for the maintenance of healthy function in organs and tissues and cells. If we are correct in assuming that these maternal systems providing the embryo with a large section of his environment are changed in content or in action by the mother's emotional condition—an assumption which I believe to be one of ordinary commonsense—then the mother and those associated with her in her emotional atmosphere have within their own control the means for preventing much of the ill-development, delicacy and abnormality of function and pre-natal disease and injury which exercise their heavy toll in premature births or in congenital debility.

That control, we say, is largely in the hands of the mother with her family and associates. How can society help the mother to attain that freedom from unhealthy emotion which is the essential leverage to be applied by her to the child's pre-natal development?

First of all, it must be a real freedom from such unhealthy emotion, not a capacity for suppressing it. I strongly suspect that it is just because many mothers are so successful in suppressing unhappy emotion, experienced and thrust out of the consciousness yet simmering in the sub-consciousness, that they are a real danger to the well-being of the children whom they are bearing. The morbid emotion is not to be suppressed; rather it is not to be experienced at all. That is to say, the mother's outlook must itself change. She has herself to develop a new and difficult habit, the habit of cheerful feeling. Like all habits, two main factors will be concerned; the inward will to establish the habit and the outward help or hindrance towards the habit depending on the mother's environment.

So far as the environment is concerned, we come back to the thesis of the resolution from which we started, that public opinion and outlook, which form so essential a part of the mother's environment, can be so false in sentiment that they can impose fears and anxieties where these should not exist. In this particular direction public opinion most readily becomes false in sentiment when it adopts a false interpretation of the place of maternity in life. That false interpretation arises when society rates creature comforts and pleasures more highly than a family. A society, also, which tends to lay more stress on physical happiness in marriage than on the bearing and tending of new life for the enrichment of the world, tends in corresponding degree to emphasise the pains and the dangers of pregnancy and labour in those wives who, willingly or unwillingly, have entered on this more real and sober side of marriage. Such a viewpoint in such a society brings into higher relief the critical importance of the relatively few pregnancies to which its outlook reduces the family, and creates a correspondingly heightened anxiety over those fewer pregnancies, to their obvious disadvantage.

A society which seeks to adapt the family by birth control to a false standard of social life, instead of altering the social life to allow of normal married life, is not a society showing the right sense of values which the mother so urgently needs to support her. If the mother is to be provided with a helpful environment in which to develop and maintain in herself the happy equability which can best help the child's development, then there must be a change in ideals and outlook on the part of society at large.

The second factor in this change is, as we have said, the mother's own determination to give the child the best conditions possible during the sojourn in her own body. Now that implies not a stringing up of the mother's will to a fresh and higher tension of effort. It is rather the converse. The need for her is to recognise the meaning and joy for the wife of the self-giving and self-surrendering which is woman's natural attitude in this relation, and full acceptance of which under worthy conditions of marriage is the secret both of happy marriage and of a truly rich and consecrated motherhood. It is in this very attitude that modern society, with its emphasis on self-expression and self-fulfilment and its failure to recognise that that self-fulfilment comes through self-abnegation,

distorts the outlook of the wife and mother through the enervating atmosphere which it spreads through social and family life.

Let us be clear that this is not an advocacy of the rights of the male and the subjection of the female. Where the conditions of physical union are degrading, or where they could be disastrous to any child conceived, then the woman should not surrender her body, but should fight tooth and nail in refusal—if necessary almost literally as well as metaphorically. But that refusal must be a frank one; it cannot be by so easy a course as artificial contraception which yields to the circumstances while refusing the consequences; for that does not eliminate the degradation which in turn means the loosening and the ultimate loss of the bonds of true marriage.

But supposing that the circumstances of physical union resulting in pregnancy have, in fact, been unworthy and the wife has been victim rather than partner, there is still needed from her, for the sake of the child, not suppression of unhappy feeling but a capacity to throw such a feeling aside and to seek to bring good out of evil. That means, I suggest, that in some form or other the mother must know in her bones the meaning of vicarious sacrifice, the sense that by her own subsequent attitude and atmosphere of self-giving and cheerful acceptance she may convert the failure which has occurred in mutual relationship into a final and fuller success, in a healthy and happy-dispositioned child and a renewed sense of the sacramental meaning of marriage to both parents.

These are, perhaps, unusual thoughts to put into words on such an occasion. Yet it would be well for family life if they could more consciously and constantly be present in the minds of those who have to advise men and women in matters of marriage and child-birth.

These remarks will have served a useful purpose if they have renewed in your minds a sense that there are still aspects of motherhood and childhood scarcely as yet touched on by the medical profession or by society at large, which yet give promise of vast stores of health and happiness capable of attainment for both.

THE Twenty-Second Annual Conference of the National Association for the Prevention of Tuberculosis will be held at the County Hall, Westminster Bridge, London, S.E.1, on July 16th, 17th and 18th, 1936.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

Milk.

Milk is an important article of diet: it may even be, as formerly, at any rate, was said, the most perfect food, containing all the constituents in due and proper proportion. As a matter of fact, it must be important, for no body set up to consider or to report upon or advise with regard to food, feeding or nutrition but makes special reference to its excellences. Of it the League of Nations Commission say that it should form a conspicuous element of diet at all ages: the conference of representatives of the Ministry of Health advisory committee on nutrition and of the British Medical Association claim for it that it is the only naturally balanced food we know of, and stress its importance as "a highly nutritious food for the child and the nursing and expectant mother;" and any nation whose *per capita* consumption falls below that claimed for the United States of America is almost too ashamed to hold its head up. While there is all this, apparent, unanimity in regard to milk, it is remarkable the extent of the investigation carried out practically continuously upon it. Of what other staple article can it be said there is any such unanimity, or upon which so much of time, money and effort is expended in research? Bread and meat and fish and the multitude of other articles by comparison are more or less taken for granted, the big merchants and distributors merely marketing and distributing and, even if seized with a desire at the time of will-making or on any other day to display generosity, never dreaming of endowing chairs or institutes or laboratories whose function shall be the day and daily discussion of or research into the chemistry or what not of the product from which they have amassed or hope to amass a fortune. As regards literary output also, there is no comparison between milk and other foods. On meat and these other things the medical journals are practically silent, and even in those dealing with public health, writers betray a distinct reticence. In the case of milk it is not so, but far otherwise. If there is a fray in regard to it, and commonly enough there is a fray, ink flows with an extreme freedom. Even when there is no fray, ink-spates are not infrequent, everything from general kinds of papers to official and quasi-official reports discussing this

and that and aiming to instruct these and those of the milk industry and of the population on the infinite variety of aspects that milk and the problems connected with it, it is gathered, present.

Bacteriological Testing of Milk.

All this is because there has just appeared, as No. 206 of the Special Report Series of the Medical Research Council, a volume dealing with "The Bacteriological Grading of Milk"* by Professor G. S. Wilson and certain of his assistants at the London School of Hygiene, to bring the total of publications issued within the last month or two up to four, one at least of them being a very goodly tome. The report of Professor Wilson, indeed, is quite a sizeable volume, possibly the largest the Council has yet issued, not excepting that in which present knowledge on vitamins was surveyed. Than Professor Wilson no one more competent, skilled or experienced could have been found to carry out the very prolonged (actually they occupied three years) and complicated investigations the objects—successfully attained—of which were to provide experimental data for conclusions as to the relative value and precision of the procedures current in the bacteriological testing of milk and to define a simple test by which the grading of milk in terms of its content in living bacteria can be reliably performed. The two methods which have hitherto been mainly used in grading milk for cleanliness—the plate count and the coliform count—notoriously are neither of them entirely suitable. Both methods have a large experimental error, and the plate count in particular, in addition to being complex and expensive, gives an appearance of accuracy which is entirely fictitious and misleading. The value of the coliform count in the examination of water is well attested by years of experience, but the fundamental assumptions on which its interpretation is based do not hold true for milk. The general conclusion reached by Professor Wilson is that the best test for the purpose is a modification, which he describes, of the methylene blue reduction test. In its earlier form this test was open to the objection that, although it could pick out very dirty samples, it was unsuitable for the examination of milk of a

* H.M. Stationery Office. Price 7s. 6d. net.

higher degree of cleanliness. The modification which the present investigation has introduced removes this ground of criticism. The modified test is simple, inexpensive, and accompanied by only a very small experimental error: it should, therefore, be of unrestricted value for the grading of milk on the basis of cleanliness and keeping quality, and should provide a satisfactory means whereby the milk of all producers, as suggested in the draft designations order, can be regularly and frequently examined.

Pasteurising Plants.

The other milk publications to which reference may be made are a report on "An Inquiry into the Design, Operation and Efficiency of Pasteurising Plants," by Drs. Scott and Wright of the Hannah Dairy Research Institute; a small volume on "Bacteria in Relation to the Milk Supply," by Mr. C. H. Chalmers, a lecturer at Leeds University; and a large volume entitled "Milk Production and Control," by Dr. Harvey, Medical Officer of Health, and Mr. Hill, Sanitary Inspector of Southgate. For the contribution from the Hannah Institute* it may be claimed that it is a most valuable addition to the literature on pasteurisation and pasteurisers. As a result of a very full investigation of some nineteen plants operating in Scotland, the authors conclude that there is a real necessity for bringing plants under more complete control and supervision of local authorities; that there is need for training and certification of plant supervisors and for an extension of routine laboratory control. The adoption of these measures, it is believed, "would go far towards ensuring more efficient methods of pasteurisation and rectifying procedures which are at present open to criticism." By way of an appendix, the report gives a clear and useful description of the phosphatase test and the methods of its use as a means of detecting inefficient processing.

The Commercial Aspect.

Mr. Chalmer's book ("Bacteria in Relation to the Milk Supply")† is intended primarily as a practical guide for the commercial bacteriologist. At the same time, it is suggested it may be found useful by others, and as it contains, in addition to a very full and clear description of the methods employed in the routine examination both of milk and water, special sections on

* Hannah Dairy Research Institute, Kirkhill, Ayr. Bulletin No. 6. Price 3s.

† London: Edward Arnold & Co. Price 6s. net.

taints and abnormal conditions in milk and the control of the dairy plant at the farm and the factory, it is not without interest and value for health workers. The description given of general bacteriological technique in which, amongst other matters, methods of isolating and identifying bacteria are discussed, is deserving of praise as being very simply and clearly put. Harvey and Hill's "Milk Production and Control"* may not be, but has every appearance of being the largest and most exhaustive study of milk so far offered in one volume. It is certainly the largest of the group now under discussion. The reason for its size obviously is that it represents an attempt to provide the information that each and every one of the parties having concern with milk requires and should possess—the producer, the distributor, the retailer, the bacteriologist, the chemist, the veterinary surgeon, the medical officer of health, the sanitary inspector, and, last, but not least, the consumer. That there appeared to the authors to be a need for a volume in which these individuals should be catered for side by side accounts for its existence. The work entailed in the production of the book must have been considerable and appears to have been well and conscientiously done, and as a reference book at least for those for whom it is intended the volume is sure to be found useful and is one to be recommended.

The Health Service in America Condoles.

The reason no doubt why the American Public Health Association had the very kindly and sympathetic thought of making communication to the Royal Sanitary Institute in the form of this cablegram—"The American Public Health Association extends to the Royal Sanitary Institute sincere condolences on the passing of His Majesty King George"—was because of the well-known fact that his late Majesty throughout his reign had been Patron of the Institute. Whatever the reason, however, there will be in the mind of everyone in the public health service a feeling of real gratification that the Association should have felt impelled to express sympathy and to show that they and their fellows in the public health service in the British Empire were at one in deploring the loss of a monarch who very consistently had been sincerely and deeply concerned to secure the health and welfare of his people. P.

* London: H. K. Lewis & Co., Ltd. Price 21s. net.

The Inspection of Canned Foods.

By CHARLES F. WHITE, M.D., D.P.H., Medical Officer of Health, Port of London.

Very practical and offering guidance in the procedure to be adopted in the case of that bugbear of food inspection, "the suspicious can," this paper, which was accompanied by a most useful and interesting demonstration of sound and unsound and doubtful specimens, received at the meeting of the Metropolitan Branch on January 10th, 1936, at which it was read, an extremely cordial reception.

IN opening this discussion, I propose to deal with the subject purely from the practical aspect. Savage and others have carried out very interesting and important investigations into the bacteriology of canned foods, but I am afraid that they have weakened the confidence of the food inspector in the ordinary methods of examination without suggesting any other equally practicable but more reliable way of deciding what to pass and what to reject. Broadly speaking, the bacteriologists say that when an inspector passes a can of food he is nearly always right; when he rejects one he is very often wrong, but, short of bacteriological examination, they cannot themselves be certain that any particular rejection was unjustified. Indeed, I regret that, in Dr. Savage's reports, the words "wrong" and "unjustified" have been used in regard to the food inspectors' judgment, for, since it is their business to protect the public to the best of their ability with the means at their disposal, they were "right" and "justified" in refusing to pass for human consumption canned foods the soundness of which they had any reason to doubt.

The chemists, too, have done valuable work and they have given us the "hydrogen swell," which is really rather a mixed blessing because, though it affords a satisfactory explanation of blowing in some, indeed, many cases, we cannot confirm the diagnosis without opening the can.

I do not wish to disparage the work of the bacteriologists or the chemists but I do suggest that up to the present time it has been of more use to the canners than to the food inspectors. Originally the canner worked empirically, now he works scientifically, but he has not altered his criteria of soundness of his product, and I am going to suggest that his criteria should continue to be ours. What the good canner aims at is the commercial sterilisation of the food and the obtaining and maintaining of a good vacuum in the container. I use the term

"commercial sterilisation" because, though the canner used to think he got absolute sterilisation, we now know that he does not, and indeed that, with certain foods, he could not, without using a degree of heat or a period of heating which would make his product unmarketable. By commercial sterilisation is meant such degree of heating as is necessary to prevent the development of bacterial spoilage of the food under the conditions in the container. It is, indeed, the failure to obtain absolute sterilisation that makes the maintenance of a good vacuum so important.

If we adopt these criteria we shall not go far wrong; we may occasionally be tripped up by the survival of the toxins of food poisoning organisms of the salmonella group, but we have no means of safeguarding ourselves against that contingency.

Nevertheless, having decided to adopt the good canners' own criteria, let us stick to them through thick and thin. Let us not be put off by the suggestion that "though the can is all wrong the food is all right." We know that it is practicable to market in this country canned foods of all kinds from all parts of the world in such condition that they do not occasion the slightest anxiety to the most careful food inspector. If cans give rise to suspicion as to the soundness of the contents there is something wrong somewhere; either in the nature, quality or condition of the product canned or in the quality of the can or in the process of canning or in the subsequent transport and storage, and the obligation is on the manufacturers and merchants to ascertain what is wrong and to correct it, stimulated by the certain knowledge that they will not be allowed to sell their unsatisfactory cans for human consumption and that their product will remain suspect and, therefore, subject to special examination, until they have established a reputation for reliability. By adopting this standard we are not in danger of prejudicing the nutrition of any section of the community; by departing

from it we shall put the food inspector in an impossible position, we shall put the careful, expert canner at a disadvantage in competition with the careless, inexperienced one and, sooner or later, we shall be badly let down.

I have a number of cans to show you, but before I deal with them I want to refer to a few special points; first of all, the production and maintenance of a good vacuum. The canner has long recognised the importance of reducing to a minimum the amount of air enclosed in the can, whether in the liquid or solid contents or in the head space. This is usually achieved by passing the filled, unsealed cans through an exhaust box where the contents are heated by steam. The cans are immediately sealed with the result that the contraction of the food and of the remaining air and the condensation of steam, on cooling, create a partial vacuum. The degree of vacuum depends, of course, on the temperature at which the cans are sealed; thus sealing at 200° F. will give 16.5 inches of vacuum, while sealing at 70° F. will give only 1 inch. A well-exhausted can shows 8 inches or more of vacuum when the can is cold. Some products, particularly meat, are sealed in a vacuum chamber in which 20 to 25 inches of vacuum are obtained by an exhaust pump.

The food inspector, therefore, has the right to expect a negative pressure in every can and if there is no vacuum he can conclude that either air has leaked in or there has been gas production inside. There is never any difficulty with the obviously blown tin with the ends definitely convex and as tight as a drum; but loss of vacuum is progressive and the tightly-blown tin has gone through the stages from a negative pressure of, say 8 inches, through the neutral point to slight positive and on to strongly positive pressure. No doubt the merchant gets away with practically all his cans which have a negative pressure of any degree, but it is when the can has reached the neutral point or is in the early positive stages that there is argument. For this condition the merchant has a number of terms such as "springer," "flipper," "puffy can" and "slack cap," and he considers that he is entitled to market the cans, albeit at a reduced price. He talks of the cap being slightly too big for the can and of overfilling. The former excuse may be valid in a very small number of cases, though I doubt it, and in any case the condition would then be uniform throughout the consignment. The term overfilling is really misleading. You cannot really overfill a can,

for you cannot put a quart into a pint pot. What the term really means is that sufficient head space has not been left to allow for a small amount of gas to be generated without obvious loss of vacuum.

The food inspector should, therefore, look upon these "springers," "flippers," "puffy cans," "slack caps" and "overfilled" cans as early stages of blowing and should deal with them on the principle that a "blown can is a bad can." When the pressure in a can has been slightly positive I have often pierced the can, or slightly opened it with a key, under water. The demonstration of bubbles rising to the surface of the water has settled the argument.

A loss of vacuum without the development of positive pressure may, of course, be due to a leak which may be very small and even be temporarily sealed by the contents. It seems to me obvious, therefore, that we should regard loss of vacuum as justifying rejection.

Now we must consider our great bugbear, the "hydrogen swell." As you know, the majority of canned foodstuffs tend to attack the iron and tin of which the can is made, but this is particularly the case with certain fruits of low acidity. Apparently it is very difficult to get an absolutely uniform coating of tin on the sheet iron and there are, almost inevitably, some minute points where the iron is not covered. Moreover, the tin coating is liable to damage in the making of the container and in the great and sudden changes of pressure in the processing and subsequent cooling of the filled and sealed cans. Where there is the slightest defect in the continuity of the tin coating a tin-iron couple is formed in the presence of an electrolyte, resulting in corrosion of the metal and the production of hydrogen. The activity with which this electrolytic action proceeds depends on whether depolarising agents are present. This is another reason for obtaining a good vacuum and, therefore, a minimum of oxygen in the tin. Certain fruit pigments (anthocyanins) act as depolarisers and, therefore, such fruits as cherries, bilberries, blackberries, raspberries, plums, etc., are particularly liable to give trouble. Lacquering of the inside of the cans curiously enough increases liability to the formation of hydrogen swells. It is impossible to get an absolutely unbroken coating of lacquer and apparently the action is concentrated at the exposed spots and there is grave danger of perforation of the can.

The temperature of storage is also important,

the action being very much retarded if the cans are kept cool. Time, too, is a factor and we probably should not see much of hydrogen swells if all canned fruits were consumed within a year of packing.

The whole subject is very fully dealt with by Morris and Bryan, of the Cambridge Low Temperature Research Station in Special Report No. 40 of the Department of Scientific and Industrial Research ("The Corrosion of the Tin-Plate Container by Food Products") to which I would direct the attention of those who are specially interested. What we are concerned with at the moment is the action we should take in regard to hydrogen swells. It must be admitted that the contents of the can are not likely to be injurious to health, for only in exceptional cases will there be a really serious degree of contamination of the food with tin; but, on the other hand, we cannot be sure that a blown tin is a hydrogen swell without opening it and examining the contents, and I do not consider that, if we find on examination that one blown tin is a hydrogen swell, we are justified in concluding that every other blown tin in the consignment is blown for that reason and that reason alone. Again, the contents are more or less deteriorated, the conditions varying from softness and loss of colour of the solids and opalescence of the syrup to complete disintegration of the food, and the consumer is not getting the product in the really sound condition he is entitled to expect. Further, everybody who is responsible for opening a can of food should know that a blown can is a potentially dangerous can. If we say that hydrogen swells are harmless and allow them to go into consumption, we cannot expect the housewife to appreciate the difference between blowing from this cause and blowing from a bacterial cause, and she may well get the idea that, after all, she need not worry if the can she is about to open is bulging at the ends though, of course, she would be rather discouraged by a shower bath of fruit juice.

It has been suggested that we should allow hydrogen swells to be vented and re-sealed. To that I would reply that apart from the uncertainty as to the cause of blowing, the can will certainly blow again unless it goes into consumption very quickly, but worst of all, once we admit the legality of venting blown tins, where is it going to stop and how are we to know when, where and under what circumstances it has been done? If we permit this, why should not the retailer, going through his stock

of canned goods and finding some blown, just vent them and re-seal them? No, the canner must solve his own problem by either discovering how to prevent hydrogen swells or arranging for such conditions and time of storage as will ensure his product being retailed before symptoms of blowing are apparent or discontinuing the canning of foods which are particularly prone to develop this trouble, for after all they are mainly luxury, rather than essential, foods.

For our part, we must stick rigidly to the principle that a blown can is a bad can, and in support of this I would quote from the report on the "Corrosion of the Tin-Plate Container by Food Products" to which I have referred above. On the very first page of the introduction occurs the following sentence: "The contents of such cans are not necessarily harmful but, since bulging may also be due to bacteria or yeasts, they present a risk which no buyer is justified in taking."

Another point in the inspection of canned food to which very close attention should be given is the "repaired" or "re-soldered" can. It is true that a leak may be detected at the time of packing and be dealt with on the spot, but how are we to know when and where a leak has been repaired? Again, in regard to soldered vents, the majority of foodstuffs are now put up in sanitary cap cans in which the lid is fitted on the exhausted can by a double-seamer machine, no solder being used and no vent being required. A soldered vent in such a can would occasion suspicion, and so would more than one vent in the hole and cap type of can. Though this may occasionally be done at the time of packing, I personally feel that we are justified in taking exception to a can when we have reason to suspect that the original sealing has been broken, even if the contents have been re-processed subsequently.

If a can is blown, the contents should not be allowed to go for human consumption in any form. There is, I believe, some lack of uniformity in dealing with blown tins of fruit pulp, which, I understand, are in some districts allowed to go for jam-making on the grounds that the pulp will be boiled and any bacteria or yeasts killed and fermentation stopped. This seems to me quite wrong practice. In the first place, there may be, and often is, very extensive detinning of the cans and the dissolved tin will go into the jam; in the second place, the contents are unsound and, in the third place,

if the canner and the merchant can have blown cans for jam-making, why should they go to the trouble and expense of preparing and packing their product in such a way that it will not blow before it is used? Surely the good canner, as well as the general public, might reasonably complain if we permit blown cans of fruit or pulp to be used in the manufacture of jam.

I understand that it is the practice of some food inspectors to return blown cans to the cases when the proportion of unsound cans is not sufficient to warrant a complete examination of the consignment, the argument being that, since the decision on the sample examination is that the whole consignment is to be passed, none of the cans should be removed. While I admit that there would be, in the unexamined portion of the consignment, a proportion of unsound cans approximately equal to that in the sample examined, and, therefore, a few unsound cans are being allowed to go forward, I hold very strongly that such unsound cans as actually come under the notice of the food inspector should be removed and condemned.

So far I have only dealt with one or two special points in regard to the external inspection of canned foods, but even when cans appear to be quite sound we ought to have the contents examined from time to time for metallic contamination and the presence of prohibited colouring matters and preservatives.

You all know the trouble there has been with lead in Portuguese sardines. The highest figure we have had in the Port of London is 78 parts of lead per million, and amounts over 20 parts per million were not infrequent. It is noteworthy that considerable variation has been found in the degree of contamination of the contents of different tins from the same consignment, and, therefore, we always take at least six tins from different cases. I believe that the contamination is mainly derived, not from the tin-plate containers or the solder with which they are sealed, but from the grills in which the Portuguese steam the fish. These grills are made of iron wire and were coated with solder containing a very high proportion of lead. Sixteen consignments representing nearly 150,000 tins of sardines were rejected and returned to the packers under guarantee that they would not be re-shipped to this country, and the packers have now been recommended to coat the grills with pure tin. Recent consignments have been very much more satisfactory, though the degree of lead

contamination has not yet been reduced to the minimum. French sardines are not cooked in the same way, and a solder containing very little lead is used for sealing the cans, consequently they have given us no trouble.

We have found lead in smaller quantities in a number of other canned products, for example, tunny fish 13 parts per million, pâté de foie gras 10 parts per million, anchovies 8 parts per million, peeled shrimps 7 parts per million, crab paste 6 parts per million.

Merchants have argued that the amount of lead in sardines is not dangerous to health, and have told me how many tins of sardines they themselves have eaten, but when it is pointed out to them that lead is a cumulative poison, that much damage may be done before definite symptoms of poisoning can be diagnosed and that the trouble is not just the quantity ingested in sardines but the many small doses from many different sources, they see our point of view and are anxious to know what steps can be taken to eliminate lead from their products.

A year or two ago I came across sample consignments of anchovy paste and mustard paste put up in collapsible tubes just like tooth paste. The former was found to contain 8 parts of lead per million and the latter 2 parts per million. I wrote to the importer and told him it was a most undesirable way of putting up foodstuffs, and I have not seen any more of it.

Tin is another metal we must watch. In the report of the Local Government Board of 1908, Buchanan and Schryver said: "It seems clear that, in any kind of canned foods, quantities of tin approximating to 2 grains to the pound are not only unusual and unnecessary but also must be regarded with grave suspicion in consequence of the risk of irritant action of the tin they contain," and in his Annual Report for 1934, the Chief Medical Officer of the Ministry of Health, after referring to the foregoing expression of opinion, says: "It would seem that this recommendation is amply justified, and that anything in excess of this limit is not only evidence of bad practice in canning or storing the goods, but is also undesirable on grounds of health."

We have had a good deal of trouble with tin in canned sild from Norway and have found as much as 5.4 grains of tin per pound. In some cases the containers were almost completely de-tinned, the fish actually sticking to the inside of the can.

In this connection I may mention that Norwegian brisling and shrimps have recently arrived in aluminium containers and have subsequently developed into hydrogen swells.

Prohibited preservatives have been found in canned hors d'œuvres from Sweden, *e.g.*, Koster Sills tit-bits in Madeira sauce; Koster tit-bits; Lukas herring tit-bits in onion sauce; fish rolls in lobster sauce; Kron anchovies; Pary herrings; herring tit-bits in Worcester sauce; Sport kaviar; smoked sealachs and sliced smoked salmon, all contained either boric, benzoic or salicylic acid.

In conclusion, I hope I have not created the impression that I am always suspicious of canned foods and that, therefore, I am suggesting unreasonable standards for inspectors. On the contrary, I have the greatest admiration for the scientific and technical skill with which the

canning industry has overcome many and difficult problems. Being principally concerned with imports I have no first-hand knowledge of English canning, but I can certainly say that the canned foods from North America maintain a uniformly high standard. Some continental countries have not, in my opinion, yet reached such perfection, and it is for the most part their products which we have to watch so carefully. The best canners have set a high standard and we owe it to them, as well as to the consumers in this country, to see that only thoroughly sound and reliable canned foods are offered for sale. So far as we are concerned the consumer must have the benefit of the doubt every time and if we all work on this principle we shall have no difficulty; but, if anyone weakens, the rest of us will find it so much harder to hold our ground.

THE Annual Charities Register and Digest for 1936 fully maintains the high standard reached by this important work of reference in other years. For detailed information regarding charitable organisations and institutions there is no more reliable and up-to-date guide, and with its excellent arrangement of contents and carefully prepared index it will continue to prove invaluable to officers of the public health department. The volume is published by Messrs. Longmans, Green & Co., Ltd., 39, Paternoster Row, London, E.C.4, and the price is 8s. 6d. net.

A LEAFLET recently issued by the Air Ministry (Meteorological Office) discusses the incidence of sunshine in regard to the percentage frequency of days with (a) no sunshine, (b) more than three hours, (c) more than six hours, (d) more than nine hours, (e) more than half the possible duration. Data in the first four categories are given for 18 stations, and in the fifth category for six selected stations. The results show that at most stations about half the days throughout the year have more than three hours of sunshine, and that in May, June and July about half the days have more than six hours. At Kew Observatory the frequency of days with more than half the possible sunshine varies from 11 per cent. in December to 41 per cent. in May. Copies of the publication (*Professional Notes*, No. 69) may be obtained from H.M. Stationery Office, price 3d. net.

THE Board of Control has recently issued a list (revised to December 1st, 1935) of state institution, certified institutions, certified houses and approved homes for mental defectives in England and Wales. Copies may be obtained from H.M. Stationery Office, price 1s. 6d. each, postage extra.

"THE Housing Problem: How Planned Distribution may Prevent Crowding" is the title of a discussion to be opened by Sir Raymond Unwin, F.R.I.B.A., at a meeting of the Royal Sanitary Institute to be held on Tuesday, March 10th, 1936, at 5.30 p.m., at 90, Buckingham Palace Road, London, S.W.1.

A SESSIONAL meeting of the Royal Sanitary Institute will be held at Bath on Friday and Saturday, February 14th and 15th, 1936. On Friday, at 4.15 p.m., at the Pump Room, tea at the invitation of the Corporation will be taken, followed at 5 p.m. by papers dealing with water supply by Mr. F. P. Sissons, City Engineer, Bath, and smoke abatement in non-industrial areas by Mr. Tyler, Chief Sanitary Inspector, Bath. On Saturday, visits will be made to a reservoir, pumping station and chlorinating plant, and to the new isolation hospital and a Grade "A" (T.T.) dairy farm. Dr. James F. Blackett, Medical Officer of Health, Bath, is acting as Hon. Local Secretary of the meeting.

The Society. Reports, Proceedings and Announcements.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.
Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of this Branch was held in the Education Offices, Calverley Street, Leeds, on December 20th, 1935. The President occupied the chair and was supported by fifteen members.

Dr. L. Pickering Pick was unanimously elected a Vice-President in place of Dr. J. A. Scott, who had resigned his office on his transfer to another Branch.

Correspondence was submitted from the Evans' Biological Institute offering to exhibit a film dealing with the production of antitoxins, prophylactics and vaccine lymph, and it was decided that the offer be accepted and that the President make the necessary arrangements.

Dr. E. E. S. J. Galbraith had written thanking the Branch for proposing him for election as a fully-paid Life Member of the Society.

Dr. M. M. McDowall, Assistant Medical Officer of Health (Maternity and Child Welfare), Halifax, gave an address on "**Some Preventive Aspects of Midwifery**," in which she stated that maternal mortality could be divided into two groups: (1) diseases of pregnancy, labour and the puerperal state; (2) sepsis from all causes. Figures from the returns of the Registrar-General of England and Wales, 1925-29, showed that the ratio of sepsis to other diseases was 1.6 to 2.59. Woodbury, of the United States had found that sepsis accounted for 40 per cent. of cases. Other diseases were a contributing factor in sepsis.

The five major causes of death were as follows:

	Per cent.
Incidental diseases	20
Toxæmia	20
Hæmorrhage	15
Trauma and shock	15
Sepsis	30

Each of these mortality groups was discussed and the major factors contributing to death were emphasised in each. The influence on the septic rate, of incidental disease and puerperal disease, was also discussed. In relation to the above rates a plea for adequate medical ante-natal care was made. It was shown that ante-natal care in the best maternity hospitals in the country reduced the mortality rate very

considerably. The mortality rates between booked and emergency cases showed a marked difference. It was also indicated that, in each of the five groups, under the best obstetric supervision the mortality rates were lowered to almost nil. It was emphasised that not only ante-natal care but intra-natal care was necessary under medical supervision if the best results in midwifery were to be obtained.

An interesting discussion, in which practically every member present took part, followed. At the close the President cordially thanked Dr. McDowall for her very informative and useful address.

THE HOME COUNTIES BRANCH.

President: Dr. A. W. Forrest, M.O.H., Leyton.
Hon. Secretary: Dr. R. P. Garrow, M.O.H., Hornsey.

A meeting of this Branch was held at the house of the Society on December 6th, 1935, the President occupying the chair. Twenty-one members were present.

Dr. E. H. T. Nash delivered a lecture on the "**Heston and Isleworth Orthodontic Scheme**." He referred to the importance of orthodontic work and the desirability of local authorities providing facilities for orthodontic treatment as an integral part of the dental treatment given in connection with maternity and child welfare schemes and the school medical service. After describing the pioneer work of the Heston and Isleworth special orthodontic clinic, the organisation of the scheme, and the advisability of having the treatment supervised by a special orthodontic consultant, Dr. Nash exhibited a most interesting and instructive collection of orthodontic appliances and models. The models, being actual plaster casts of both jaws taken before and after treatment, were keenly and critically examined by members of the Branch and the dental experts present. The models provided indubitable proof of the effect of orthodontic treatment in converting ugly, deformed and ineffective sets of teeth into pleasant looking and effective masticating machines. This was followed by a demonstration of orthodontic cases—children who had been, or were being, treated at the Heston and Isleworth orthodontic clinic. The mothers of

the children were also present, and they were able to furnish eloquent and grateful testimony regarding the marked improvement which they had noticed in the health and appearance of their children as the result of treatment.

A discussion ensued in which the following took part:—Dr. Ralph Williams (Board of Education), Dr. R. Weaver (Board of Education), Mr. Pilbeam (Senior Dental Surgeon, Croydon), Dr. M. Barker (Medical Officer of Health, East Ham), Mr. Webster (Senior Dental Surgeon, Hendon), and Dr. A. T. W. Powell (Medical Officer of Health, Walthamstow).

A hearty vote of thanks was accorded to Dr. Nash for his lucid and stimulating lecture, and for his carefully arranged demonstrations of patients, models and appliances.

THE MIDLAND BRANCH.

President: Dr. P. G. Horsburgh, M.O.H., Nuneaton.

Hon. Secretary: Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

The third meeting of the session of this Branch was held at the Medical Institute, 154, Great Charles Street, Birmingham, on December 5th, 1935. In the absence of the President the chair was taken by the President-Elect, Dr. A. Massey. Twenty-nine members were present.

The Hon. Secretary reported that the Council of the Society had requested the observations of the Branch on the scheme for a municipal midwifery service prepared by the Joint Council of Midwifery. It was resolved that a special meeting of the Branch be held in January to discuss these proposals, the date of such meeting to be decided by the President.

A discussion took place on "**Rheumatism in Childhood**," the two chief speakers being Dr. K. D. Wilkinson, O.B.E., Professor of Therapeutics in the University of Birmingham, and Dr. W. Carey Smallwood.

Dr. Wilkinson said that acute rheumatism was essentially an illness of childhood and that it was a class disease as well as a type disease. The name given to it was misleading because it was seldom acute and rarely affected the joints. Its most serious manifestation was carditis. Although difficult to detect in the early stages, an old rheumatic carditis was very easily recognisable in later life. For the prompt detection of acute rheumatism a medical man must be a good clinician, accustomed to

examining children both in health and in disease. Dr. Wilkinson described various modes of onset of the disease, distinguishing the type with malaise, anorexia and listlessness, a type in which the nervous symptoms predominated and which generally went on to chorea; a type in which the cardiac signs and symptoms were the outstanding features, and other types which were ushered in by sore throats or by pains in various parts of the body. He stated that it was difficult to estimate the severity of the cardiac damage because the young heart was capable of astonishing recovery if properly rested. The degree of damage depended upon the extent of the temporary disturbance of the heart and the amount of permanent change produced in that organ. Early enlargement of the heart was indicative of an old lesion whilst diastolic murmurs meant permanent damage. The differential diagnosis from functional irregularity or congenital disease often presented difficulties and might require the use of X-rays and the electro-cardiograph as well as expert clinical knowledge. The treatment of acute rheumatism was extremely simple and consisted primarily of mental and bodily rest until all acute inflammation had subsided, followed by a very gradual return to activities. He was in the habit of prescribing three months' complete rest for a slight case, six months for one where endocarditis had been present, and one year if symptoms of pericarditis had been found. The return to activity must be gradual and must be made under supervision. Re-assurance and encouragement were needed and the spirit of competition should at all costs be avoided. The future careers of these children required to be planned on the assumption that they would be more suited as brain workers than manual workers.

Dr. Smallwood confined his remarks to the work of the Baskerville School Colony for convalescent rheumatic children, conducted under the auspices of the Birmingham Education Committee, but closely linked up with the Birmingham Children's Hospital and Moseley Hall Convalescent Home. He said that a rheumatic clinic should be primarily a hospital and that the educational work in it should be of secondary importance. It was necessary to accustom the children at a colony to a sedentary life because they spent most of their time resting. On admission they were grouped into four classes. The first class were in bed or lying on stretchers practically the entire twenty-

four hours. As they progressed they were allowed a short easy walk, first of ten minutes' duration, but increasing to thirty or forty minutes as they were promoted to another class. The highest class of all were allowed to do a little light manual work. Every case was reviewed once a month but the first signs of any recrudescence were a signal for transfer back to hospital. The length of stay at the colony varied from eight months to two years. Dr. Smallwood also dealt with the risks of herding rheumatic children together, including the dangers of epidemics of sore throat followed by a fresh attack of carditis. He did not consider it advisable to establish a colony for rheumatic children unless provision was made for adequate isolation in order that cases of sore throat or other infection could be promptly removed from the ordinary wards. In selecting cases for a colony of the Baskerville type the aim should be to obtain children recovering from their first attack of acute carditis and especially those whose home environment was unsatisfactory. The function of such a colony was to treat a recent carditis and not an old mitral stenosis.

Several members took part in the discussion which followed these two addresses, and a large number of questions were asked, particularly in relation to the ætiology, causation and predisposing factors of acute rheumatism. In his reply Dr. Wilkinson expressed the view that acute rheumatism was undoubtedly a disease of the poorer child and that it was predisposed to by anything which tended to depress the vitality of the child. He was convinced that there was a rheumatic type of child which could readily be picked out by the expert. An acute carditis in a child definitely indicated rheumatism for there was no other disease of children which affected the heart in the same way. Carditis arising during the course of scarlet fever was rheumatic carditis.

In dealing with the question of streptococcal infections of the throat in the ætiology of rheumatism, Dr. Smallwood described some interesting results he had obtained from the routine swabbing of the throats of all the patients at Baskerville School and of a group of non-rheumatic children living in similar environmental conditions at a residential open-air school in Birmingham. In each group hæmolytic streptococci were isolated from the throats of more than 90 per cent. of the cases, and it was suggested that infection with the hæmolytic

streptococcus did not fully explain the rheumatic infection.

On the proposition of Dr. Auden, seconded by the Hon. Secretary, a hearty vote of thanks was given to the two chief speakers for their most interesting contributions. It was generally agreed that this was one of the most successful clinical afternoons that had been held by the Midland Branch.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

A short post-graduate course on the psychology of childhood was held by this Group on Saturday and Sunday, December 7th and 8th, 1935, at the Institute of Medical Psychology, London. Over fifty members attended, and it was the general opinion that the course was one of the most interesting ever arranged by the Group.

Summaries of the papers contributed are set out below:—

The Physiological and Temperamental Conditions in the Psychological Disorders of Early Childhood. By Dr. FRANCIS C. ROLES, Consultant Pædiatrician, Institute of Medical Psychology.

In the study of the period of early childhood, it is necessary to take the individual not only in terms of its heredity through at least two generations and of the influences to which it may be subjected during pregnancy and birth. It is also necessary to watch in continuity the gradual moulding of hereditary raw material by environmental influences. It is only in this way that we can attempt to acquire knowledge relating to "type" or "constitution," which after all largely determines the widely different reactions of individuals.

What is expressed by that difficult word "temperament," contains both physiological and psychological components, interdependent to a degree which is not commonly realised. The child with adenoids who is whining and difficult to teach becomes co-operative and happy when its airway is improved. Work at this Institute reveals every week striking examples. A boy of eight years was labelled delinquent for stealing. Questioning here

showed that he always stole sweets, which he consumed with insatiable voracity.

His sella turcica, X-rayed on account of this common symptom of pituitary dysfunction, was found to be walled-in with bone and greatly reduced in size. Measurements of the proportions of his skeleton showed alterations which commonly accompany one form of pituitary infantilism.

Both the physiological and psychological have derived partly from hereditary influences. The work which has been done in the past few years on genes all over the world has revealed their influence, not only on physical characters such as eye colour or liability to disease, but also intelligence and type of memory, and the tendency to develop talents, habits and emotional reactions. What is transmitted is not the finished product but the capacity to develop traits resembling members of family stock. A girl of 12 was sent up because she felt sick in school. Her mother, equally emotional, told me that she herself and the female members of her family always felt sick in a crisis, though she had been careful not to let the girl know this. Those of her children who "took after the father"—a stolid man—had no sickness. The environmental factor, the school, was brought in by the girl having been upset by seeing a school maid very sick in her class during her first term.

Since what is fixed by heredity is capable of very little modification, treatment must be directed towards that which is acquired and changeable. In this example though, it will prove impossible to alter the girl's tendency to sickness under emotional stress; it is her attitude to school which can be affected.

The lecturer then briefly sketched the stages of development in the new-born child. At first, its responses to external stimuli by one of half a dozen stereotype reflex actions. On acquiring the power of sitting-up, and later of independent movement, a wide field of new impressions is introduced and the child is actively concerned with "conditioning" or training his motor responses. What chance reveals to be pleasant persists and what is accompanied by pain is stopped at once. While it is at this stage morbid habits are so easily formed, yet the intelligent mother has unlimited opportunities by methods of so-called "suggestion" and "contra-suggestion." How many of us have fads which result from wrongly applied pressure to eat or not to eat certain foods?

The treatment of such morbid habits as stridulous breathing, breath holding, rumination, masturbation, enuresis, etc., was discussed along the above lines. Pathological cases are those in which rigid fixation occurs early, and the material is incapable of being moulded by environment to a normal adult.

Since facts and observations must be calculated before any theory can be formed, the lecturer asked those doctors who were interested to send cases to the Institute for investigation by Dr. Hamilton Pearson and the other physicians in the children's department.

Principles of Training and Parenthood. By Dr. ALICE HUTCHISON, Physician, Children's Department, Institute of Medical Psychology.

The first thought in considering the lines of normal development in children is that every child should be desired. A certain number of undesired children succeed in creating desire and love for themselves within a few weeks; the development of those who fail to do this suffers. The ideal motive behind the desire should be the wish to create and to follow up the creation by giving the child freedom to develop his own personality and to take his place in the world. There is then no suggestion of making claims upon the child. Adopted children are expected to satisfy claims to a far greater extent than other children. They must relieve loneliness, restore a sense of manhood or womanhood, or become a suitable companion for an only child. Desire alone for the child is inadequate. Throughout life the child stands in need of an understanding love. This love should not stop short at the satisfying of his physical needs; it should regard as essential a bond of confidence and should be aware of the child's need to be understood. To a child given such love, especially in the crises, small and large, of his life, the risk of harmful repression is at least greatly diminished, so increasing the chances of mental health.

Bearing in mind that impulses are present in every baby from birth, *e.g.*, desire for self-assertion, curiosity, pugnacity, sex, acquisitiveness, etc., the path of the educator lies in giving opportunity for their expression, at the same time so dealing with the child that little by little he takes over guiding control himself, arriving gradually at sane repression combined with self-expression. In dealing with the child's impulses we produce emotional reactions, helpful or unhelpful, in the form of anxiety, fear and guilt, which we believe to be ready for

action at birth. Primitive fear exists to enable us to escape from danger, while anxiety exercises a restraining effect upon confidence, leading to more cautious and considered action. Normal fear and anxiety should cease when the situation provoking them has come to an end. But in psychological problems we are faced with pathological anxiety and fear which seem to serve no useful purpose and sap vitality.

In considering discipline it must be remembered that the root of the word is "disciple," and as such it is a process of education of the child in the use and control of his impulses. So that obedience is brought into line as an educative process and not as a means of upholding the status of the educator. Control and authority we must have, for without them children feel insecure. Direct control must be exercised in certain situations, *e.g.*, danger, but the more indirect control is used, the better are the results. The latter can be exercised by the diversion of energy into a fresh channel, by the substitution of one activity for another. A status has to be maintained which does not brook defiance. Nothing interests children so much as our reactions to their behaviour, and they provoke these reactions in greater and greater measure. The child becomes increasingly difficult, is thrown into a state of anxiety and insecurity, and provokes irritability in his parents to such a degree that in the end he doubts the existence of parental love.

It is necessary first to experience a satisfying mother-child relationship before the child is capable of breaking away and achieving complete independence of thought and action. A mother-tied individual is prone to experience anxiety and a sense of insecurity, as a swimmer who never strikes out from shore; whatever his age the relationship with his parent is unhappy. Children may develop symptoms which can be understood in terms of hereditary tendencies and which, either from their inherent strength or from the child's environment, have been intensified. They may be roughly divided into three groups:—

(1) Aggressive and sensation mongering; children who, figuratively speaking, throw all their cards on the table.

(2) Regression to a childish level, or failure to emerge from level to level of development, *e.g.*, temper tantrums (normal at three years of age) at ten years of age or later.

(3) Fears and withdrawals (withdrawals from painful and difficult situations). Such a child retreats into phantasy which far exceeds the

amount necessary and normal to its development.

The situations presented to us have to be unravelled and dealt with constructively, so that the end-result for the child is a way of life in which he is happy and self-reliant, with a large capacity to resist and rebel when resistance and rebellion are called for.

The Recognition of the Psychological Disorders of Children.—By Dr. EMANUEL MILLER, Physician, Institute of Medical Psychology.

Neurosis in childhood cannot be obtained solely from the actual symptoms of a neurosis, or from the outward characteristics of a behaviour disorder. We must take into account certain minor peculiarities which serve as indicators of abnormalities in emotional and intellectual development. In looking into a child's intellectual development we must assess not only its inborn capacities but also those disturbances in intelligence which are due to an absence for the zest for learning which may be the results of emotional conflict.

It must be clearly realised that there are certain children who cannot tolerate the frustration of their instinctual needs. The desire for love, even the monopoly of love, may be the root cause of the larger number of neurotic disturbances. Many children interpret frustration, not as the very condition of reality, but as punitive measures directed against them for offending against an actual or imagined adult prohibition.

The early sexual development of the child, while not a universal factor in neurosis formation, cannot be excluded. The following indications of neurosis over and above the manifest symptoms and behaviour disorders should be looked for:—In the very young, lack of capacity to play; lack of curiosity in manual operations; inability to receive gifts or to be satisfied with those given; inhibition of questioning and excessive questioning; excessive goodness, *i.e.*, an excessive adaptation to the requirements of adult standards of behaviour; indifference and shyness in social contacts; attitudes of saintly renunciation; repeated physical incapacity without clear evidence of physiological and structural disorders; secret phantasy play.

The Treatment of Disorders of Childhood through Play, including Drawing and Allied Activities.—By Dr. EMANUEL MILLER.

In young children, it is impossible to make a direct exposure of the neurosis by means of questioning or the adult types of psychotherapy. We must get the child to speak a

language which is nearer its unconscious mental life; in other words, we are obliged to study its imaginative life as exhibited in play and drawing. These will reveal the underlying needs and interest and frustrations in the same way as analysis uncovers the conflicts in the adult neurotic. Play therapy makes clear the nature of a child's anxiety, the extent of its obsessional tendencies, the degree of inhibition of intelligence and the extent to which character peculiarities are indicators of psychosis rather than neurosis. Play and drawing are the languages of childhood and through them, particularly the former in relation to the therapist, the child's relationships to its parents are made clear. It is important to provide such a variety of play material as will stimulate the child to disclose his interest in his world and his pre-occupation with primitive needs and functions. It is, therefore, necessary to have material which is undifferentiated or primitive, such as clay, sand, water and paste; bricks for the construction of houses and little worlds, and miniature figures to people the world on the basis of a child's phantasy.

The therapist is in duty bound to study the child's reaction to himself or herself as parent substitute. It is necessary not only to come down to the child's level and to allow it to appreciate that one understands its needs, but to understand when a child finds it impossible to play freely because it is afraid of the free expression of its own impulses; it is not enough to condone and to legalise its play but to understand when the child is afraid of its own freedom.

Children's drawings are a special way of expressing phantasy. The rôle of the therapist is to play from time to time the part of good or bad parent, to recognise the nature of impulsive behaviour, to recognise the guilt expiation ritual of obsessive play, and to give the child, not only a feeling of legalised freedom but to get it to understand its own feelings of insecurity.

The Psychology of Breast Feeding.—By Dr. GRACE S. CALVER, Physician, Children's Department, Institute of Medical Psychology.

In addition to the physical difficulties of breast feeding, such as the retraction of the nipple, there are many difficulties of a psychological kind, and these may be on the part of the child or of the mother. Amongst the most common in the infant is the sense of anxiety; for if a child is in a state of anxiety it may not feed, or if it does feed it will not digest its food owing to the disturbance of gastric secretions. The fear of the father, of noisy brothers and

sisters, of the mother herself, who may be irritable or in a hurry, may produce this effect. Anger in the infant has the same effect, which may come from similar causes and has the same physiological result. The lack of sensuous pleasure is another cause of lack of satisfactory feeding, since such sensuous pleasure normally encourages the function of feeding, and the digestion. On the mother's side there is the frigidity or indifference which discourages the child; there is, on the other hand, the over-sensuous mother who over-stimulates the child; and there is the mother who is loving her child but is at the same time jealous of it. These and other factors affect the even tenor of the child's life which demands above all things the feeling of security and love.

The Origin of Psychopathological Conditions in Early Childhood.—By Dr. J. A. HADFIELD, Physician, Institute of Medical Psychology.

Almost all psychopathologists are agreed that the fundamental causes of the psychoneuroses—hysteria, obsessions, anxiety states and sex perversions—lie in early childhood. If this is the case it is only by a study of the causes of these conditions that we shall be able to prevent them in early childhood. Considering the length of treatment at present required to cure cases of psychoneuroses, the future of this science lies in the prevention of these conditions in early years.

The precipitating causes are often quite definite, and often they are important from the causation point of view, as in the traumatic cases, *e.g.*, car or train accidents. But usually they are quite insufficient to produce a permanent neurosis, *e.g.*, a woman who precipitated an anxiety state which persisted because her husband went away for the week-end the first time since their marriage. When we go to the precipitating causes in early childhood, we find the origin of psychoneuroses in specific instances in early childhood, and the most general cause is that of the deprivation of love. Every child must have safety and security, expressed in the love of its mother. If the child feels deprived of love, it is compelled to react abnormally, by depression, by anxiety, by solace in sensual gratification, by rage and anger, by self-pity, by showing off, by rebellion. These are all neurotic reactions, and these in general are the reactions which later emerge as psychoneurotic symptoms. It is, however, not mending the experience of these reactions which produces the psychoneuroses, for if left free they persist as character traits. But if they are in turn

repressed, these tendencies are arrested in favour of a more acceptable attitude, and only later do these repressed feelings emerge as psychoneurotic symptoms. An understanding of the psychopathology of these early causes may help us not to make such mistakes as to create the situation in childhood which predisposes to a later breakdown.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.

Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at the Royal Naval Anti-Gas School, Portsmouth (with the kind permission of the Commander-in-Chief) on January 10th, 1936. There was a very large attendance, representatives of the local division of the British Medical Association and of the Royal Navy, Army and Air Force being present. The President occupied the chair.

Lt.-Commander F. H. Austin, R.N. (Superintendent of the Anti-Gas School) in an introductory lecture on "**Gas Protection**," gave some interesting particulars of the various forms of gas and the appropriate anti-gas measures.

Major Stuart Blackmore, O.B.E. (Air Raids Precautions Department, Home Office) gave a lucid and informative address on "**Air Raids and Gas—A General Survey from the Medical Angle**," in which he traced the history of gas warfare from 400 B.C., when the Greeks used suffocating fumes. He described the new obligations recently imposed upon local authorities by the Air Raids Precautions Department of the Home Office, and outlined the precautionary measures necessary for safeguarding the civil population against the effects of air attack in those parts of the country which might be subject to attack by hostile aircraft. The work of preparing schemes for passive air defence, so far as the treatment of casualties was concerned, would fall mainly on medical officers of health, and it was important to have the co-operation of medical practitioners and of the various voluntary organisations in the area, *e.g.*, the British Red Cross Society and the St. John Ambulance Brigade, etc. The government had issued two air raid precautions handbooks and further handbooks were in course of preparation. A civilian gas school was about to be established, the object of which was to train

a nucleus of instructors who would be competent to train members of various air raid precautions services throughout the country.

The President briefly outlined a scheme for the treatment of casualties which he had drawn up for the City of Portsmouth. He demonstrated on a plan the alteration which would be necessary to convert an elementary school into a combined first aid and decontamination centre, together with the cost thereof.

A tour of the anti-gas school was made and Lt.-Commander Austin staged some interesting gas demonstrations. Thereafter, the party was entertained at tea and a most lively and interesting discussion followed.

On the proposition of Dr. J. A. D. Radcliffe (President of the Portsmouth Division of the British Medical Association) seconded by Dr. E. Croft Watts, a hearty vote of thanks was accorded to Major Blackmore and Lt.-Commander Austin for their interesting addresses, and to the Commander-in-Chief for his kindness in providing facilities for the meeting.

THE DENTAL OFFICERS' GROUP.

President: Grantley Smith, Esq., L.M.S.S.A., H.D.D., L.D.S., Municipal Dental Officer, Bermondsey.

Hon. Secretary: J. F. Pilbeam, Esq., L.D.S., Dental Officer, Croydon.

A meeting of this Group was held at the house of the Society on December 14th, 1935, the President occupying the chair. There was a representative gathering of members.

The President and Mr. Mason reported with regard to the conference held on November 29th, 1935, and a discussion ensued in which Messrs. Newton, Pilbeam, Rhys-Herbert and McClelland took part.

The Hon. Secretary read a letter from Dr. Grant of Toronto describing the dental service in that city, and Mr. Newton was able to give details of a visit to Toronto where he met Dr. Grant.

Mr. D. E. Mason (Senior Dental Officer, Notts. C.C.), in a paper on "**The Annual Dental Report**," explained the modifications he would like to see made in this document. Miss Radcliffe and Messrs. Matthew, Fitton, McClelland, Rhys-Herbert, Pilbeam, Taylor and Thomson took part in the discussion which followed, and a vote of thanks to Mr. Mason for his paper was accorded on the proposition of Mr. Matthew, seconded by Miss Radcliffe.

The Literature of Preventive Medicine.

Christine Murrell, M.D. Her Life and Her Work. By CHRISTOPHER ST. JOHN. London: Williams & Norgate, Ltd., 1935. pp. 133. Price 5s. net.

The late Dr. Christine Murrell had a wide circle of friends and a circle of admirers wider still. To all of these this book by Miss Christopher St. John will make instant appeal and need not be commended. To others it should be of interest because it is the life story, most sympathetically told, of a very remarkable woman: one who made history by becoming the first woman member of the General Medical Council of Great Britain and the first woman to be elected to the Council of the British Medical Association. In addition, she played a prominent part in the activities of the Medical Women's Federation, of which she was at one time President. Apart from the unique reputation she established for herself by this medico-political work, she was known as one of the ablest and most successful women general practitioners of her generation. The integrity and selflessness with which she served her profession were no less conspicuous in her services to her sex. Her death while still in her prime and with still much to do was a tremendous loss to her friends, her profession and the many causes in which she had concern. She will long be remembered, and if anything is needed to keep her memory green this book should help.

Handbook on Offensive Trades. By DAVID RONALD, M.INST.C.E., F.R.S.E., Chief Engineer, Department of Health for Scotland. London: William Hodge & Co., Ltd., 1935. pp. 204. Price 15s. net.

It may be accepted that there is a real need for an authoritative book on the offensive trades. An examination of this work by Mr. Ronald convinces that it is just exactly what is required to meet the need. Primarily, in fact, it was prepared for the use of medical officers of health, sanitary inspectors, and other local authority officials concerned in the administration of the law relating to, and the supervision of, statutory offensive businesses, and of students preparing to undertake these duties. Having regard to the position he occupies, naturally he knew what these workers wanted, how to provide it and, what is no less important, how to put it. In addition to appealing to the official group, the

book must appeal and prove useful to persons who contemplate the establishment of such businesses, and are desirous that these businesses should be carried on without causing nuisance or annoyance to their neighbours and to the satisfaction of the local authority and their officials. In the preface it is claimed that the contents of the book represent the fruitage, not only of long personal experience, but also of careful laboratory experiments covering a period of over two years and of subsequent experiments on a large scale carried out in factories through the courtesy of the owners and covering a period of three years. There is every evidence to support this claim in the book, which may be recommended with confidence.

A Manual of Practical Chemistry. By ALAN W. STEWART, D.SC., A.I.C., Director, Chemical Laboratories, Royal Institute of Public Health; Public Analyst, Boroughs of Islington and Paddington. London: John Bale, Sons & Danielsson, Ltd., 1935. pp. 121. Price 7s. 6d. net.

When a student's manual reaches its third edition it is generally safe to believe that at least it is well on its way to become an established favourite. Equally it may be concluded that the teaching it imparts is sound and reliable. The fact that, after all, the public for a book of this sort is limited may explain why the period between the appearance of the second and this, the third edition, is so long as eleven years. In any case the interval has seen many developments in regard to matters dealt with in the book, and to these attention has been given. The book, indeed, it is claimed, has been revised throughout and much new matter introduced. This should add to its usefulness and value to those for whom it is intended—students for the Diploma in Public Health, public analysts' assistants and other laboratory workers.

THE Association of Port Sanitary Authorities of the British Isles has arranged to hold its annual meeting this year at Newport, Mon., on June 10th, 11th and 12th, and a particularly attractive programme is in course of preparation for the occasion. Dr. A. B. McMaster of Dover and Dr. C. F. White of the Port of London are, respectively, Honorary Secretary and Honorary Treasurer of the Association.

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Editorial.

The London County Council Hospitals: Research.

ONE of the duties of the London County Council in taking over, under the Local Government Act of 1929, the hospitals of the late poor law authorities and the laboratories attached to them was to supply a report annually on the work of these hospitals and laboratories during the previous year. These reports cover such topics as improvements and enlargements, number of patients admitted, treated and discharged, and the financial side of running such hospitals. In such a huge organisation as the hospital service of the Council, comprising as it does general hospitals, sanatoria and hospitals for infectious diseases and other special purposes, a great variety of cases of sickness—many of which no other hospitals are prepared to deal

with—is provided for. There is, therefore, a vast amount of material available from which much can be learned. Moreover, there are on the Council's staff persons admirably fitted to carry out research and to advance the treatment of disease. With a generosity not always conspicuous amongst local authorities where matters of this kind are concerned, the London County Council from the very beginning made provision for allowing members of the staff to take advantage of opportunities for carrying out research. Further, they provided full facilities for publication of results, and annually during the last four or five years a section of the annual report of the Council has been devoted to this purpose, appearing under the title of "Public Health—Medical Supplement to the Report on the Hospital Services." In the medical supple-

ment for 1934* there is contained a collection of papers, reports and annotations, a number of which may be counted scientific contributions not only of interest but of importance and certain to react beneficially to the investigators as well as to sufferers, whether in the Council's hospitals or elsewhere. The field covered by the contributions is, naturally perhaps, wide and varied and classification is not too easy. In the publication the arrangement followed is one adopted a year or two ago of grouping papers, reports, etc., under the heads of special hospitals, special units and general hospitals, the chemical branch having a separate heading for itself. In the special hospitals group the communications from isolation hospitals are naturally most numerous. In addition, however, notes from tuberculosis hospitals and sanatoria and establishments for rheumatic children are given a place. Amongst special units making contribution are that for puerperal fever, the radium centre and clinic, the goitre clinic, the maternity wards, and the clinics for diabetes and pernicious anæmia. From the general hospitals the reports, notes and papers deal with interesting cases, surgical as well as medical. That there must have been a good deal of selection done, not only in this but in the other branches, is certain, and judging from the general high standard of excellence of the contributions it must have been carried out most carefully. In the special hospitals group of papers, since they treat of such subjects as purpura hæmorrhagica and scarlet fever, food poisoning caused by *B. dysenteriae*, the use of the Drinker respirator, vulvo-vaginal diphtheria, gastric lavage in tuberculous children—to quote only a few—every one has a wide importance. The paper on gastric lavage in tuberculous children, by Dr. Fish of High Wood Hospital, is a preliminary report only, but as it appears to indicate that by this method real assistance in detecting the presence of tubercle bacilli can be obtained, it is worth noting. The paper on the Drinker respirator, descriptive of its use and assessing its value in the case of diphtheria, empyema and pulmonary collapse, is also noteworthy. Of reports from special units calling for mention are those of Dr. Joe on the work done in relation to puerperal

fever. These contain a close analysis of the cases dealt with and full particulars of 14 deaths occurring amongst 165 cases of puerperal sepsis admitted for treatment. In present circumstances the notes on work done at the radium centre for carcinoma of the uterus at Lambeth Hospital and the radiotherapeutic clinic also at that hospital by Sir Comyns Berkeley, Dr. Stebbing and others, are of real moment. Equally so are the reports from the goitre and diabetic clinics. Dr. Young's report of the work done at the latter especially may be noted on account of the fulness of the information given with regard to the type of diet in use at St. Peter's Hospital and the method devised for its measurement by patients, particularly those in poor circumstances. An important contribution in the special unit group is that by Dr. Letitia Fairfield on maternal deaths in the Council's hospitals. That there has been a very great advance made in relation to maternity work in the various institutions since they were taken over by the London County Council cannot be doubted. It is certainly revealed in this as in other reports that have been issued with regard to work done. In 1934 the total number of births taking place in the hospitals was 13,253, an increase of 1,336 on the numbers for the previous year. The number of deaths of women confined in the hospitals after the twenty-eighth week of pregnancy was 66. This gives a death-rate of 5.1. As a maternal mortality, having regard to what it includes, this must be counted small. By way of conclusion to very full and skilful analysis of the figures and facts, Dr. Fairfield submits the following, which will probably receive general acceptance: "The close enquiries undertaken into every maternal death in the Council's hospitals show that no obvious or easily eliminated cause for a high mortality rate exists. There is very rarely any evidence of failure of ante-natal care, of avoidable sepsis, of unnecessary interference, or of failure to provide efficient obstetrical aid at the proper time. Samples of the many and diverse obstetrical problems which defy easy and automatic solution are now being dealt with. A steady improvement of staffing, accommodation and organisation, as well as loyal co-operation on the part of the patient, offer the only possibility of a further reduction in the mortality rate." Amongst contributions from the general hospitals group may be

* London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Publication No. 3156. Price 5s.

mentioned those of Mr. Waters of St. Stephen's Hospital on abdominal actinomycosis, and of Mr. Gillies (Hackney) and Major Sinclair (St. James'), the former on fractures of the neck of the femur, and the latter on end results of fractures. From the chemical branch two contributions were regarded as worthy of inclusion in the report: one by Mr. Coste on atmospheric pollution, and the other descriptive of an investigation carried out by Mr. Shelbourn and Mr. Bennett, at the request of the Chief Officer of the Fire Brigade, into possible dangers from inhaling phosgene gas in connection with the use of fire extinguishers of the carbon-tetrachloride type. As already mentioned, there must have been very close and careful selection made of papers prepared by members of the Council's staff. An indication of the amount of work this involved may be gathered from the fact that, in addition to those included in the report, there is a long list of others which, no doubt because they were crowded out, had to be published elsewhere. The references to these are quite full, so that the information they contain will be readily accessible, though possibly less so than those included in this interesting and most valuable supplement to the general report on the hospital services.

Mental Hospitals and Mental Deficiency.

Because they also are, in a sense, supplementary or, possibly, rather complementary to this report, those on Mental Hospitals and Mental Deficiency, and Hospital Finance, may appropriately be referred to here. In a series of three chapters and some four appendices the former* gives a volume of most useful information with regard to the extremely extensive mental services provided by the Council. Historically it is interesting to note that on January 1st, 1890, that body and the Metropolitan Asylums Board together were providing institutional accommodation for 15,670 mental patients. On January 1st, 1935, the Council, which took over the functions of the Metropolitan Asylums Board in 1930, was providing beds for 33,621 mental patients and shouldering double the responsibility of 1890. This does not mean that there is any substantial increase in the incidence of mental derangement in the London population. Largely it has resulted from change in policy

* Publication No. 3148. Price 1s.

and outlook. The Mental Deficiency Act, 1913, for example, placed upon the Council the duty of ascertaining and providing for mentally defective persons who before that date had been dealt with—if at all—in the chronic wards of mental hospitals, or (not very suitably) as cases of chronic harmless insanity by the Metropolitan Asylums Board. Since then, further, a mental deficiency service, supplementing the provision made for the assistance of the mentally deranged, has been organised and developed. On December 31st, 1934, the Council's mental hospitals committee were responsible for the care of 37,236 persons suffering from mental disorder or defect, including defectives under supervision in their own homes or under statutory guardianship. The report, which is very rich in statistical information, contains a number of figures of sufficient general interest to be worth quoting. During 1934, for instance, 3,621 persons suffering from mental disorder were admitted to London county mental hospitals. The percentage of direct admissions to the total population of the administrative county of London as at the 1931 census was 0.07. The number of deaths of patients in such hospitals during 1934 is the lowest recorded since 1898. There are more patients between the ages of 45 and 54 years than in any other age-group. This applies both in respect of the total patient population and of direct admissions during the year to the county mental hospitals. On March 31st, 1935, there were 741 patients in the hospitals whose mental disability was due to, or aggravated by, military service during the Great War and who were therefore classified as "service" patients. On December 31st, 1934, there were in residence at the mental hospitals 665 alien patients, of whom more than one-third were Russian subjects. The unique work done at Maudsley Hospital, where only voluntary patients suffering from early mental or nervous disorder are received, is worthy of comment. During 1934, 3,325 out-patients were treated at the hospital and a further 1,302 at the psychiatric clinics, established as "limbs" of Maudsley Hospital, at three of the Council's general hospitals north of the Thames. Between 1914 (when the Mental Deficiency Act, 1913, came into operation) and December 31st, 1934, 17,950 cases of mental defect were notified to the Council as a local mental deficiency authority. The

number of new cases notified during 1934 was 939. At December 31st, 1934, one out of every eleven mental defectives sent under order to institutions for the mentally defective was out on licence with a view to ultimate discharge. Finally, it may be mentioned that the total number of staff employed at the Council's mental institutions is 8,553. This gives some idea of the magnitude and importance of the services so fully described in this interesting report.

Hospital Finance.

The report on Hospital Finance* aims to set out for the information of all who are interested in problems of hospital administration, comprehensive data, expressed in terms of cost per in-patient per week, for each of the 76 hospitals for the sick maintained by the Council. That there were difficulties associated with the taking over and reorganising of such a large hospital service as that of the Council may be imagined and will be believed when it is seen that the annual expenditure exceeds £4,500,000. As a matter of fact, it is clearly shown that all the difficulties have not yet been overcome, and in the discussion of the changes introduced in relation to such matters as the keeping of inventory records, regrading of staff, treatment of obsolete and redundant stocks, outdoor dispensary and district medical services, etc., hints that may prove of value to others may be found. Considerable reorganisation of the ambulance service has been carried out, and a table giving particulars of mileage run, number of patients carried, etc., gives some idea of the extent of this service. Similarly, a table indicating the working of the laundry service carried on in the hospitals contains an amount of information useful and interesting to others concerned in hospital administration. Naturally, the cost tables presented in the report are important, particularly as they are more detailed in form than the tables published in respect of the voluntary hospitals in the annual reports of the King Edward's Hospital Fund. The series of cost tables, it may be noted, is based upon the assembly of hospitals into groups according to the type of patient treated, and for guidance a description of the activities at each hospital is annexed to the tables. Particulars are given for each group of the number of beds avail-

able and the average daily number of patients treated, together with a detailed analysis of the cost per patient per week. An interesting feature is that at the end of each table figures are given showing the "mean" costs for the hospitals in each group, as well as the "average" costs for all patients. Not only are details of the "local" costs for each hospital shown, but also the central and overhead charges, thus arriving at a total inclusive cost per occupied bed per week for each hospital. To the large number of members of the health service now concerned in hospital administration, this report will prove no less interesting than the others in the hospital group of reports issued by the London County Council.

The Central Midwives Board.

IN due course there will appear a report of the work of the Central Midwives Board by the representative of the Society (Dr. J. J. Buchan) upon that body. Because this has reference more definitely to matters with which health officers are concerned it is naturally of peculiar interest. For information on these as well as other matters dealt with by the Board there is the report of the Board itself, and that dealing with the year ended March 31st, 1935, has recently appeared. Much of what is discussed has interest mainly for the 15,885 women who were practising as midwives in England and Wales in 1934. In view of the importance of the midwives' work for the safety and well-being of mothers, however, the information given, it may be believed, deserves study by members of the general public. To these no doubt it will appear remarkable that less than 30 per cent. of the total number of qualified midwives are actually engaged in the practice of their profession. Discussing the question of examinations, the report shows that during the year, 3,965 candidates presented themselves, the percentage of failures being 25.1. For the midwife-teachers' examination, 42 appeared for part 1 and 28 were successful. In the second part, 24 out of 32 were successful. Penal cases dealt with numbered 18, and resulted in the immediate removal of ten names from the roll. Notes of various interesting decisions by the Board are given, and particular mention is made of the fact that provision was made for re-enrolment of health visitors, in actual practice as such, whose names had been removed from the roll under section 3 (2) of the Midwives Act, 1926, calling for extra training. Special note is

made of the fact that during the year a revision of certain rules of the Board took place, including those regulating the proceedings relating to the conduct of midwives. As usual, the report is available for purchase and may be obtained (price threepence) from H.M. Stationery Office or through any bookseller.

Physical Education.

IN circular 1445 of January 13th, 1936, the Board of Education outline their views on the development of physical education in the schools and among young people generally. In the view of the Board there is at the present time a quickened interest in all that concerns the health of the nation, and the object of the circular is to show that physical education has a special contribution to make to a healthy and enjoyable life and should be further developed, not only amongst the young in school, but among young people generally, though progress here depends most largely on the enthusiasm and initiative of local authorities and voluntary bodies and on their co-operation.

That progress has been made is very evident. As the circular points out, during the past thirty years the scope and quality of physical education has been transformed from a narrow system of school drill into a balanced scheme for the physical development of children throughout their school life. Unfortunately, however, there are still schools and even whole districts where the teaching is dull and lifeless. In this connection the value of work of organisers of physical training is emphasised, the Board expressing a readiness to welcome proposals for the provision of gymnasia in senior schools. In the matter of playing fields, it urges authorities to survey the needs of their areas with a view to supplementing the existing provision wherever practicable.

In the secondary schools, it is claimed, the need is mainly for trained teachers in the boys' schools and for more time to be given to physical education, which should not be crowded out by the pressure of other subjects. In all secondary schools a gymnasium should form part of the normal provision. In junior technical schools and in technical colleges, where physical education and games constitute a vital part of the corporate life, better accommodation and more qualified teachers are required.

For young people no longer at school the Board accept, and it will be agreed generally,

that it is a matter of national importance that more consideration should be given to the development of facilities for physical training and games. At the same time, however, it is pointed out that any imitation of the centralised methods in use in some continental countries would be altogether inappropriate. Rather, each area must build up the organisation best fitted to its own local circumstances.

Special mention is made of courses for the unemployed, and a tribute is paid to the work done by authorities and voluntary organisations in helping to maintain the physique of those who are without employment. The ground is, however, far from completely covered, and the Board regard it as desirable that local education authorities should devote more attention to this work, and that organisers of physical training should be available to assist voluntary bodies with advice in organising the necessary courses.

One of the chief needs that remain is for more organisers of physical training. Of the 316 local education authorities in England and Wales, only 124 have yet seen their way to appoint organisers. This the Board view with regret, and one of the objects of the circular is to urge most strongly that the time has now come when the appointment of a sufficient number of qualified organisers should be regarded as an indispensable part of the provision for physical education. Concerning the organiser generally, it is held that he should be the recognised guide and adviser for the community as a whole in matters relating to physical exercises and recreation. His work, in short, should not be limited to schools of any type, but should extend to young people, both employed and unemployed, who have left school, and his services should be freely available to voluntary organisations and for co-ordinating their schemes with those of the authority.

The main directions in which the system of physical education in this country calls for improvement and expansion, according to the circular, are:—

(a) A more complete organisation of physical education through the appointment in every area of an adequate number of men and women organisers, who can advise teachers in all types of schools and can help to co-ordinate and develop the provision of physical activities for children and young people generally.

(b) A larger output of teachers competent to give gymnastic training in senior, secondary and technical schools; and an increase in the numbers of short courses for teachers in all types of schools, and for leaders in voluntary organisations.

* Publication No. 3163. Price 1s.

(c) An improvement in the standard of physical training in elementary schools, particularly in certain areas.

(d) A fuller appreciation of the need for physical education for pupils in secondary and technical schools at all stages of their school life.

(e) A more thorough organisation to enable young people no longer attending school, whether employed or unemployed, to continue to receive physical education from competent teachers and in suitably equipped premises.

For general guidance, the Board, it is stated, propose shortly to issue publications dealing with recreation and physical fitness for youths and men and for girls and women respectively. A memorandum on the planning, construction and equipment of gymnasia is also promised.

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Diphtheritic Infections.

THE report on this subject issued by the London County Council* very rightly has attracted a great deal of attention. Concerned not only with the nomenclature of diphtheritic infections but with the procedure for dealing with children (a) immunised and (b) non-immunised, from whom positive swabs are obtained, but who show no clinical manifestations, and, in particular, with certain categories of these children, the information it contains may be accepted as authoritative. Backing the opinions offered are such skilled and experienced observers as Dr. A. F. Cameron, Chief Medical Superintendent, Infectious Hospitals Service, London County Council; Dr. E. H. R. Harries, Medical Superintendent, North-Eastern Hospital; Dr. A. Joe, Medical Superintendent, North-Western Hospital; and Dr. J. E. McCartney, Director of Research and Pathological Services.

Grouping cases into respiratory and non-respiratory, these experts offer definitions of various types, expressing, it may be noted, dissatisfaction with the term "faucial diphtheria," and in relation to non-respiratory forms stressing the need for early recognition of cases of diphtheria of the conjunctivæ. The notes on carriers are very illuminating and call for study, more particularly those in regard to immunity in the carrier state and the factors in the production of carriers. On immunisation procedure, it is noted that preference is

* NOMENCLATURE OF DIPHTHERITIC INFECTIONS. Report of Departmental Committee appointed by the County Medical Officer of Health and School Medical Officer, London County Council. London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Publication No. 3161. Price threepence.

expressed for a preliminary Schick test as also for a second testing of those Schick-positive children who have received immunising treatment. Details of the procedure to be adopted in residential schools in the case of children immunised and non-immunised, from whom positive swabs have been taken, are given. In respect of children attending day schools, although they would like to see similar rules apply as in the case of residential schools, those responsible for the report think that, since the conditions of children attending day schools are so diverse, it is inadvisable to lay down any specific rules for the control of diphtheria in such schools. Possibly the most important and practical part of the report is the appendix, in which such matters as the method of taking swabs and the clinical significance of bacteriological findings are discussed, and a definition of diphtheroids and forms of report on throat and nasal swabs are suggested.

As might have been expected, having regard to the number of clinicians concerned in the presentation of the report, there is something of an inclination to attach importance to the presence or absence of clinical signs. The view expressed that, where a case is suspected clinically to be diphtheria, a negative bacteriological result cannot be regarded as excluding the diagnosis, is one that will be widely accepted as will be the advice that the swab should be repeated and treatment with antitoxin continued. The report is one to be kept handy and read over and over again. The London County Council deserves the greatest credit for having had it prepared and published.

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Standardisation of Vitamin A.

AT the International Conference on Vitamin Standardisation, which was held in London in 1931, at the invitation of the League of Nations' (Health Section) Permanent Commission on Biological Standardisation, a certain sample of carotene was accepted provisionally for two years as the biological standard for vitamin A activity. This arrangement recognised that difficulties might arise in its use, since both the purity and stability of the sample were doubtful, and certain specific problems for further investigation were suggested by the conference.

Such investigations were undertaken by a number of workers, in some cases independently, in others at the invitation of a Vitamin A Subcommittee, specially set up by the Accessory

Food Factors Committee (Medical Research Council and Lister Institute of Preventive Medicine). The body of work thus produced, when put together, forms a substantial mass of evidence in which the results obtained in different laboratories corroborate each other. Published separately, however, the contributions of single laboratories on many points would be evidentially inadequate and would tend to encumber the literature with a mass of small communications of varying individual value.

For bringing them together in one report,* Miss E. Margaret Hume and Dr. Harriette Chick deserve the utmost credit, even though what has been produced for publication by the Medical Research Council is actually only, as the prefatory note states, a collection of technical information, not available elsewhere, concerning the properties and use of the international vitamin A standard, and is intended for the information of competent workers already practised in the usual methods for the quantitative estimation of the vitamin.

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Water Pollution.

THE report of the Water Pollution Research Board of the Department of Scientific and Industrial Research for the year ended June 30th, 1935†, contains matter of real value from the public health point of view, giving details of a number of most useful investigations directed to the elucidation of problems connected with this important subject. Of these investigations special note may be made of those relating to the base-exchange process of water softening, which have resulted in the discovery of methods of treatment whereby materials suitable for water softening equal in base-exchange value to some of the imported minerals and more resistant to disintegration can be prepared from certain British clays. Contamination of water by lead received attention also, and satisfaction is expressed with the progress made in the direction both of standardising methods of analysis and treatment.

One of the most important subjects under investigation is that of milk factory effluents. Pollution with these has increased to such an extent that the development of satisfactory

* REPORTS ON BIOLOGICAL STANDARDS. IV.—The Standardisation and Estimation of Vitamin A. Medical Research Council Special Report Series, No. 202. H.M. Stationery Office, 1935. Price 1s. 2d., post free.

† H.M. Stationery Office. Price 1s. net.

methods of dealing with the problem is a matter of urgency. Several creameries and factories, both in this country and on the Continent, have been visited during the year and the methods in operation for the treatment and disposal of the effluents have been examined. For the purpose of testing the processes on a large scale under commercial conditions, two experimental plants have been erected at a factory at Ellesmere, Shropshire, which is owned by United Dairies, Ltd., and valuable information is likely to be gained as a result of the work done there.

Of work in connection with sewage disposal, that done at the London School of Hygiene, under the immediate direction of Professor W. W. C. Topley, is specially referred to, the experiments directed to the discovery of the effect of activated sewage sludge in promoting the oxidation of various organic substances by air being discussed at some length. The River Mersey investigation, the object of which is to determine the effect of discharges of crude sewage on the amount and nature of the solid matter deposited in the estuary, was continued and the survey of the River Tees completed in the course of a year that, as the report clearly shows, was a very full one.

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Pathological Specimens by Post.

ACCORDING to a communication recently made by the Postmaster-General, pathological specimens sent for medical examination or analysis have been observed in the post which are not packed in accordance with the postal requirements. In view of the serious risk of infection to Post Office servants, and of the contamination of the mails in the event of leakage of the contents of such packets, it is thought proper to direct attention to this matter here, and to issue a reminder of the existence of Post Office regulations governing the postal transmission of pathological specimens. The following are the terms of the regulations:—

Deleterious liquids or substances, though otherwise prohibited from transmission by post, may be sent for medical examination or analysis to a recognised medical laboratory or institute, whether or not belonging to a public health authority, or to a qualified medical practitioner or veterinary surgeon within the United Kingdom, by letter post, and on no account by parcel post, under the following conditions:—

Any such liquid or substance must be enclosed in a receptacle, hermetically sealed or otherwise securely closed, which receptacle must itself be placed in a strong wooden, leather, or metal case in such a way that it cannot shift about, and with a sufficient quantity of some absorbent material (such as saw-dust or cotton

wool) so packed about the receptacle as absolutely to prevent any possible leakage from the package in the event of damage to the receptacle. The packet so made up must be conspicuously marked "Fragile, with care," and bear the words "Pathological Specimen."

Any packet of the kind found in the parcel post, or found in the letter post not packed and marked as directed, will be at once stopped and destroyed with all its wrappings and enclosures. Further, any person who sends by post a deleterious liquid or substance for medical examination or analysis otherwise than as provided by these regulations is liable to prosecution.

If receptacles are supplied by a laboratory or institute, they should be submitted to the Postal Services Department, General Post Office, London, E.C.1, in order to ascertain whether they are regarded as complying with the regulations.

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Bacteriological Examination of Water Supplies.

THE Ministry of Health in May, 1934, issued a memorandum on the bacteriological examination of water supplies, describing a standard technique for this purpose and explaining the precautions necessary in obtaining and transmitting samples to the laboratory. At the time, this publication was noted in these pages and now reference to it again becomes essential since, over 4,000 copies having been disposed of, it has been found necessary to reprint it. That there has been so great a demand is a striking illustration of the recent increased activity in the improvement of water supplies, especially in rural areas. In March, 1934, the Government made available a grant of £1,000,000 for this purpose. Already £830,000 of this has been provisionally allocated to assist water supply schemes in 1,700 rural parishes in England and Wales. The total cost of the schemes to be so assisted is over £5,150,000. In addition, during the same period, the Ministry of Health has sanctioned the borrowing by rural authorities of over £1,200,000 for rural water supply schemes which are not being assisted by government grant. The cost of the rural water schemes for which loans have so far been sanctioned by the Ministry during the current financial year has already reached a total of £2,040,000. This is exactly double the corresponding figure for the whole of the financial year 1934-5 which was itself the largest amount ever sanctioned in any one year for this purpose.

The importance in considering rural water problems of testing the purity of both existing

and new supplies is self-evident, and it is clear that the Ministry's memorandum, which deals fully with the technical aspect of the problem, as was anticipated in the review published here, has been found very useful, the section on interpretation of results, the portion most open to controversial views, having met with general acceptance. In the reprint, it is noted, certain descriptions of technique have been somewhat simplified, and the opportunity of correcting certain slips and of making reference to recent British standard specifications has been taken. For the memorandum it is claimed that it may be relied upon as representing a satisfactory standard of practice, and this claim may be granted.

The reprint, entitled "The Bacteriological Examination of Water Supplies," is No. 71 of the Ministry of Health Reports on Public Health and Medical Subjects. Copies may be obtained (price 1s. 3d.) from H.M. Stationery Officer or from any bookseller.

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British Medical Films.

ONE of the most active of the several panels set up by the British Film Institute is the medical panel. A function of the Institute is to co-ordinate and develop the uses of cinematography for educational and cultural purposes, the responsibilities of the medical panel being in respect of films that are of technical interest to medical practitioners and students. Evidence of the activity and success of the panel is shown in a catalogue of British medical films recently issued and obtainable (price 1s.) from the Institute at 4, Great Russell Street, London, W.C.1. Most usefully the catalogue has been classified in accordance with the medical curriculum, and full indices have been included for ease of reference, with particulars of name of author, width of film, silent or sound, length, suitability, name and address of owner.

A most interesting publication, it is not unlikely that, in addition to proving useful as a catalogue, it may, as the panel hope, prove valuable as a method of education which deserves far more attention than it appears so far to have received.

Realising that there may be medical films in existence, made by individuals or associations primarily for their own use, which have not been brought to notice, the panel is anxious to secure full particulars of such films, which may be addressed to the Institute or to members of the

panel, several of whom (Dr. E. L. Sturdee, Ministry of Health; Dr. G. C. Anderson, British Medical Association; Brevet-Col. L. W. Harrison, R.A.M.C., Ministry of Health; and Lt.-Col. G. S. Parkinson, R.A.M.C., London School of Hygiene and Tropical Medicine) are well known in the health service.

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The Care of the Cripple.

IN an opening address to a course on "Public Health in relation to Orthopædics," recently held in Hendon, Dr. A. Fairgrieve Adamson, the Medical Officer of Health of the Borough, drew attention to a number of points connected with the subject that are deserving of more general notice. The emphasis he laid upon the importance of extending the scheme not only to school children but to children under five years of age, for example, is noteworthy, since undoubtedly a considerable number of orthopædic defects are found in the latter group, and treatment, if given early, may lead to saving of time and trouble when the child arrives at school age. The question of the prevention of orthopædic defects, naturally was noted, and the importance of those engaged in maternity and child welfare work being always observant of any slight deviation from the normal in the gait and carriage of a child, as indicating possibly an early rickets, was stressed. In this connection the marked decrease in tuberculous lesions of bones and joints was brought out and the hope expressed that other infective conditions, such as infantile paralysis, might ultimately come within the field of practical preventive medicine. Postural defects of children attending the public elementary schools and the need for the careful supervision of their physical training were referred to, and regret expressed at the neglect of the adult cripple and the lack of adequate facilities either for supervision or treatment of these unfortunates. Many of these, as children attending the elementary schools, have been under continuous treatment, but although it would be to their benefit and, incidentally, to the benefit of the community if treatment could be continued, actually nothing was done. The suggestion offered was that those who have already established orthopædic centres should make the premises available for these adult cripples, the cost of in-patient and other treatment possibly being met from poor law or other sources. By way of stressing the need and the existing neglect, Dr. Adamson pointed out

that the tuberculous cripple was actually the only one who was adequately cared for in later life. Another need emphasised was that of making provision for the vocational training of cripples, the example of Shropshire being cited and a hint given that a comprehensive scheme might at no distant date come into force in the County of Middlesex.

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British Rainfall, 1934.

THIS is the title of the seventy-fourth annual volume of the British Rainfall Organisation, which gives a detailed account of the distribution of rain in space and time over the British Isles during the year 1934 as recorded at some 5,460 stations in Great Britain and Ireland. It includes maps, tables and descriptive matter showing the distribution of the rainfall each month and for the whole year, and its relation to the average; studies of heavy falls on individual days of particular interest; discussions of heavy falls of rain in short periods, and of the number of days with rain and of spells of dry or wet weather during the year.

For the British Isles as a whole, 1934 ranks as a year of average rainfall. The main feature of the distribution was the area across central England and Wales where there was less than 90 per cent. of the average rainfall. At stations representative of much of the eastern half of England, as well as parts of South Wales and the Cheshire Plain, the total rainfall of 1933 and 1934 was less than 80 per cent. of the average.

February was the driest month in most districts, and December the wettest. Certain stations in Sussex and Hampshire experienced no measurable rain during February. On the other hand, at certain stations in Sussex, Devon, Cornwall, Glamorgan and Co. Kerry, December, 1934, ranked as the wettest December since before 1870. At Chilgrove, near Chichester, where the record commenced in 1834, the total of 11.90 inches for December, 1934, exceeded by more than an inch the previous highest total for any month.

The volume includes three special articles. The first contains a list of heavy falls on rainfall days recorded during the years 1865 to 1934, arranged county by county. The second discusses the frequency of heavy rains in short periods as experienced at Kew Observatory during 50 years; and the third

article deals with a new type of gauge for showing the rain of the day and night separately.

Containing nearly 300 pages, this extremely interesting publication is issued under the authority of the Meteorological Committee (Air Ministry), and may be purchased (price 15s. net, postage 5d.) from H.M. Stationery Office or through any bookseller.

London Health Services.

IN reviewing the sixteenth annual report of the Ministry of Health for the year 1934-5, reference was made to the fact that it contained a special detailed review of the public health work carried out in London by the London County Council, the City Corporation and the metropolitan borough councils. Not unnaturally, this attracted wide attention, so wide indeed that it has been found necessary to reprint it as a separate publication. In a most interesting preface, Sir Kingsley Wood, the Minister of Health, points out that the review is based on a general survey of local authorities' health services in London undertaken by officers of the Ministry, and explains that this new system of general surveys, which since the Local Government Act, 1929, has replaced the former routine inspection in detail of individual services, has fully proved its value. Amongst other advantages claimed for the survey by the Minister, and that all will readily grant, are that it enables the efficiency of the health services in each area to be generally appraised from time to time; it encourages a deeper comprehension of the problems with which local authorities have to grapple, and it promotes an interchange of experience between the local authorities and the central department, which is clearly beneficial to both.

The practice of publishing sections of the Ministry and Chief Medical Officer's reports separately is one that appears to be growing and that may be commended most warmly. This, which is entitled "London Health Services," can be obtained (price 1s.) direct from H.M. Stationery Office or from any bookseller.

Certification of Blindness.

IT has been found that tests with test cards for defective sight may give different results according to the degree and standard of illumina-

tion of the cards. The question is of special importance to local authorities in connection with certification under the Blind Persons Act, 1920, and the Minister of Health accordingly asked the Committee on the Prevention of Blindness (of the Union of Counties Associations for the Blind) to consider fixing a definite degree and standard of illumination of test types. The Committee referred the matter to the Council of British Ophthalmologists and made a recommendation to the Minister based on the Council's report which the Minister has decided to accept.

In a circular (1520) recently issued, addressed to county and county borough councils, the Common Council of the City of London, and voluntary associations for the blind, there are set out various suggestions for adoption, namely:

(1) Artificial illumination should be used in preference to daylight.

(2) The degree of illumination should be approximately, and not less than, 10 foot-candles.

(3) This can be effected by the use of two 25 watt internally frosted (pearl) lamps fixed vertically 15 inches in front of the plane of the test card, one on each side, at a horizontal distance of 12 inches from the vertical plane normal to and bisecting the card. One lamp should be placed higher than the other, one being opposite the junction of the upper and middle thirds of the card, the other opposite the junction of the middle and lower thirds. Opaque screens, preferably cylindrical, having a matt white interior, should be mounted behind the lamps so as to direct the light on to the chart and also prevent direct light from the lamps reaching the eyes of the person who is being examined.

(4) This method ensures that with new lamps the illumination on test types is about 14 foot-candles. The ordinary variations of current, deterioration of lamp, and the darkening of the test card with age will not reduce the brightness of the test card so illuminated to a value less than that of a perfectly white surface receiving an illumination of 10 foot-candles.

Obituary.

ARTHUR JOHN SCOTT PINCHIN, M.D.,
F.R.C.P. LOND.

THE Society records with regret the death, in his sixtieth year, of Dr. Scott Pinchin, who had been ill with pneumonia for only three days. Dr. Pinchin was a Fellow of the Society of Medical Officers of Health, attached to the Metropolitan Branch, his main association with the public health service being as Consulting Physician to the London County Council General Hospitals Service and Consulting Tuberculosis Officer to the Hampstead Borough Council.

Psychology in Relation to Public Health.

By HENRY WILSON, M.D., M.R.C.P., Physician, The Institute of Medical Psychology; Fellow in Psychiatry, London Child Guidance Clinic; and S. W. SAVAGE, M.D., D.P.H., Deputy County Medical Officer of Health, Buckinghamshire.

Nothing could more markedly indicate the change that is taking place in the direction of the trends in the activities of the health service than that such a subject as that with which the two following papers deal should have been chosen for consideration at an ordinary meeting of the Society. That there could have been no better choice of openers of the discussion than Dr. Henry Wilson and Dr. S. W. Savage was the view of those present at the well-attended meeting on December 20th, 1935, and perusal of the papers here published will show how correct that view was.

DR. HENRY WILSON.

I AM grateful to have this opportunity of speaking of psychological illness to a Society whose aim is that of preventive medicine. And I need hardly remind you of the recent estimates of the incidence of neurosis in general practice or in factories, and therefore increasing the expenditure upon national health insurance. Doctors have estimated that 40-75 per cent. of their cases are really patients whose psychological maladaptation is expressing itself in minor bodily or mental ailments. Statistics from the Industrial Research Board have shown how illness rates jump up in those factories where discontent is rife. In one there is a sickness rate of 3.2 days per year, in another one of 16, and in the latter the jump appears to be largely due to psychological ailments.

Sir Walter Langdon Brown has drawn the distinction between those who are unhappy, therefore they are ill; and those who are ill, therefore they are unhappy. Indeed, it is very true that neurotic illness represents the solution of a problem, the escape from a situation which for the particular patient is unbearable. The same can be said of psychotic illness as well. But we need to realise that the forces which are at work and producing the impasse comprise not only mental determinants, but physical as well.

In suggesting that the prevention of mental and neurotic illness is a proper interest of those working in preventive medicine, I wish to claim at the outset that such measures must never lose sight of the interaction between body and mind, and that the thoroughness of routine inspection for physical defect or imbalance is a keystone of any arch across

which we pass in our task of minimising mental and neurotic illness.

Breakdown or delinquency is the result of habit. In these days we belittle habit and extol conditioned reflexes. But the former term is still valid in practical considerations, and no breakdown occurs unless the individual has inured himself to dealing with his problems in habitual and psychologically unsatisfactory ways. If a habit is to be broken it is proverbial that it will be broken more successfully at its inception than later, and it can only be broken satisfactorily if all the factors to which it owes its origin are faced and adjusted. The timid, self-effacing individual with considerable mechanical skill who is always losing time in the factory does so because he has not sensitised himself to the ups and downs of competitive life and has always run away from challenging situations. A young man of 30, whose contribution to his firm was considerable, broke down continually because on the surface he could not tolerate the very ordinary back-chat of office life. But he had never since early days really coped with criticism, mild or severe. Conditions that had produced a severe psychological trauma at six were repeated in a modified way many times since, and because they had not received adequate attention in childhood their later and less severe repetition precipitated a breakdown.

What are the factors which encourage the persistence of psychological mechanisms likely to produce absence from work, severe breakdown, or chronic discontents which will adversely affect those with whom the individual comes into close contact? A foreman jaundiced in his outlook, a mother subject to recurrent mild depressive states, even an

office boy who is temperamentally unstable, will influence many others and stimulate reactions in a group which make for discontent, diminished output, or open warfare. I suggest that every person who goes sick with some form of psychological illness may be struggling with any one of four separate sets of conditions:—

- (a) Intrinsic, inborn deficiencies.
- (b) Physical handicaps.
- (c) Environmental difficulties.
- (d) Unsatisfactory psychological habits.

It has become a truism, though doubtless often invalid, that the neurotic comes from bad stock. In some cases the signs of the bad stock are seen in physique, in others in intellectual deficiency, in others in unstable reactions. But these handicaps are by no means always apparent, and such a dictum intensifies that erroneous conception that neurosis has kinship with moral obliquity, a conception that has done much to hamper treatment, to defer a sympathetic consideration of those who form so large a number of the absentees from industry, and to swell the numbers who crowd the harassed practitioner's surgery or the out-patient department.

The neurotic deals with his problems in an evasive manner. One child tells me continuously of the way her friend's mother never satisfies her needs, but is blind to the unwelcome fact that her own mother misinterprets her requests, and denies her reasonable attention. She dare not look such realities in the face because unconsciously she scents that such facts would arouse in her unstable person much too great a conflict. Mrs. Jellyby interested herself in the natives of Booriboolagba, because her unsuitability for motherhood had made her own home too awkward a problem for so self-indulgent an individual to tackle. The neurotic who has never coped with his parents' excessive ambition for him, collapses in a business situation where courage is needed to face an exacting foreman. The braggart is over-compensating for his sense of inferiority; whilst the individual with a rigid mind, impervious to all new ideas, has encased himself behind an armour-plating where his real apprehensions shall not be seen. One of the greatest difficulties in treatment is to distinguish those individuals in the patient's life who have really caused him harm, and those who he says have done so. There are often many of the latter,

for such a belief will prevent him facing his own inferiorities or ineptitudes.

But he has real problems often enough. What resentment, bewilderment, or anxiety is concealed within the mind of the child crippled by an ankylosed hip, or an old infantile palsy? What are the real feelings buried beneath the outward lumpishness of the Fröhlich girl? What is the fundamental outlook of the child handicapped by rheumatic carditis? What wealth of jealousy lies hidden, or what day-dreams of exuberant activity or herculean prowess? If such persons reach manhood, are we to expect that their outlook will be untainted by fear, uncomplicated by envy, or free from an urge to escape their own deficiencies? Will they not pass on to their children warped ideas, or press them on by unattainable ambitions?

On the intellectual side we have statistics which suggest that 10 per cent. in every school population are seriously backward or mentally dulled. Only 1 per cent. or less are defective in the legal sense. It is from the former group that a large number of delinquents are drawn. Has this a greater bearing upon crime and also neurosis than we realise? The findings at the London Remand Home suggest that it has. Not only are the children referred there on the whole intellectually sub-normal; in addition, many show a super-added defect in reading or arithmetic. Thus as a result of general intelligence tests they might be placed two standards lower than that normal to their age, but in some cases their reading, and in some cases their defect in arithmetic would necessitate their being relegated even further from the position average to their age. This is not true of all, but of a high percentage—60 for reading, 40 for arithmetic.

Such discrepancies can be detected by the time the child is eight, and if dealt with then are likely to minimise the bewilderment that such retardation must produce. Such an examination of every child's intelligence takes but an hour, and the results expressed in percentage are not variable as the school-years go by. When psychological theory bristles with so many variable, unmeasurable factors the reliability of these results of native intelligence are as the shadow of a great rock in a weary land. If such facts apply in regard to delinquency, we may expect something similar as regards neurosis.

The neurotic is usually overstrung, often

highly intelligent, artistic, a highbrow. In children, very roughly speaking, neurotic traits are associated with high average or superior intelligence. The second child whose mental age is on a par or greater than that of her two-year-old sister vaguely apprehends this subtle distinction. In all fairness, her parents, ignorant of such differences, legislate without compensating for it, and the child may become turbulent, spiteful and unmanageable or, on the other hand, sulky, morose, and shut-in. We have still to acquire reliable evidence that the adult neurotic has suffered in such ways in childhood. But the fact of his usually high intelligence (I speak of averages) rather favours such an idea, and I suggest that in the psychologist's insistence upon the emotional factors lying behind a breakdown too little is made of these intellectual handicaps and differences.

Resentment, hatred, and passion are not the outcome merely of being denied love, but also spring from the surprise and incredulity which arise when a complicated piece of juvenile thinking is not justly appraised or, on the contrary, when parental ambition allows some piece of muddled thinking to be overrated, when cheap applause leads to diminished effort.

It is the environmental handicaps to which most attention has been given by psychologists. Take the case of:—

B. D., a little boy of seven, who truants from home in the evening but not from school. He is reported as being aggressive at school and at home, but having the most winning ways towards those who have not heard of his misconduct. He had the misfortune to be a diphtheria carrier, spent eighteen months of his first three years of life in a fever hospital where he was doted upon and was the favourite of everyone. He returned home, called his mother "Nurse," and she, infuriated that he had bestowed upon her the most cherished name in his vocabulary, felt hopelessly snubbed. She was not, and never has been, a very stable type, and was far more interested in her husband than in the patient and his older brother. She retaliated in a stupid way and never realised the true situation. It gradually became more and more impossible for him to achieve any sense of importance. This woman, who called herself his mother, was cold, severe, and full of timetables for him. He could hardly be expected to accept this back place, and so month by month he has had to scheme to achieve some position in which he felt she really noticed him. Perverted, you may say, but think how satisfactorily truancy and violence towards the furniture achieved his ends. Mother *must* show some interest in such escapades, and that is better than showing, as the boy feels, no love.

You will note at once that the problem of this boy's truancy was not merely one of his

own behaviour. There was another problem, that of the parents' own relation to the boy, first as a child of *theirs*, secondly as a problem-child. An adequate solution could only be found either by making the child capable of complete adjustment to the parents whether they act wisely or whether they do not, or by strengthening the child's capacity to adjust, and also by helping the parents to face their own problems and disappointments. One further factor came in, the fact that his three-year-old brother has an intelligence and perspicacity only slightly in advance of the patient's own. If we attempt the second solution, the situation can only be dealt with by pretty constant talks and advice. The sort of story that this case illustrates is one similar to those one hears of when one treats adult hysterics. In them it often seems that any difficult situation is sufficient to produce conduct that is bound to be noticed. Even if its value lies in the notoriety of suffering this seems sufficient to satisfy a predisposed individual.

Any one of the environmental handicaps imposed from within the home or by society may be (1) denied or (2) exaggerated. Micawber denied his no less completely than the psychotic Richard Carstone. Dora Copperfield exaggerated her difficulties but, instead of accepting her real infantility, posed as the grown-up person and burst into hysterical weeping if a word of criticism escaped.

The aim of preventive medicine is bound to include prophylaxis against neurotic and mental disorders. Increased attention is being paid to the treatment of the full-blown troubles in adults; pathologists, clinicians, and psycho-therapists are busy in stemming the fully developed illnesses. The prophylactic methods must include:—

- (1) Early assessment of inherited gifts or deficiencies.
- (2) Satisfactory education and openings for those crippled by disease.
- (3) The adjustment or amelioration of environmental handicaps.
- (4) Attempts to alter abnormal outlooks and reactions in the young.

I would suggest, therefore, that all that the educationists are doing to assess intellectual levels early and to research into and treat those many cases where there is some discrepancy between mental age and educational position, is worthy of support by those most

intimately concerned in preventive medicine. It is not merely a matter of segregating the defectives. It is the far more knotty problem of studying the individual child, and of arranging his education in ways that will not produce bewilderment in his mind. Whilst one claims, therefore, individual considerations, one does not forget the importance of social unity. The skilled psychologist (and here I do not mean medical psychologist) gives us a report covering far more than the mental age of the child, or pointing to certain retardations in reading or arithmetic. In his attitude with the test material the child reveals to the skilled eye, traits of nervousness, over-scrupulousness, ready fatigability, or distractibility which suggest possible need for readjustment. The psychologist may detect such traits before their importance is apparent to the most intuitive teacher. Those who carry out such tests must be co-operators with the schools, not those who seem to be introducing the dry bones of the laboratory into vital problems of the school. But the services of the psychologist can go further. Used by the authorities of the central schools they should be capable of preventing round pegs being placed in square holes when the child enters the industrial world. There is something in their detachment from the school which makes their advice more readily acceptable to the parents than that of the headmaster. And the force of statistics enables them to get across to the parents of the dull boy the fact that their darling may never gratify their ambitions, and, more important still, that it is criminal to try and make him.

What specific methods are to be applied to the environmental handicaps which the unstable child meets in his own home? Truly, a man's foes are those of his own household. I have described these in B. D.'s case.

A boy, S. L., referred to the clinic for stealing, was found to be subject to various phobias. In addition, he projected blame on to others and lacked insight into this mechanism which suggested serious disease—the beginnings of paranoic symptoms. His father was an unsatisfactory character, an unsuccessful business man who wrongly attributed all his failures to others. His mother attempted to compensate for his father's lack of interest by over-indulgence. This formed an integral part of the problem, and needed adjustment. How could this be done?

It is here that the social worker offers such help. Her contribution, together with those of the public health visitors, is essential for

any adequate dealing with the potential neurotic. Not only has she to form a link between the doctor at the clinic and the home; she has to attempt to cope with the home situation, she has to supply information which is of the utmost value to the physician. You know far more about the services of the health visitors than I, but you can imagine how her counterpart, the psychiatric social worker, is indispensable to the clinician dealing with neurotic manifestations. Take the case of:—

W. M., an aggressive child of seven, whose inability to fit into school life makes him the despair of teachers and the rejected of his fellows. He is an illegitimate child whose first foster-parents died when he was four, and whose present foster-mother has a series of foster-children who only stay with her for periods of two to three years.

You may say: "Move him." But is there any certainty that such a course will succeed, whilst there is every chance that this will be but another accentuation of his feeling of being unwanted. And what of the financial difficulties of any such scheme? The social worker has to set to work on this unpromising material, reporting upon the conditions found and endeavouring to mollify or strengthen the parents' attitude.

Medical officers of health know I respect far more than the psychiatrist how essentially difficult it is to change human conditions. In relegating this sort of work to the social workers the clinician knows that he is handing on one of the most knotty of his problems to another. But it is not merely time; it is the question of sympathy and understanding as well. The psychiatric social worker is not only an information agent, but one who supports the parents in their task of altering their own attitude.

And what is the medical psychologist's part in such a service? He is asked to decide how far character abnormalities or neurotic traits are evidence of serious disease, distorted outlook, or merely temporary stress. One school of thought holds that temper-tantrums, night terrors, truancy, stealing, romancing, obsessional behaviour, serious enuresis are always signs of serious mal-adjustment. I would prefer to be far less dogmatic and to say that no one sign permits us to assert that we are dealing with a child who is bound to break down later. A famous headmaster said that stealing was endemic in 5 per cent. of the boys of a public school.

Are all of these certain candidates for neurosis? When the medical psychologist has picked his material his aim is to aid the child by play-therapy, or drawing, or talking, romancing, or the telling of dreams to re-adjust his values, to develop a real sense of his own powers for self-discipline, to control himself by the light of simple principles which he can understand and not by that of taboos or social ostracism.

The medical psychologist, like every other specialist, is clamouring for the opportunity of treating and investigating early cases. The growth of the public health services, their high standard of organisation, their co-operation with public bodies, are to him a dream. He awaits that time when he can take to those showing early disorder of the mind what preventive medicine has offered to the physically diseased—thorough investigation, early notification, suitable environment and complete treatment.

DR. S. W. SAVAGE.

Dr. Wilson has given an interesting account of some of his experiences of psycho-therapy amongst children. I follow now in a more prosaic rôle as the administrator seeking to establish the value of psychology to the school medical service in its efforts to promote the health of the community and as one of the many medical officers of health who cast their eyes critically over their work to review the various methods of controlling the disabilities causing so much waste of time and loss of life in this country.

For this purpose it will be necessary to leave psychology for the moment, but I promise you that what I have to say now is intimately concerned with the thesis I have to present to you, namely, that we should use the discoveries of psychology in the school medical service whenever we are able to do so.

This problem can be approached from the medical statistical point of view, although, of course, that is not the only way. The medical, or perhaps I should say pathological, method takes the fully formed disability, *i.e.*, the end-result and works backwards by way of causation.

There are various ways of measuring the harm done by disease; the oldest way is by mortality rates—a disease is said to kill so many persons per thousand of the population per year. This method of measurement

was very good in the old days when diseases were acute and killed quickly. Most of these suddenly fatal diseases have been removed and there remain a host of chronic disabilities. This is the era of chronic disease. In order to arrive at some measurement of the damage done by illnesses I have chosen "number of working-days lost" as a standard. It is, of course, somewhat arbitrary as it gives no account of the hundreds of people who are not ill enough to be taken off duty but still creep to work with chronic sub-normal health. Still, I believe it gives some indication. From the panel figures of Scotland and from personal enquiry among a large number of practitioners and from my own experience, I have been able to draw up a table, reckoning the total number of days lost in a year and working out the days lost in my various causation groups as percentages. The theory of causation has been subjected to much destructive criticism by many philosophers; clinicians, too, never weary of pointing out the frequency of multiple etiology. Nevertheless, a classification according to the most important cause is, I believe, valuable and reasonable if we are willing to remember its limitations.

I have grouped the disabilities under six heads and they come out as follows:—

(1) *Disabilities caused by living organisms which are capable of living at least one day outside the body.*—Diseases spread by intermediate agents (such as water, food, etc.), *i.e.*, typhoid, cholera, tuberculosis, etc.—6 per cent. (mostly tuberculosis).

(2) *Disabilities caused by living organisms which only live a very short time outside the body and are usually spread by direct contact.*—Influenza and most of the ordinary infectious diseases, including venereal diseases, and the common cold. I would put diphtheria into this group—30 per cent.

(3) *Disabilities caused by poor economic conditions.*—Especially the end-result of mal-nutrition in children, such as a certain proportion of dental caries and diseases due to poor, wet and cramped houses—16 per cent.

(4) *Disabilities which have no known causes.*—The cancers, disseminated sclerosis, diabetes, etc.—18 per cent.

(5) *Disabilities grouped under other causes.*—Including defective heredity and physical violence—10 per cent.

(6) *Disabilities which have mainly psychological causes.*—For example—"Nerves," "Nothing the matter with them," "Functional," "Psychoneurosis," etc.—20 per cent.

You may perhaps smile at the method by which I have arrived at these figures, but I submit that the impression (expressed in approximate figures) of a medical man who had been in touch with clinical material for many years is just as valuable and "scientific" as many more carefully compiled statistics, grouped together by those who are not in touch with the clinical material which they are tabulating.

(1) *Disabilities caused by living organisms which are capable of living at least one day outside the body.*—Cholera, typhoid, tuberculosis, etc.

This is the group of disease which the public health service has been able to reduce in such a magnificent way. The organisms are carried in water, food and milk, and it has been possible by strict attention to the physical environment to reduce the incidence of these diseases; in some cases almost to wipe them out. In 1869 the typhoid death-rate was 390 per million; in 1927 it was brought down to 9 per million—a marvellous achievement largely due to the activities of the public health service.

(2) *Disabilities caused by living organisms which only live a very short time outside the body and are usually spread by direct contact.*—The common cold, influenza and most of the ordinary infectious diseases, including venereal diseases.

With this group an entirely different method of attack has been found to be necessary. The environmental method was tried—in the most noted instance—in the case of the great so-called isolation hospitals, which failed to prevent the spread of fevers and ended up as custodial and treatment centres.

It has, therefore, gradually been recognised by the public health service that it is necessary to treat the individual child, *e.g.*, by such methods as active immunisation, and it is no longer possible to distinguish sharply between preventive and curative work. In other words, we are bound to carry out clinical treatment in order to prevent many disabilities of children either from appearing at all or, if they do appear, from getting worse.

This is not the place to enter into a long

discussion, on routine school medical inspection, but I should like to mention one or two things which have struck me very forcibly. First, that one never gets to know the children and makes no personal contact with them in the rush and tumble of the inspection. I do not think I ever forget the face of a patient I have treated and helped to get well again, but I have carried out routine school medical inspections all day and cannot recognise even a child's face when going to the school next morning. Secondly, the difficulty so many poor people have in paying for necessary treatment for disabilities which are not included in the present schemes of the public health service.

(3) *Disabilities caused by poor economic conditions.*

I have only placed this at 16 per cent. although many of my reports and observations in poor districts place it much higher than that.

I am convinced that at least 3 per cent. of the children in this country are chronically under-nourished, especially in the towns. How can anyone bemoan a falling birth-rate when many children who are born now are not properly cared for?

Psychological help alone is of little use to children who are semi-starving, but unemployment is often the cause of neurotic trends in the parents being transferred to the children, so that many of these children want psychological treatment as well as food.

This appalling poverty could, I believe, be remedied by a modification in our economic system on the lines of Major Douglas's social credit scheme were it not for the reckless over-breeding of those who are already submerged.

The poor, tattered individuals who attend our clinics do not eat, as the public health posters suggest, to obtain proteins, fats, carbohydrates, vitamins, salts and water, but to fill an aching void in their stomachs with the cheapest possible food (carbohydrates). These sticky carbohydrates have a disastrous effect on their teeth, which are already badly calcified from a diet poor in calcium and vitamin D. When one looks at their cramped and poor living conditions it is tempting to put all ills down to economic causes, but although poverty is the cause of much and is for these people their most urgent problem, the relief of poverty still leaves many problems unsolved. It may not be, however,

until the poverty is relieved that we can see the other problems that are there.

(4) *Disabilities which have no known causes.*

These are the cancers, disseminated sclerosis, diabetes, etc. It is well for the enthusiastic medical officer of health to remember these. Hundreds of well-to-do individuals die of these diseases every year while living under the best possible hygienic conditions and while being in a position to command the best known methods of medical treatment. Under this heading 18 per cent. working-days are lost, and most of these diseases kill.

When one watches the health propaganda vans and cinemas going out on their rounds with their "Anyone can be healthy who listens to us" motif, it is well to remember that much knowledge is still locked up in the recesses of the pathological laboratories. Preaching at people and pretending to tell them how to avoid these diseases is like telling them that if they follow the advice of the health poster they will never grow old.

(5) *Disabilities classified under other causes, including defective heredity.*

The miscellaneous collection covered under this head accounts for about 10 per cent. days lost. As far as hereditary diseases are concerned they will, I suppose, be dealt with eventually by eugenic methods.

(6) *Disabilities which have mainly psychological causes.*

I have been at great pains to assess this figure correctly and I believe 20 per cent. is rather an under-estimate. It will be remembered that Dr. Halliday, in his work on the panel figures of Scotland, places it as high as 33 per cent., and Dr. Alex. Walker at 29 per cent. I propose to deal with this subject in the following sections, which I have prepared in the form of questions and which I hope will form the basis of discussion:—

- (1) What are the symptoms of the fully formed disabilities in adults?
- (2) How is the diagnosis of "psychological" made?
- (3) Is there any evidence that early signs of these disabilities could have been detected during the school years of these adult patients?
- (4) What are the principles of treatment and prevention as far as the two can ever be separated?
- (5) Should the school medical service play any part in this?

(6) What should the fully formed adult at 18 be like and not be like?

(7) How are good and bad choices of occupations made?

(8) Are psychological cases above or below the average in intelligence and artistic sensibility?

All of us remember our early experiences in practice and how, even to a really earnest searcher, many patients exhibited symptoms with no physical signs whatever. Moreover, the pattern of these symptoms often did not fit in with any disease which we had seen in hospital.

I have often dispensed medicines while the patient waited, and given them the first dose myself, and was at first surprised to be told that they "felt very much better" immediately they had swallowed it. Most of the drugs used took quite half-an-hour to produce a pharmacological effect, so it was obvious that the results were not due to the drugs; but I need not labour this—every doctor is overwhelmed by people who have come to see him complaining of backache, headache, indigestion, and air swallowing, biliousness, sleeplessness, asthma (psychological in at least half the cases), palpitation and nervy heart, a feeling of chokiness in the night, giddiness and a weak feeling at the knees, etc., etc.

The final proof that the condition is really psychological must rest upon a very full clinical examination, together with X-ray and pathological reports. If these prove negative and, finally, if the patient is returned to full normal health by psychological treatment, there remains no doubt regarding the diagnosis and etiology. This is a practice of perfection; after a little while the doctor learns to recognise these cases by the way the patients tell their story and by their facial expression, which is often wearied, hunted and strained. The complexion is blotchy and there is marked pallor, in women often well disguised. We are not concerned here with the treatment of these cases when they are adults under the mental treatment and other acts, but with their treatment and prevention during school years.

The child grows into a man in three ways—by physical, intellectual, and what, for want of a better word, we can call the emotional development. Great stress has always been laid on the first two of these, which are comparatively easy to observe. The

simplest observation of physical development is increase in weight (rightly made much of in welfare centres), and the second is seen by the child's progress at lessons and, more systematically, by the intelligence tests. The emotional development is much more subtle, although it is extremely important; in fact, providing the other two reach a reasonable level it is the most important of all.

It has been shown that a group of youths who had been sent to an institution for various psychological reasons and who only had their emotional life educated from 12 to 17—their intellectual life being allowed to hibernate—were able, when they went to the university at 18, to equal the ordinary intellectual youth who is nearly always in emotional chaos.

It has been established beyond all doubt that the child in passing from the complete dependence of the baby to the independence of the adult, goes through a series of subtle emotional transferences. Failure to get the right transference at the right time will cause the development of character to be held up permanently and will bring about psychological disabilities in adolescence or middle age, which lead eventually to the doctor's consulting room, the hospital or prison.

Is there evidence that these disabilities could have been prevented by psychological treatment of children during school years, and how can we detect them?

What did the adults who complain now of chokiness in the night, giddiness and weak feelings at the knees, look like at school? Could they have been recognised as sick and treated?

In only very few adult neuroses or psychoses is evidence lacking that there were difficulties in childhood for longer or shorter periods, e.g., periods of frequent nightmares, frequent phobias, serious misbehaviour of the aggressive type, over-activity or inability to concentrate for reasonable periods.

We have not had sufficient time to follow up cases that have been treated in childhood; the evidence, so far, suggests that good results last, and presumably will go on lasting.

Abnormal children can be divided into two categories:—

- (1) The delinquent class.
- (2) The others.

The delinquents lie, steal, forge the teacher's signature, set fire to hayricks and so

forth. They are often quite up to average in intelligence and are certainly psychological cases, but there is not much evidence to show that any of the psycho-neurotic adults were ever delinquents. Therefore, treating the child delinquent would not affect the incidence of adult functional disease, although it would probably greatly reduce the population in the prisons of the future.

Whenever a child guidance clinic is set up it is always first filled with delinquents; this is certainly right but the other children should be included as well.

This second group includes the "too good to be true" type of child who works night and day, always trying to be first in work, games and everything else, and the "evasive child" who will not develop at all and just sits and cries, and is sometimes suspected of mental deficiency by worn-out teachers, but the Binet-Simon tests not infrequently show a high intelligence quotient in such a child.

There is also another type of child who already shows signs of actual functional disease. Two of these cases are noted below:—

Boy aged 14.—He was shut in and withdrawn from life—his pulse went down to 54—after two months psychological treatment the heart beats increased to 65.

Boy aged 15.—Complained of misty vision. One ophthalmic surgeon diagnosed retro-bulbar neuritis. Another ophthalmic surgeon said "functional." Glasses were worn for six months—after psychological treatment he suddenly threw them away and has been able to see well ever since. Various unfortunate things had happened to him in his early life (his parents had been divorced, etc.) and he had used his glasses for the purpose of "not seeing" events which were disagreeable to him.

The psychologist who deals with adult cases finds that they are more often drawn from those who have been good children than from the rampagious, high-spirited creatures. The meek and mild individuals are the real problems; they are very inhibited and the parents are slow to recognise their social and personal deficiencies. It is safe to say that it is the too submissive rather than the untamed who become the doctor's difficult problem in later years. Our efforts must be to aid and abet through wise teachers who realise that the "shut-in" quiet children will find it very heavy going in the rough seas of adolescence, or when in casual and uncertain employment; who can convince the parents of the child's needs more certainly than those

armed with the authority of the medical man.

Principles of treatment and prevention.—The aim is to provide a graded environment in which the child can gain experience necessary for the development of initiative and clear seeing—traits essential to its future well-being.

The home commonly fails for two opposite reasons, the first because of poverty and cramped space, and the second because the parents, through excessive emotional interest in the child, will never let the child grow. The parent will never let him risk himself in any way.

The young toddlers should have gained control over their bodies by about three years and be capable of effective muscular co-ordination and acute sensory discrimination; this enables them to face their environment (which should include other children of their own age) with greater happiness and without fear.

Children who have had a faulty emotional development from an early age frequently become pale and frightened and are bad at games; they may suffer from asthma, enuresis and so forth; and they can be discerned easily by an experienced eye.

Treatment.—I have little experience of child guidance clinics, but I have some experience of institutional treatment which appears to me to be infinitely better.

The principles of treatment are to remove the child to an environment where all that he lacks can be supplied. If the abnormal condition has not gone very far, a change of home may be sufficient, but usually by the time it is observed the abnormality is far too advanced for a change to an ordinary good home to be effective, and a specially controlled environment is needed where the child is stimulated to do what he likes and live through, with experienced staff, the experience and transferences he has missed.

We are fortunate in Buckinghamshire in having a private school of this description, and I have already sent five cases to it: one an out and out delinquent, three children of the "evasive" type, and one of the "too good to be true" type who could not keep it up. They are all showing good progress, although sufficient time has not elapsed for any final results to be seen.

One of the difficulties in this work, as in the tuberculosis service, is to get the cases early enough: no one seems to notice any-

thing until the emotional conflict of the child has been going on for a very considerable time. One never sees the case unless it is brought forward either for hopeless backwardness or some form of delinquency, and the routine medical inspector never finds the early psychological case. We are somewhat dependent on the teachers, who vary, some being extremely good.

What should the fully-formed individual at 18 be like and not be like? He should be completely independent emotionally, but how many are? It has been estimated that only 5 per cent. are free. The rest are either in direct psychic bondage to one or both of their parents or in the grip of some infantile fixation or phantasy. These fixations can only be removed by living through the interrupted experience again. The growing boy is always anxious to appear as grown up as possible and scorns the idea that he may have something infantile in his make-up. This makes the situation more difficult. Many boys of 14 would rather play "hide and seek" than the more formal games, but they would never admit it, even to themselves.

How are good and bad selection of occupations made? When choosing an occupation the adolescent will have various thoughts in mind, the chief of which are the desire to have as full and interesting a life as possible and to earn a competent income. Technical achievements at school may indicate one occupation or another, and if the adolescent has achieved freedom, a correct choice is usually made, although help from a vocational guidance institution may be useful in addition. On the other hand, those who are in an undeveloped state are liable to make a false choice of career, as they will be influenced by unconscious tendencies, and are attracted to all careers in which they think they will have an undue influence over others. This applies very much to our own and to certain other professions. I have heard it said that, relatively speaking, the percentage of nervous breakdowns is highest for doctors and naval officers.

Are psychological cases above or below the average in intelligence or artistic sensibility? I have had frequent opportunity of observing some large families where one parent has been considerably more cultured than the other. In such cases there are often one or two fine children amongst the others, and it is these who have the psychological troubles.

Stacy Aumonier's story, "The Baby Grand," describes the children of a street lout and a singing girl and brings out this point. The child who inherited her mother's musical abilities nearly became a psychological case until she was rescued by a romantic clergyman. These sensitive types are often reaching out for more than their less imaginative brothers and sisters, and in attempting to achieve more may run into psychological danger and may need helping out or rather on.

After all, the prevention of disease is not a complete or final aim, for if it were we should all stay in bed. We must recognise another principle, and that is the desire of the individual to live life and be moulded by life to the fullest possible extent. Riding horses and taking part in winter sports is not the best way of preventing fractures, and yet it is more healthy to do these things although one may be damaged.

Perhaps it was for this reason that G. K. Chesterton said: "Health is the most unhealthy of topics."

DISCUSSION.

The President (Dr. W. G. Savage) explained that he was largely responsible for going, on this occasion, a little outside the ordinary subjects for discussion, because he felt very strongly, as was stressed by one of the speakers, that by the very success achieved by the public health service in getting rid of a great many of the diseases with which it was their business to deal, it was necessary for more and more time to be devoted to the problem of saving people from chronic disease rather than acute infections. He had noted with particular interest that the second speaker had discarded death-rates and adopted other standards for assessing the damage done by disease. He considered that both Dr. Wilson and Dr. Savage had made out a case that there was an opening, a scope, a need, and also a duty for those responsible for the care of children, including those of pre-school age, to utilise to a far greater extent the knowledge and benefits of psychology which were available. The question was how exactly to make that effective. To what extent would the school medical service benefit if there were on the staff an expert to whom difficult cases could be referred? Another suggestion was that such cases should be referred to a child guidance clinic. In any case there must be some practical line of approach.

Dr. Maitland Radford (Medical Officer of Health, St. Pancras) held that poverty at the present time was a psychological problem. Although the community had all the things to eat, the ingenuity of man had not contrived to utilise them fully. The number of patients considered by doctors to be psychological patients was of great interest and importance. The high percentages were actually not at all surprising, and it was not a bad thing that there existed a good

deal of illness of a psychological character because in these days it was the only and right way of escape from the tedium of routine which could only very partially represent the full psychological activity of the individual concerned. Dr. Radford spoke of the absurd ways in which leisure was employed, and made passing reference to the golf course in this connection. The difficulty in these very interesting discussions, he felt, was that one went away without knowing what the neurotic was. If a definition could be given it would be of assistance in the taking of any measures of prevention.

Dr. T. W. Hill (Deputy Medical Officer of Health, West Ham), referring to Dr. Wilson's four factors which were likely to encourage neuroses (intrinsic, inborn deficiencies; physical handicaps; environmental difficulties; and unsatisfactory psychological habits), said he failed to see the necessity for the fourth category. Did Dr. Wilson believe in the recommendations of the Hadow Report making certain rigid chronological age-limits—7-11 and 11+? From his own experience it was the mental, the intellectual age, that was important. Without it there was every possibility of going seriously wrong. Dr. Maitland Radford's reference to the golf course applied, in the case of women, to the cinema, which, in providing an escape from the dull cares of life, indicated deficiency in the present-day emotional life of the people. The names of the great psychological theorists had not been mentioned by the opening speakers. It would be interesting to learn from them who, in their opinion, had made the greatest contribution to psychology. If it were recognised that the majority of neuroses and behaviour problems were due to bad parental discipline, then it must follow that the average parent was, in fact, physically and otherwise unfitted to bring up children, and that some environment for the child, other than that of the average home and family, must be found. The difficulties of bringing up one or two children, he claimed, were greater than in bringing up seven or eight.

Dr. Irene B. M. Green (Assistant Medical Officer of Health, Norfolk County Council) gave it as her experience that maladjusted children were not discovered at ordinary routine medical inspections. She took a great interest in the mental side, and had found that many of the younger teachers were very keen. Collaboration between school doctor, teacher and parent was extremely valuable in the care of the child.

Dr. C. F. White (Medical Officer of Health, Port of London) sought the view of Dr. Wilson on the value, if any, of discipline in the school, in home life, and in industry. In the case of the tramp steamer, certainly, the difference between a happy ship and an unhappy one was not always a question of wages; it depended largely on the type of discipline on board. Provided it was of the right kind it could prove a great factor in the happiness of the crew, the members of which might be separated from their families for long periods.

Dr. A. J. Smyth (Assistant Medical Officer of Health, Borough of Cambridge) said that it had been stated that the large majority of adult neurotics resulted from mistakes in childhood. Was it necessary to go back to those mistakes? Were there not other methods of adjustment that could be employed?

Dr. Wilson, replying to questions, said that the percentages of psychological cases were not his own, but those compiled by Sir Walter Langdon Brown, who had secured them from a number of general practitioners, many of whom had put it as high as 75 per cent. and none at less than 40 per cent. With regard to a definition of "neurotic," he would say that the neurotic was an individual suffering from symptoms, mental or physical, which concentrated the attention of the patient upon those symptoms to the exclusion of the real problem. As to Dr. Smyth's question—must we get back to the earliest mistakes of childhood?—this was seldom done at the London Child Guidance Council Clinic. The attempt there was to make an adjustment as rapidly and as satisfactorily as possible. On the point as to whether there was necessity to speak of the fourth factor, he had to differ from the questioner. There were many people with intellectual deficiencies, with physical handicaps and with environmental difficulties who did not become neurotic at all. With regard to poverty, this was certainly a very serious handicap, but was by no means explained by the unemployment question. The outlook of the individual who had to face such difficulties was often a determining factor. Referring to the Hadow Report, he agreed that obviously there were circumstances in which to make a division between the age-groups 7-11 and 11+ was difficult and needed a great deal of adjustment. Educationists were trying to widen the scope of their division by arranging, in ordinary schools, classes in such a way that variations that occurred in individual children might be catered for, the children receiving an adequate amount of coaching in bad subjects and going into a particular class for others. With regard to schools of psychology, he confessed that he was an eclectic, and tried to see the best of all schools. At the London Clinic, psychologists endeavoured to smooth out the tangle as rapidly as might be, but in order to do so it was essential to get children in the early stages of neurotic trouble. Though the psychologists did not secure all of them as a result of school inspection, an enormous number of children was referred to them by school medical officers who realised that something was wrong. He agreed entirely with Dr. White regarding discipline on board ship; indeed, it seemed to him that what all children were needing was the support of reasonable discipline, though sometimes an altered type of discipline was necessary. It was a *pis aller* to take children away from their home. Where the home conditions were unsatisfactory, an effort had to be made to alter them and try to help adjustment to the family. An answer to the question of how to make the treatment effective, he thought, was summed up in the annual report of the Chief Medical Officer of the Board of Education for the year 1934. Speaking of child guidance clinics, Dr. MacNalty said: "In a number of areas, including Derbyshire, Reading and Bristol, where no clinic has been available, energetic and interested school medical officers have devoted some of their time to examining and treating difficult children, and have properly called their work child guidance, although no clinic in the ordinary sense of the term may have been established." Further, the concluding paragraph of chapter IX of the report showed how the Board were prepared to finance

psychological work in suitable areas and under suitable conditions:—"It will be noted that the Board's action in approving the establishment of a child guidance clinic as part of the school medical service in Birmingham is in line with the general principles of English educational administration—to wait until a new development has shown its worth under voluntary management, to note whether there is a widespread desire for extension of that development (as they have noted the work and comments of school medical officers in the past five years), and then to permit extensions by local authorities in suitable cases which are kept under review."

Dr. S. W. Savage, who also replied, suggested that a "neurotic" might be defined as an individual who lived on secondary mechanisms instead of primary mechanisms. His experience was that very few psychological cases were detected at routine inspections owing to the rush and bustle of the work. Moreover, the psychological child was apt to behave exceptionally well on those occasions, and was therefore less likely to be discovered.

A hearty vote of thanks, moved from the chair, to the readers of the opening papers, was carried enthusiastically.

Dr. A. SALUSBURY MACNALTY (Chief Medical Officer, Ministry of Health) will deliver a Chadwick Public Lecture on "Epidemic Poliomyelitis—Epidemiology, Causes and Prevention," at the Royal United Service Institution, Whitehall, London, S.W.1, on March 19th, 1936, at 5.30 p.m. The chair will be taken by Sir James Crichton-Browne (Chadwick Trustee). Admission to all Chadwick Public Lectures is free and no tickets are required.

A SESSIONAL MEETING of the Royal Sanitary Institute will be held at Ipswich on Saturday, March 14th, 1936, under the chairmanship of Mr. W. T. Creswell, K.C., Deputy Chairman of the Council of the Institute. At 10.30 a.m., members will meet at the Town Hall for visits to a milk pasteurising plant, a new branch clinic, a controlled refuse tip, a new car park and underground conveniences, and the bacon factory of Messrs. Harris (Ipswich) Ltd. At 2.30 p.m., in the Town Hall, there will be discussions on "The Disposal of House Refuse by Controlled Tipping," to be opened by Mr. E. McLauchlan, Borough Surveyor, Ipswich; and on "Baths and Bath Water," to be opened by Dr. A. M. N. Pringle, Medical Officer of Health, Ipswich, who is also acting as Hon. Local Secretary of the meeting.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

The Thanks of Her Majesty Queen Mary.

The Council meeting of February 21st must have been both the most prolonged and the most controversial of any recently held. Almost the only matter that did not give rise to argument was the report by the Executive Secretary of the reception of acknowledgment on behalf of His Majesty the King, Her Majesty Queen Mary and the Princess Louise of copies of the February number of PUBLIC HEALTH, in which attempt was made to voice the sorrow of the Society at the passing of King George V, and their loyalty to his successor, King Edward VIII. Particularly it was noted that Queen Mary had expressed a wish that, to all members of the Society, Her Majesty's "warm and grateful thanks for this thought for her in the irreparable loss which she has sustained in the death of our late beloved King" should be conveyed.

The Council Meeting.

It was on items in the report of the General Purposes Committee that the bulk of the controversy arose, and this in spite of the fact that that body had done its best to perform the functions entrusted to it and clear away difficulties and show the way to a decision that might be agreeable and generally acceptable. The first matter leading to discussion was a disciplinary one, and then came the question of the salaried service of midwives. In regard to this latter, views varied, much being said for and against the acceptance of the suggestion of the Committee that the Society should support generally the representations made to the Ministry of Health by the Association of Municipal Corporations, and press that all maternity and child welfare authorities employing a whole-time medical officer of health should be local supervising authorities and should be responsible for the provision of whole-time salaried midwives for their respective areas, as outlined in the memorandum. Mainly it was round this last that argument surged, officers of county councils being naturally strongly against. Voices in favour seemed conspicuous mainly by their absence, largely no doubt because representatives of the type of local authority

referred to in the recommendation were absent from the meeting. Eventually, modification of the recommendation of the General Purposes Committee had to be accepted, partly to diminish the stress placed upon the advisability of increasing the responsibilities of maternity and child welfare authorities and to secure that the request of the Ministry of Health for an expression of opinion by the Society should be met.

The Public Health Consolidation Bill.

Other matters upon which there was talk included the draft Public Health Consolidation Bill—the suggestions of a special sub-committee as to alterations of a minor character receiving acceptance, members at the same time being invited to send in any notes they may have made as to matters calling for amendment or attention; the training of health visitors—an invitation to join in discussions with the Women Public Health Officers' Association and the College of Nursing being refused; child guidance service in rural areas—the Committee's suggestion that the Council should receive a deputation from the Child Guidance Council being refused and instructions given to the Committee to arrange themselves to receive representatives of the body mentioned. Decisions reached by the Committee on other matters, whether or not they involved recommendations, received approval. For itself the Council decided it could not then approve the formation of a County Borough Medical Officers of Health Group within the Society; that at the meeting of the Royal Sanitary Institute at Southport the President should be the representative; on the Central Midwives Board, Dr. J. J. Buchan; on the National Baby Week Council, Dr. Cassie and Dr. Fenton; and on the National Milk Publicity Council and British Health Resorts Association, respectively Drs. Orr and Wilshaw.

A Discussion on River Pollution.

Possibly it was because their meeting had lasted so long that members of Council found it impossible in any numbers to attend the ordinary meeting of the Society and hear the most excellent and instructive paper on

"Prevention of River Pollution" by Dr. Ash of Derbyshire, and join in the very useful discussion that followed it. If they had this for an excuse they were in a better position than many other members of the Society to whom it might have been supposed the subject was of interest. Actually this meeting was the worst attended of any so far held this session, and grateful as all must be to Dr. Ash for consenting to be one of the contributors to the session's programme at all, even more should they be grateful to him for agreeing to read his paper to a gathering so small as that he had to confront. One consolation he had, however, was the success that attended his efforts to stimulate discussion. As a matter of fact, the talk that commenced immediately Dr. Ash ceased went on much longer than is generally the case, and even after seven had struck there were still things left to be said and people anxious to say them. River pollution, it may be supposed, actually affects only a comparatively small proportion of members of the Society. Those it does affect it concerns very deeply, which no doubt accounts for the fact that, though the attendances were few, those who were present came because they wished to hear or had something to say and a desire to take part in a discussion.

The Joint Tuberculosis Council.

The meeting to hear Dr. Ash was not the last at the House of the Society for the week ended February 22nd. Late on the Friday evening there was a meeting of the Tuberculosis and Dental Officers' Groups and of the Maternity and Child Welfare Group; and on the Saturday morning some, at any rate, of those who had been to the meeting of the Council or the Society or to one or other of the Group meetings were early at Thornhaugh Street to attend the meeting of the Joint Tuberculosis Council. Though actually without any definite connection with the Society, this body does work and carries out investigations that are of the deepest interest and importance to the health service, as indeed to the public health generally. Reports of the meetings, thanks to the energetic secretary—Dr. Ernest Ward—are submitted for publication in PUBLIC HEALTH, and the Society enjoys the advantage of reading of what has been done. In due course report with regard to the meeting on Saturday, February 22nd, will

appear, and the position in connection with investigations now in hand by various distinguished authorities on tuberculosis will be made known. Being urged by the secretary to undertake and carry out research into problems of tuberculosis is not the only benefit attaching to membership of the Joint Tuberculosis Council. Annually after the February meeting, the Chairman of the Council—Dr. Lissant Cox—one of the most widely known and active of tuberculosis officers—requests the pleasure of the company of his colleagues on the Council at lunch. Fortunately, he does not limit his invitations to the Council but extends them to include other guests, some of whom may be officers of the Society.

And so to Lunch.

The luncheon following the Council meeting of Saturday, February 22nd, was even more noteworthy as a function than usual; Dr. MacNalty being present, and Dr. Savage, President of the Society of Medical Officers of Health; Sir Henry Gauvain, Captain G. S. Elliston, M.P., and Dr. Horner of the *British Medical Journal* and Dr. Morland of *The Lancet*—these two latter representing what Dr. Lissant Cox described as "pure editorship," the "unpure" being represented by, amongst others, the honorary editor of PUBLIC HEALTH. A speech of real attractiveness and importance was contributed by Dr. MacNalty in response to the Chairman's toast of his guests. In what he said, Dr. MacNalty revealed how strong is his interest and concern in the problem of tuberculosis, how intense his belief in the value of the Joint Tuberculosis Council as a contributor to the solution of the problem, and how sincere his desire to assist the Council and to take advantage of the work it is engaged upon. Sir Henry Gauvain, who proposed the toast of the Council, and Dr. Ernest Ward, who responded, made excellent contributions also, the former recounting some of his many and strange adventures and of dangers passed in the course of the round-the-world journey to the British Medical Association meeting in Australia. As for Dr. Ernest Ward, as might have been expected, he indicated new lines of research for the Council and its committees. As these involved a prolongation, almost indefinite, of the existence of the Council, with meetings in February of many years to come, and the possibility of invitations by the

Chairman to lunch afterwards, the revelation that the field of research was still of enormous extent was received with a satisfaction not much less marked than the enthusiasm that greeted the toast of the health of the Chairman and host, suitably proposed by Dr. Hawthorne.

Retirement of Surgeon-General Cumming.

On February 1st last, Surgeon-General Hugh S. Cumming retired from the office of Surgeon-General in the United States Public Health Service. The regret with which this

was learned is particularly keen since it was on health grounds that the determination was made to give up a position which all of his many friends in this country will readily agree General Cumming, for the record period of 16 years, graced with so much distinction. The hope is entertained that now that he is free from the cares of an office which carries grave responsibilities, he will have an opportunity to regain health and strength. There is the further hope also that opportunities of seeing him more frequently than in the past will be presented to us here.

P.

Parental Vaccination and Transmissible Immunity.

By JAMES BENNETT, M.R.C.S., L.R.C.P. (LOND.), D.P.H., Medical Officer of Health, Warrington Rural District, and Golborne and Lymm Urban Districts; Public Vaccinator, Warrington County Borough.

On the practical aspects of vaccination there should be no one better qualified to shed light than a person who has served as a public vaccinator, and in this paper, read at a meeting of the North-Western Branch on December 13th, 1935, Dr. Bennett, who has acted in this capacity for some thirty years, drawing upon a wealth of experience submits a number of views that are not only interesting but extremely stimulating.

MUCH controversy has arisen in recent years as to the relationship of variola major (the old type of smallpox) and variola minor (the present day type in England) and by some it has even been doubted whether there is any relationship at all. As, however, both can be prevented by the same agency, namely, vaccination, this relationship would seem to be firmly established. Given that they are related but that there are considerable differences in the clinical manifestations of the two, there may be room for very big differences in administrative procedure in the face of an outbreak of the one or the other; consequently it is necessary to explore every avenue which might possibly throw any light on the subject, and my reason for quoting certain experiences gained in my work as Public Vaccinator during a period of 34 years is that such experiences might give some guidance as to one particular aspect of this relationship and might lend support to certain ideas of modification of quarantine and isolation hospital treatment.

It has always been recognised that as regards certain diseases now classified as notifiable infectious diseases, an invasion or epidemic brings with it a certain degree of subsequent

communal protection, by rendering those who have had a particular disease safe from a further attack and, therefore, unable to communicate it to others. Further, it has never been proved that some degree of this acquired personal immunity cannot be handed on to the next generation. Indeed, the very mildness of certain infectious diseases in these days suggests that there is some hidden force at work which definitely inhibits the destructive power of specific germ elements—present-day scarlet fever suggesting itself as a typical example.

It is a well-known fact that wherever smallpox has invaded an unvaccinated community for the first time its virulence has been pronounced and its capacity for destruction very great. Subsequent epidemics in the same community have successively lessened in intensity and the disease has been of a milder nature.

The history of smallpox in isolated parts of the world like Iceland and Greenland is interesting. In 1707–90 years before Jenner's epoch-making discovery—we learn that traders from Denmark carried the disease to Iceland and that 18,000 out of a population of 50,000 died. Following one of the outbreaks in Iceland the disease extended to Greenland and so

decimated the population that the existence of the country was forgotten for a very long time—a not impossible fact having in mind the limited means of transport in those days. Similar experiences in many other lands might be quoted.

Subsequent attacks in these insular or isolated populations, which populations only occasionally came into touch with the rest of the world, go to show that the severity of the disease declined.

We ask: "Why was this?" One possible explanation may be that by intermarriage among those who had survived the smallpox, a degree of inherited immunity to the disease was handed down, and although subsequent generations might develop the disease, the sting had been drawn by and through parentally transmitted immunity. I suggest that this was so, and that vaccination is similarly capable of post-natal protection.

Looking at the history of smallpox in this country, it would seem that during the last century there was a periodicity of about 25 to 30 years between pandemics, roughly a generation of fresh lives. Can we infer from this that the children of these smallpox survivors brought with them into the world an element of protection?

One has no desire to dogmatise on this matter, but possibly the thought is worth consideration, and it is raised in order to discuss whether there is anything in relation to vaccination analogous to that supposition.

This brings me to the subject matter of this address which is: whether the protection of parental vaccination can be handed down to subsequent generations, and if so, can it be the cause of the mildness of smallpox to-day?

Lack of knowledge prevents me entering into the deeper details of the bacteriology and biology of vaccinia, but perhaps one may be permitted to give one's practical experiences for what they are worth in connection with an apparent analogy gained from certain observations related to vaccination, with the object that the assumptions may be disproved, or if not disproved that they may possibly assist in elucidating some of the abstruseness of mild smallpox.

The experiences referred to were in connection with two outbreaks of smallpox in the County Borough of Warrington, which, situated as it is on the main cross-roads running from east to west and north to south, has always been specially vulnerable to smallpox owing to the

number of tramps using its institutions. Incidentally, it is a town which has produced much valuable information on the question of smallpox, not only on account of its frequently occurring epidemics, which have been fully chronicled, but also owing to the fact that bills of mortality, collected with meticulous care by competent persons, exist for many years prior to the introduction of vaccination or of official death registration, and serve as a most valuable source of comparison between smallpox in pre- and post-Jennerian days.

The two outbreaks occurred, one in 1903–4 and the other in 1927–28.

During both of these, many girls between the ages of 15 to 20 were vaccinated or re-vaccinated. As time went on, some of these girls became the mothers of children to be vaccinated, and after both epidemics it has been my experience to note that their children up to the age of about four months were far more difficult to vaccinate successfully than were the children of mothers who had not been recently vaccinated, and even after four months the "takes" were modified in degree as compared with "takes" in the children of other mothers vaccinated with the same strain of lymph. So pronounced was this about the years 1908–9–10, that on the visit of the then Local Government Inspector of Vaccination (Dr. E. P. Manby), I called his attention to the matter of which at the time he took notes as being of more than ordinary interest, and actually visited some of the cases which had required a second vaccination before success was obtained. Unfortunately, during those years I did not specially note in the vaccination register the vaccinal condition of the mothers whose children failed to take or took only in a very mild way with only one or two insertion successes instead of four per child. I did, however, question such mothers and the answers invariably were that these mothers had been re-vaccinated during the outbreak three, four or five years ago as the case might be.

It should be remembered that public vaccinators rarely got "failures to take" in normal four-mark times, and very few insertion failures, as is testified by the returns of all government lymph used, which returns are preserved at the government lymph establishment at Hendon and which show a general average of about 99 per cent. case successes and about 97 per cent. insertion successes. Incidentally, to have to sign a certificate of insusceptibility because a child has failed to take at the third time of vaccinating has never been my lot—indeed

on only about three or four occasions in tens of thousands of vaccinations has it been necessary to vaccinate a third time, and then always with success. These results only go to prove that it can scarcely be considered that "failure to take" in the case of the children of the re-vaccinated mothers could be attributed to any lack of care or skill on the part of the public vaccinator.

Another outbreak of smallpox in 1927-28 was again the occasion of a number of girls being re-vaccinated, and again during the three and a half years following, whilst the four-mark insertion continued, my experience of 1907-10 has been repeated and "failures to take" were almost invariably the children of such re-vaccinated mothers.

This time, however, particulars as to the re-vaccinational condition of the mother were inserted in the registers. Out of 51 failures during these three and a half years prior to one-mark vaccination, 36 have the significant entry in the "remarks" column of the vaccination register: "mother re-vaccinated three, four or five years ago."

Probably it will be suggested that the number of cases on which I base my assumption is very small. This must of necessity be so for the field of observation is limited to the recently married re-vaccinated and child-bearing girls who, at the most, form only a very small proportion of the total child-bearing mothers during the three and a half years under review in that particular vaccination area, the number of the latter referred to me being about 1,400. A threepenny piece by the side of a five shilling piece would certainly over-estimate the proportion of the one group to the other, yet out of the threepenny piece we get 36 cases and out of the five shilling piece we get only 15 cases, and it is significant to note that the latter 15 cases of "failure to take" are just about the average normal failures common to all public vaccinators, namely, about 1 per cent. It will be obvious, therefore, that though the figures are small there must be some specific cause at work regarding the former.

Considering this "failure to take" question, it would seem that the figures—which have come in two distinct and separate waves following similar circumstances—justify some thought, at any rate, whether such thought leads us anywhere or not.

One can only give one's own experience (as I have not been able to find literature on this particular aspect of the subject) and that

experience is that maternal vaccination in a varying degree does pass to the child, and that the child of a recently vaccinated or re-vaccinated mother will be resistant to its own vaccination up to about 12 to 16 weeks, as it is under three months' old that nearly all the cases of failure have occurred. One does not forget that nearly all children are more difficult to vaccinate successfully when they are very young, but the fact remains that few, except the children of comparatively recently vaccinated or re-vaccinated mothers failed at the first attempt during the years referred to.

A noteworthy fact is that after four months old, that is six to eight weeks after the initial failure these children invariably take but that the "takes" are less vigorous and also retarded as compared with the "takes" in even very young children on whom the same lymph was used. This clearly indicates that although success is ultimately obtained, there is still an inhibitory influence at work, and this influence, for anything we know to the contrary, may be active for many years and may have a modifying or retarding effect through more than one generation.

In contrast to this delayed and inhibited degree of "takes" in the second vaccination of such children, is my own experience and that of other public vaccinators, including Dr. A. E. Cape, who was a member of the last Royal Commission on Vaccination, and Dr. Kennard, of Whitechapel, that a second vaccination in a child whose mother had not been recently vaccinated or never vaccinated, is invariably accelerated, *i.e.*, a ninth day appearance on the seventh or eighth day, and the reaction is intensified above normal. Here again is a definite difference between the two groups.

Smallpox history and my vaccination experiences both lead me to suggest that some degree of protection is capable of transmission, and the question arises, if this is so, can it have any relation to the modified form of smallpox now generally known as variola minor? Let us consider a few points.

In the first place we have learned from pre-Jennerian history that after the first invasion of smallpox into geographically isolated areas, such as Iceland and Greenland, the disease lost some of its virulence for at least a generation. Can this be due to any other cause than the inheritance of some antigenetic force from a parent who has been rendered immune by having had the disease?

In the second place there are the experiences I have related in connection with the transmissibility of the effects of vaccination. Furthermore, it does not necessarily follow that the antigen to the disease has altogether disappeared from a child because at a later date it becomes capable of "taking" vaccination, which "takes," as we have seen, are even then usually much milder than normal. Such a child, even when it becomes a parent, in addition to its own vaccination may carry with it an additional inherited force from parental vaccination, which fortifies its own acquired force and this could perhaps be best expressed as "bred-in immunity."

In support of my suggestion that modern smallpox may be modified by a degree of inherited immunity either from the person having had the disease itself or from vaccination, is the broader observation that in practically all the more civilised and, therefore, vaccinated countries in the world, the disease which formerly was of the major type is now definitely of the minor variety, whilst in countries which have never known complete vaccination, the major type is even to-day endemic.

But, you may say, in countries where it is endemic it should have long since bred itself out if my theory is correct. My answer to that is that never in any outbreak of any infectious disease does everybody take that disease (only a percentage take it) and consequently a great many are totally unprotected. This only partial protection of a community contrasts strongly with the degree of protection obtaining in a well-vaccinated country in which practically every single individual is vaccinated and where consequently the severe type of the disease, having no real virgin soil on which to settle, cannot get going and only an attenuated form is forthcoming.

But, you may also say, both types of the disease can exist side by side. Quite so, and those with the minor form may be and probably are, the children of those who have had the disease, whilst those with the severe form have no such parental protection. My submission is that this lends support to my theory. Experience has also taught us that the ratio of the "death" incidence of smallpox has fallen to a greater degree than the "attack" incidence among those who have at some time been vaccinated, which indicates a restraining influence even in the presence of the disease, as compared with pre-vaccination days.

Also, the period of incubation in variola minor does not conform to a practically definite 12-day period as did the major type—evidence again that there is some restraining influence at work preventing the "burst out" of the disease and modifying the "burst" when it does come.

Nor must we forget that the infants of mothers who have had smallpox during gestation are for a period insusceptible to vaccination or very difficult to vaccinate successfully.

Some may say that supposing it is assumed that the arguments are right, can it be anything more than of mere academic interest? Can it be of any practical value, for that is the acid test?

If it is admitted that parental transmission of immunity does exist, and that each successfully vaccinated parent hands down some degree of protection to its child, then, seeing that two or three generations of the whole population in this country have been, with few exceptions, successfully vaccinated during the last 60 years, there must be a "bred-in" immunity amongst those now living which will take one or more generations to breed itself out, the length of time depending on whether the population continues to be vaccinated or not.

Whilst this "bred-in" immunity lasts there would seem, therefore, little likelihood of even the present-day unvaccinated part of our population ever developing the severe type of smallpox, if they are the offspring of efficiently vaccinated parents, for even they have inherited some protection. If this can be relied on—and here comes the practical point—then the one time necessary procedure and elaborate machinery for the control of smallpox with all its costliness may be tremendously modified with perfect safety. This would mean that many of our unoccupied smallpox hospitals may, with perfect ease of mind, be at once used for other purposes.

But a note of warning is necessary, and it is that unless efficient—and I stress the word—infantile vaccination is carried out persistently in every generation and this "bred-in" immunity maintained, a future generation will of a certainty revert to the old type of severe smallpox, requiring again all the elaborate machinery necessary for its control and all the disorganisation of the work of the health departments which has been the bane of medical officers of health in the past.

Conservative Treatment of Chronic Mastoid Disease.

By ALEXIS TUMARKIN, M.B., F.R.C.S. (EDIN.), D.L.O. (LOND.), Honorary Aurist, Bootle General Hospital.

The subject which Mr. Tumarkin discussed with the North-Western Branch on November 8th, 1935, is one that has very real importance, and not only the Branch but the Society as a whole must be grateful to him for his paper and for the very great pains taken to ensure that the information given shall be as helpful and practical as possible.

CHRONIC infection of the tubo tympano mastoid tract profoundly affects the general standard of national health and wealth. It produces cripples of varying degree, from those simply hard of hearing down to the deaf mute imbecile. It entails the colossal expense of the special schools and it hampers hundreds of thousands in their struggle for existence. Finally, every year, many thousands are destroyed by one or other of its fatal complications. Now in any individual case the aurist can usually achieve some sort of amelioration.

There can be no doubt, however, that the sporadic and unco-ordinated activities of the private practitioner, the municipal clinic and the hospital out-patients' department fall very short of the ideal.

I shall confine myself to the problem as it affects children. Actually most of my remarks apply to adults as well, and in any case most adult cases date from childhood.

Let us consider four clinical types so that we may go on to envisage a scheme to deal with them.

(A) Many cases begin in earliest infancy.

(B) The fevers are responsible for a distinct group.

(C) The simple pyogenic type such as occurs in influenza, pneumonia or, it may be, primarily.

(D) The relapsing type.

Dealing with these groups in detail :—

(A) Cases occurring in early infancy are characterised by :

(a) Difficulty in diagnosis. The infant is unable to describe its pain and so the condition is rarely diagnosed until perforation has occurred.

(b) Perforation (fortunately) early.

(c) Satisfactory resolution in most instances owing to the fact that the complicated adult arrangement of air cells has not yet appeared, and drainage is comparatively good.

Unfortunately, there is a tendency among parents and even practitioners to regard this condition in infants as trivial. Further, this indifference is paralleled by the inadequacy of the provision made by the public health authorities. It is a noteworthy fact that, even in districts where ample provision is made for school children, the pre-school infant is more or less ignored. The result is that the occasional obstinate case is allowed to drift on into an advanced stage in which radical surgery is unavoidable. It is very desirable that doctors in charge of infant clinics should make a practice of referring all such cases to an aurist without delay. We have made such an arrangement in Bootle and our results are excellent.

(B) My next group is the type occurring in the course of the exanthems. Such cases are already in hospital and so should be able to get the most assiduous and expert attention. I believe I am right in saying that this is far from being the case. Generally speaking, there is room for very considerable improvement. The actual treatment is in the hands of nurses who, with the best will in the world, are quite inefficient unless they have been specially trained.

Consider the drum in, say, scarlatina otitis ; bathed on each side by pus teeming with streptococci. These are histolytic as well as hæmolytic, and it is small wonder that so much destruction of the drum can occur. It is liable literally to dissolve away.

What can we do about it ? Three things.

(a) Stop the suppuration as quickly as possible. Here I would refer to a small series of cases which I treated at Linacre Fever Hospital recently by courtesy of Dr. Wood, the Medical Officer of Health of Bootle¹. With the enthusiastic co-operation of the nursing staff, I arranged for these children to receive the most intensive treatment. I myself attended several times a week at first, to do the ears myself,

and also to lecture to the nurses and demonstrate the principles of the treatment. In suitable cases ionisation was used, and where necessary the mastoid was opened. The beneficial results were dramatic and unmistakable. Whereas before it was quite common for an ear to go on running for many months, we were able to reduce this time to three or four weeks and, of course, in the milder cases, to even less than that.

(b) and (c) These procedures are still essentially experimental and I mention them with all due reserve. To begin with, we are attempting to discover an antiseptic albuminous substance which will absorb the histolysin and also destroy or inhibit the streptococcus. Secondly, we have had some quite encouraging results in our efforts to close permanent perforations with skin grafts. In cases which have been discharging for lengthy periods, and occasionally after a mastoidotomy, we can recognise that a perforation is liable to be permanent. Skin grafts should be applied when the drum is in that juicy, sticky stage, just after discharge has ceased, but before fibrosis and sclerosis have supervened. Possibly the graft acts merely as a splint across which the epithelium spreads from the margins. Even so, however, I believe that it produces some vital stimulation to this ingrowth, and so is more successful than an artificial splint. I regard this closure of perforations as very important in the prevention and cure of chronic mastoiditis, and I shall return to it later.

(C) My next group is the simple pyogenic type, which occurs and is treated at home. It thus derives its importance from the fact that it is liable to have drifted into a chronic stage before it comes under efficient treatment. I would earnestly urge a general review of the provisions for the early recognition of acute otitis media. In that way, I am sure we could do much to prevent the development of chronic disease.

On that subject, I have two suggestions to offer :

(a) Make acute otitis media a notifiable disease. In the early stages of this disease, the child is usually ill at home. It can only get efficient treatment if the following three conditions are satisfied :—

(i) The parent thinks it is worth bothering about.

(ii) The parent has money to pay the doctor.

(iii) The doctor has the necessary skill and instruments.

In practice, these conditions are rarely satisfied and in my opinion the problem can only be solved by making otitis media acuta notifiable even as is ophthalmia neonatorum.

Let the aural branch of the public health department be informed without delay of the occurrence of a case of acute otitis. Let specially trained nurses be available to visit such a case until it is able to attend the clinic. Let the aurist see the child without delay if the progress is unsatisfactory. Co-operation, continuous supervision and adequate treatment—surely these are not too much to ask.

Is a deaf child so much less of a cripple than a blind child ?

(b) My second suggestion under this heading is for the more extended use of the gramophone audiometer. This instrument has been designed so that any trained nurse or operative can examine the hearing of, say, 20 children in as many minutes. Such a test could be applied regularly and would help to comb out many little sufferers who might otherwise escape notice for long enough. Remember you cannot depend on mothers or teachers to recognise these cases. Often a child is only brought for treatment because of deafness. But if only one ear is diseased there will be no noticeable deafness. Indeed, it is amazing how acute a child's hearing remains even when both ears are pouring pus.

Early recognition and treatment are of paramount importance. During the last three years, I cannot recall a single failure in my treatment of acute or sub-acute otorrhœa. On the other hand, my ward is filled and my out-patients' department thronged with chronics in whom I have tried by operation and frequently with but indifferent success, to compensate for previous years of neglect.

The relative failure of surgical treatment of these chronic cases is positively tragic when it is contrasted with the brilliant success of conservative treatment in the early stages.

Until, however, early intensive treatment becomes universally available, we shall continue to be confronted by this chronic suppuration, and we must not relax our efforts to find methods of curing it. Surgery, as I have said, is highly unsatisfactory. In 1933² I decided to investigate further the possibilities of conservative measures.

About a score of these children were admitted to hospital and submitted to intensive treatment.

Ionisation and rigorous asepsis were our main lines of attack, but no possibly profitable line of treatment was ignored. Let it be remembered that all of these children had already had the benefit of quite efficient treatment in an aural out-patient clinic. Most of the cases had been running for several years. A few were really admitted for a mastoidotomy, but were given the opportunity of these conservative measures as a routine preliminary. The results were gratifying. Indeed, in some cases, they were literally amazing. Nearly 75 per cent. of our cases were cured. In fact, I may say that to-day I should refuse to consider radical surgery in a child with chronic disease until this method had been given a most extended trial.

The results in sub-acute inflammation of admission to hospital are equally gratifying. I have repeatedly shown that an acute otorrhœa which has drifted on into the fourth or fifth week without improvement can be rapidly cured by admission to hospital.

Unfortunately, it necessitates the most painstaking and assiduous treatment under expert supervision. Furthermore, it raises the question of expense and accommodation. Such questions are outside my sphere. I do say, however, most earnestly and emphatically that the conservative treatment of chronic and sub-acute otorrhœa under hospital conditions is of paramount importance in the solution of this problem of the deaf and that its success amply justifies any expense involved.

We must remember that the word "cured" merely implies dried up. Suppuration has been suppressed. In most cases, however, the drum has been almost entirely destroyed. Ossicles are mutilated, and the progressive fibrosis of intratympanic structures leads to advancing deafness. Moreover, such an ear is always liable to flare up again. This leads me to my fourth heading.

(D) I am convinced that the really hopeless types of otorrhœa which will not respond to any line of treatment are usually inaugurated by a series of relapses, in the early stages of which they are easily curable. Can we do anything about this? Do we know anything of the reasons why relapses occur?

The standard contributory causes are well known and I shall not waste time discussing them. Unhealthy adenoids, faulty hygiene, inadequate diet, hypovitaminosis, etc., are all of paramount importance and are fairly adequately dealt with by our present system.

There are two factors which do not receive due attention. These are (a) sinusitis and (b) the dry perforation.

(a) It is not sufficiently realised that paranasal sinusitis is by no means rare in children. It is responsible for many cases of mouth breathing which are naturally not improved by repeated curettage for non-existent adenoids. Diagnosis and treatment both present definite technical difficulties. It is so much easier to remove tonsils and adenoids or order breathing exercises that the possibility of sinusitis is frequently not even considered. Nevertheless, rational treatment is usually successful and produces the most gratifying results. Remember that the child is suffering not only from an impaired air-way, but also from septic absorption. The naso-pharynx is in a state of unhealthy congestion, and any mid-ear disease is quite incurable, or if it does subside for a time will inevitably recur. Operation may in exceptional cases be necessary but usually cure can be obtained by regular lavage of the sinuses. This we do nowadays by the negative pressure method of Proertz, using a weak solution of ephedrine in normal saline. This method is quite painless, and the most nervous child will readily submit to it. The technique is simple, and any good nurse can be trained to administer it.

(b) My second factor in the production of relapses is the permanent perforation. I referred before to the evil effect of prolonged suppuration especially in scarlatina in dissolving away the drum. Remember that the outer ear is normally a *cul de sac*. Similarly the eustachian tube and middle ear constitute a *cul de sac*. In each case the drum acts as the dividing wall. Clearly a perforation completely alters this and allows the passage of infected material into the middle ear either from the naso-pharynx or from the outer world. For instance, as I pointed out last year,³ an indifferent swimmer is very liable by breathing at the wrong time under water to get his mouth and nose full of water. His subsequent convulsive efforts, snorting, swallowing, holding his nose and so on raise the pressure in his naso-pharynx. At the same time the swallowing is opening his eustachian tube. If, now, there is a perforation of the tympanic membrane to act as a bung-hole the inevitable result will be that infected water will be driven into the mid-ear and otitis supervenes.

Again, consider the enthusiastic efforts of a harassed mother washing her offspring's ears. A suspension of mud in infected water is

vigorously massaged round the auricle to the accompaniment of yells and wriggles. The cartilaginous outer ear is compressed under this treatment, and again a rise of pressure in the outer ear drives infection through the perforation into the susceptible middle ear.

I am convinced that a perforated drum makes re-infection inevitable sooner or later.

The problem is grave, and its solution is as much in the hands of the public health authorities as the aurist.

For my own part, I have some hope that the method of grafting, which I have already mentioned, will enable us to deal with many cases. Also the incidence will be greatly reduced by the early notification and intensive treatment such as I have advocated.

A small percentage will persist and defy our efforts. In such cases there are two things we can do:—

(1) Educate the parents and the child to realise the grave danger which the ear produces.

(2) Stop the child swimming. Surely it is not impossible to cancel the swimming contracts of these kiddies. I am well aware of the difficulties in trying to keep a determined youngster from going to the baths. I am well aware of the advantages of his enforced weekly bath, of his learning to swim and so on. Nevertheless, they all, in my opinion, fade into insignificance when offset by the disadvantages and dangers of a septic ear.

We are now in a position to envisage a scheme which will deal with the problem as I have described it. I classify my suggestions under three headings:—

(A) For early recognition of the trouble:

(i) Compulsory notification of acute otitis media.

(ii) Routine periodic gramophone audiometry.

(B) For prophylaxis:—

(i) Education of parents and school teachers and the children themselves by means of pamphlets or in their hygiene lectures.

(ii) Cancellation of swimming contracts where necessary.

(C) For treatment:—

(i) Co-ordination. A central aural clinic should be in charge of every case from its very inception.

(ii) Prompt hospitalisation of sub-acute cases which threaten to become obstinate.

Automatically a case which has dragged on for four weeks should go into hospital.

(iii) Preliminary hospitalisation of chronic cases before considering operation.

(iv) Intensification of treatment in fever hospitals.

In conclusion, I hope that no one will accuse me of being unpractical or visionary. The procedures I have advocated clearly involve more work, more expense, more hospital accommodation and so on. Possibly we shall have to await the advent of nationalised medicine. Nevertheless, I have from practical experience, convinced myself that such an outlay would be more than compensated by the immediate and lasting benefits which would accrue.

REFERENCES.

- ¹A. Tumarkin. "Prevention of Deafness." *Eye, Ear, Nose and Throat Monthly*, Aug., 1935.
- ²A. Tumarkin. "Are Mastoid Operations Necessary?" *Eye, Ear, Nose and Throat Monthly*, May, 1935.
- ³A. Tumarkin. "The Bathing Pool and Deafness." *British Medical Journal*, Aug. 25th, 1934, vol. ii, p. 357.

"MODERN Hospital Construction—Hygiene, Ventilation, Heating, Plumbing, etc., in relation to New Methods and Materials" is the subject of a Chadwick Public Lecture to be delivered by Mr. Lionel G. Pearson, F.R.I.B.A., at the Royal Institute of British Architects, 66, Portland Place, London, W.1, on April 2nd, 1936, at 8.15 p.m.

DR. WINIFRED CULLIS, C.B.E., Professor of Physiology, University of London, and Dr. R. Cove-Smith, Physician-in-charge, Rheumatism Clinic, Hospital for Sick Children, Great Ormond Street, W.C.1, will lecture on "Keeping Fit," in the Great Hall of the British Medical Association, Tavistock Square, London, W.C.1, on Tuesday, March 10th, 1936, at 8 p.m. The lecture is the eighth "Sir Charles Hastings Lecture" inaugurated by the British Medical Association for the purpose of offering to the public information by the highest authorities on matters of general public health interest. Admission will be free, by tickets obtainable on application to the Financial Secretary, British Medical Association, Tavistock Square, London, W.C.1.

The Society.

Reports, Proceedings and Announcements.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, February 21st, 1936, at 2 p.m.

The President (Dr. W. G. Savage) was in the chair and there were also present Dr. Vynne Borland, Sir Henry Brackenbury, Drs. J. J. Buchan, Ethel Cassie, R. Veitch Clark, Captain G. S. Elliston, Drs. James Ferguson, A. W. Forrest, Sir Francis Fremantle, R. P. Garrow, W. W. Jameson, A. Joe, R. H. H. Jolly, G. W. N. Joseph, G. C. M. McGonigle, H. J. Milligan, Agnes Nicoll, W. Paterson, R. M. F. Picken, Charles Porter, T. N. V. Potts, T. P. Puddicombe, E. H. Snell, V. F. Soothill, J. A. Stirling, E. W. Caryl Thomas, A. G. G. Thompson, H. G. Trayer, A. A. Turner, Ernest Ward, H. Gibbons Ward, R. H. Wilshaw and F. T. H. Wood.

Apologies for absence were received from Drs. G. F. Buchan, W. M. Frazer, James Mair, G. H. Pearce and Mr. Rhys-Herbert, L.D.S.

Death of H.M. King George V.—The President reported to the Council that the Hon. Editor of PUBLIC HEALTH had caused to be sent to H.M. King Edward VIII, H.M. Queen Mary and H.R.H. Princess Louise, Duchess of Argyll, copies of the February issue of the Society's journal, in which on pages 161 and 162 sympathy was expressed at the death of the late King, and loyal expressions were offered to H.M. King Edward VIII. Dr. Porter's covering letters and the acknowledgments received were read to the Council.

Minutes.—The minutes of the last meeting of the Council held on November 22nd, 1935, and published in PUBLIC HEALTH, December, 1935, pages 92-96, were approved and signed.

Women Public Health Officers' Association.—A letter was received from the Secretary of the Women Public Health Officers' Association, in which she explained that the Executive Committee of the Association consisted of representatives from the twelve local centres and that some of the representatives had experienced difficulty in obtaining leave

of absence. It was proposed that in future there should be only four quarterly meetings at which the presence of provincial representatives would be required. The Association asked the help of the Society of Medical Officers of Health in the matter.

The Council instructed the Executive Secretary to circulate the letter from the Women Public Health Officers' Association to the Branches of the Society.

County Borough Medical Officers of Health Group.—A letter was received from Dr. R. H. Parry (M.O.H., Bristol) asking the Council to approve the formation of a County Borough M.O.H. Group in the Society. Dr. Parry stated that the proposal had the support of the M.O.'sH. of the following County Boroughs: Birmingham (Dr. H. P. Newsholme), Bradford (Dr. J. J. Buchan), Cardiff (Dr. J. Greenwood Wilson), Coventry (Dr. A. Massey), Glasgow (Dr. A. S. M. Macgregor), Leeds (Dr. J. Johnstone Jervis), Liverpool (Dr. W. M. Frazer), Newcastle (Dr. J. A. Charles), Newport (Dr. H. Catto), Plymouth (Dr. T. Peirson), Southampton (Dr. H. C. Maurice Williams), Wolverhampton (Dr. R. H. H. Jolly).

The Council considered this application at some length, and the view was expressed that the Branches should be able to cater for the needs of County Borough M.O.'sH. and that there should be no need for the formation of a special group.

The Council decided that the final decision on this matter should be deferred for twelve months and that the Branches should be asked to see whether their programmes could be adapted to meet the need in the minds of Dr. Parry and his colleagues.

Maternal Deaths due to Abortion.—The Council received a report from Dr. Stella Churchill of a deputation from the National Council of Women received by the Minister of Health, which had urged the Government to appoint a representative committee to enquire into the incidence of abortion and as to the law and its administration dealing with criminal abortion and attempted abortion, and to consider what measures, if any, medical, legal, social or administrative, were advisable to improve the existing position. Further, the

Council had asked that arrangements should be made forthwith to ensure that the figures as to maternal deaths attributable to abortion should be set out separately from the general returns as to maternal mortality in all future official returns.

Dr. Churchill explained in a covering letter that she had made it clear that the views expressed by her were not necessarily those of the Society, whom she represented on the National Council of Women.

The Council asked the Secretary to express their thanks to Dr. Churchill for her report of this deputation.

Report of the General Purposes Committee.—Dr. F. T. H. Wood (Acting Chairman of the General Purposes Committee in the absence of Dr. James Fenton) presented the report of the Committee arising from the meetings held December 20th, 1935, and February 7th, 1936, as follows:—

Your General Purposes Committee beg to report as follows:—

1. The Committee held meetings on December 20th, 1935, and February 7th, 1936, when the following members attended:—

December 20th.—Dr. James Fenton (Chairman), Drs. G. F. Buchan, J. J. Buchan, A. Joe, G. H. Pearce, R. M. F. Picken, Charles Porter, W. G. Savage, E. Ward and H. Gibbons Ward.

February 7th.—Dr. F. T. H. Wood (Acting Chairman), Drs. T. W. Naylor Barlow, G. F. Buchan, J. J. Buchan, A. Joe, R. H. H. Jolly, G. W. N. Joseph, James Mair, R. M. F. Picken, Charles Porter, Ernest Ward and H. Gibbons Ward.

2. *Election of Chairman.*—The Committee unanimously re-elected Dr. James Fenton as Chairman of the Committee for the session 1935-36. The Committee decided to elect Dr. F. T. H. Wood to be acting Chairman of the Committee during Dr. Fenton's absence in South Africa in the spring.

3. *Appointment of a Medical Officer of Health accepted by a M.O.H. in contravention of the Askwith Memorandum.*—At their last meeting the Council deferred taking action under Article 11 in the case of a Fellow who had accepted an appointment in contravention of the policy of the Society and the British Medical Association with regard to the Askwith Memorandum on Salaries, and referred to the General Purposes Committee consideration of correspondence to which the Northern Branch had drawn attention.

Recommendation.—The Committee are of opinion that the above correspondence reveals no further information in regard to the facts of the question at issue.

It having been moved that the Fellow in question be asked to send in his resignation, an amendment was proposed that he be admonished only.

The Council rejected the amendment, and the original motion was then passed by the necessary majority of two-thirds of those present and voting in accordance with the provisions of Article 11.

4. *Housing and Administration of the Society.*

(a) *Staffing.* In accordance with the recommendations adopted by the Council at their last meeting (see PUBLIC HEALTH, December, 1935, p. 93), Mr. G. L. C. Elliston took over duty as whole-time Executive Secretary on January 1st, his duties to include all secretarial and business work on behalf of the Society and the management of the advertisements in the journal. The Committee also approved the appointment by the Chairman of Miss Kathleen McDowell to carry out clerical work in connection with the Society's accounts, subscriptions, etc., at a commencing salary of £104 p.a. as from January 1st.

(b) *Letting of Offices.* At the February meeting of the Committee, the Hon. Treasurer reported that he had recently received an offer from the Society for Cultural Relations with Russia to rent the Council Room on the first floor and two rooms on the ground floor of the Society's house, for three years at £165 per annum to include rates and cleaning; and from the British Institute for Adult Education to rent the ground floor entire at £180 per annum including rates and cleaning. He said that the bodies mentioned above had been asked to make a joint offer with the object of letting the two floors simultaneously and that, alternatively, he had asked the British Institute for Adult Education to raise their offer for the ground floor to £200. The two bodies had been unable to make arrangements for a joint offer and the British Institute had been unable to raise their offer above £180. He considered that the acceptance of either of the above offers would involve an immediate removal by the Society and the loss of approximately £100 per annum until the remaining offices could be profitably let. In the circumstances, he could not recommend the acceptance of either offer.

Recommendation.—The Committee endorse the view of the Hon. Treasurer that the above offers be not accepted.

5. *Salaried Service of Midwives.* (See PUBLIC HEALTH, December, 1935, p. 92).—Since the last meeting of the Council, the Committee have had under consideration, the report adopted by the Association of Municipal Corporations in reference to the Joint Council of Midwifery's report, a confidential memorandum from the Ministry of Health on the proposed legislation, a letter dated January 7th, from the Secretary, A.M.C., to the Ministry, commenting on the above memorandum and observations on the Joint Council's report forwarded by the Metropolitan, Eastern, East Midland, Midland, Welsh and Yorkshire Branches.

On January 15th representatives of the Association of Municipal Corporations, including Drs. G. F. Buchan and R. Veitch Clark, were received by the Secretary to the Ministry and discussed the representations made in the A.M.C.'s letter. Dr. G. F. Buchan further submitted certain proposals for inclusion in the Bill which we have set out in our recommendation below. An assurance was given by the Ministry that,

in the event of the Bill on the basis of the present memorandum becoming law, the position of M. and C.W. Authorities which applied for powers as Local Supervising Authorities under the Midwives Acts would in no way be prejudiced.

Recommendation.—That the Council inform the Ministry of Health that the Society supports generally the representations made by the A.M.C. in their letter of January 7th with the modification set out in paragraph (a) below; the Society further supports the proposals put before the Ministry by Dr. G. F. Buchan on January 15th for inclusion in the Bill, *viz.*:—

- (a) That all maternity and child welfare authorities employing a whole-time medical officer of health should be local supervising authorities and should be responsible for the provision of whole-time salaried midwives for their areas as outlined in the memorandum;
- (b) That provision should be made for the elimination of the "pin-money" midwife;
- (c) That provision should be made for dealing with the independent practising midwife who may become old or infirm at a later date;
- (d) That provision should be made to enable the Ministry of Health to prescribe qualifications for whole-time salaried midwives.

and in addition the Society draws attention to the desirability of including, with the "voluntary agencies" referred to in para. 1 of the Ministry's memorandum "M. and C.W. authorities which are not L.S.A. but which already employ midwives."

Sir Henry Brackenbury raised the question whether the action which had already been taken, and which it was proposed to take, on the above matter, did not constitute medico-political action within the meaning of the agreement for co-operation between the Society and the British Medical Association, set out on page 101 of the current handbook of the Association. He said that he proposed to put down for consideration at the next meeting of the Public Health Committee of the British Medical Association the need for some fresh interpretation of the agreement.

The Council also referred to the General Purposes Committee of the Society consideration of the same question.

After considerable discussion on the recommendation made by the General Purposes Committee, it was agreed to inform the Minister of Health that the Society approved the principle of the forthcoming Bill in so far as it would improve the status and efficiency of midwives; that they gave general support to the recommendation made by the Association of Municipal Corporations, who had had the advice of representatives of the Society; and that, when the Bill was printed, the Society would like to have the opportunity of putting forward certain further observations.

It was also agreed that the Maternity and Child Welfare Group should be given an opportunity of making comments on the proposed legislation before the Society forwarded their final observations.

6. *National Maternity Service.*—The Committee considered a memorandum adopted by the Council of the British Medical Association regarding a National Maternity Service.

Recommendation.—That the Council acknowledge with thanks receipt of the memorandum.

7. *Supply of Milk to M. and C.W. Authorities.*—In reply to the resolution passed by the Council at their last meeting (see PUBLIC HEALTH, December, 1935, p. 95, para. (18)) the following letter was received from the Secretary of the Milk Marketing Board:—

"I may say that my Board is at present considering a scheme for the supply of milk to expectant and nursing mothers and children under school age. As you may imagine there are many bodies to be consulted and difficulties to be overcome, but I trust that ultimately some scheme can be announced."

8. *Salaries of Public Health Dental Officers.*—The Executive Secretary presented the following report regarding the conference held with the British Dental Association on November 29th, to discuss the question of a scale of salaries for Public Health Dental Officers:—

Drs. W. Paterson, Middleton Martin, C. F. T. Scott and G. C. Anderson represented the B.M.A., and Dr. H. J. Milligan, Mr. Grantley Smith, L.S.A., L.D.S., Mr. D. E. Mason, L.D.S., and the Executive Secretary represented the Society.

The conference agreed (a) that the attainment of a recognised scale of salaries for public health dental officers was desirable, (b) that the British Dental Association should in the first place approach the Board of Education for their approval of this proposal, and their assistance in arranging conferences with the Associations of education committees and local authorities with the object of reaching an agreed scale, and (c) that the actual figures to be put forward as a basis for negotiation by the B.D.A. should be further considered by that Association and formulated roughly on similar lines to those set out in the Askwith Memorandum. It was understood that the B.M.A. and the Society would be again consulted when the B.D.A. had reformulated their proposed scale.

9. *Annual Dinner.*—The Chairman reported as follows as Chairman of the Annual Dinner Sub-Committee formed to make arrangements for the dinner held on November 22nd—"262 members and guests attended; of this number 226 dinners were paid for, the remainder being official guests and press representatives. Comparative figures of previous years were—170 (1934); 169 (1933); 155 (1932); not held 1931; 169 (1930); 150 (1929). The attendance for the 1935 Dinner was larger by 92 than on any previous occasion. The net cost of the Dinner this year to the Society compares very favourably with previous years—it works out at about £42."

Recommendation.—That the Council appoint a similar sub-committee to make arrangements for the Dinner to be held in November, 1936, to consist of the President, the Chairman of the General Purposes

Committee, the Hon. Treasurer, and the President-Elect as soon as the latter's name is known.

The Council approved the proposition that the Annual Dinner should be held on Friday, November 20th, 1936, and left the decision as to the place in the hands of the above Sub-Committee.

10. *Post-Graduate Facilities for Departmental Medical Officers.*—The Committee considered a memorandum submitted by Dr. Agnes Nicoll on facilities desirable in order to improve and maintain the efficiency of medical personnel in a public health department.

Recommendation.—That the Council circulate Dr. Nicoll's memorandum to the Branches and Groups of the Society and request their observations.

11. *Resolutions from the Yorkshire Branch.*—The Committee considered the following resolutions submitted by the Yorkshire Branch:—

(1) The question of re-admission to membership of the Society of persons who had been dealt with under Article 11 of the Constitution was considered and it was resolved that the Branch re-affirm its decision that such persons should not be re-admitted and also recommend the Council that where an application for re-admission is received the Secretary of the Society should bring specifically to the notice of the Council the fact that the candidate had been dealt with under Article 11.

(2) The question of advertising in PUBLIC HEALTH was again considered and it was resolved that the Council be recommended to instruct the Executive Secretary to prepare a note to all Fellows of the Society setting forth the claims of the Journal to be regarded as an advertising medium not only for official notices, but also generally, and to issue with this communication a note with regard to rates.

With regard to resolution (1) the Committee instructed the Executive Secretary to inform the Branch that they were in sympathy with the nature of the resolution, but to point out that the adoption of this resolution would involve re-drafting the present constitution of the Society regarding the election of members (Article 10). The Executive Secretary was also instructed to remind the Branch of the decision at the last meeting of the Council that he was to refer to the General Purposes Committee any cases of doubt amongst the applicants for election to membership of the Society.

With regard to resolution (2), the Executive Secretary sent a circular letter in January to all M.O.'s H. of departments who employ Assistant M.O.'s H.

12. *Hadow Report on Local Government Officers.*—The Committee considered a letter forwarded by the Secretary of the Metropolitan Branch from the Borough Medical Officers' Committee drawing attention to the suggestion in the Hadow Report regarding the administration of specialist departments.

The Committee considered paragraphs 102-106 of the Hadow Report, and paragraphs 15 and 16 of the Report's Summary of Conclusions.

Recommendation.—That in the opinion of the Committee there is not sufficient ground in these sections

of the Hadow Report to justify any special action by the Society.

13. *Status of the Borough Medical Officers' Committee, Metropolitan Branch.*—Dr. Ernest Ward, at the instance of the Inter-Group Committee, raised points regarding the status of the Borough Medical Officers' Committee.

In reply to Dr. Ward's enquiry, the Chairman explained the *raison d'être* of the Borough Medical Officers' Committee and recalled that the question had been raised at a Council Meeting in November, 1932, when the Branch had been advised that they should deal with this matter at their own discretion. He also reported that the Metropolitan Branch had revised their bye-laws to include a special bye-law regarding the constitution of the Borough Medical Officers' Committee. Finally, he explained that the expenses of the Borough Medical Officers' Committee were met by a small subscription made by individual medical officers of health, and that no expense therefore fell on the Society.

14. *School Children Aged 11+ and 16+.*—The Committee considered a memorandum drawn up by the School Medical Officers' Group in reply to questions from the Consultative Committee of the Board of Education, in regard to physical and mental development of school children (other than elementary school children) between the ages of 11+ and 16+.

The Group reported that they had received these enquiries direct from the Consultative Committee of the Board of Education and had intended to submit their reply for the approval of the Council had time permitted. In view of the fact, however, that the original enquiries had reached the Group in June, 1934, and of the fact that the Council was not holding its next meeting until February, 1936, the Group had decided to take the responsibility of sending their replies to the Board without further delay.

The General Purposes Committee after discussion decided to instruct the Executive Secretary to inform the Consultative Committee of the Board that they had now given *general* approval to the memorandum, but that it must be regarded as the opinion of the Group only, since it had not yet been endorsed by the Council of the Society. The Executive Secretary was instructed at the same time to ask that future enquiries from the Board should be addressed to the Society as a whole.

15. *Board of Education Memorandum 1443—Provision of Meals for Elementary School Children.*—The Committee considered the above memorandum, which, in their opinion, constitutes a satisfactory modification of the attitude of the Board of Education.

16. *Draft Public Health Consolidation Bill.*—The Committee considered the Second Interim Report of the Local Government and Public Health Consolidation Committee and the draft Public Health Bill. It was reported that the British Medical Association had received an invitation from the Ministry to submit their observations.

The Committee instructed the Executive Secretary to remind the Ministry of Health of their correspondence with the Society on the subject of consolidation of Public Health Law in 1921, and to request that the Society be now afforded an opportunity of commenting on the new Draft Bill.

The Committee also decided to set up a special sub-committee to consist of the Acting Chairman, the President, Drs. G. F. Buchan, J. J. Buchan, W. W. Jameson and R. M. F. Picken, to consider the Draft Bill in detail at a special meeting to be held on the morning of February 21st.

Dr. Wood reported that the Special Committee had considered the draft Bill that morning, and he outlined to the Council certain observations on the details of the Bill which the Committee recommended should be sent to the Ministry together with a general expression of approval of the value of the consolidating measure.

The Council approved this course in view of the urgency of the matter, and asked the Secretary to circulate to members of the Council as soon as possible the letter which it was proposed to send to the Ministry.

17. *Training of Health Visitors.*—The Committee considered the advisability of taking action in view of the reference on page 63 of the Annual Report, 1934, of the Chief Medical Officer, Ministry of Health, to a proposed review of the training of Health Visitors. The Acting Chairman reported that the Women Public Health Officers' Association desired a conference with the Public Health Section, College of Nursing, and the Society, to discuss the possibility of a revised course to cover four years and to include Public Health, Social and Hospital training. The Association had in mind either a course which could include three years general nursing with a further year devoted to other branches of the training, or alternatively, a shorter period of general nursing training with more time devoted to the Social and Public Health side.

The Acting Chairman reminded the Committee that the Society's view as expressed in the evidence given on their behalf to the Departmental Committee on the Qualifications, Recruitment, Training and Promotion of Local Government Officers, had been that the basic qualification of Health Visitors should consist of the full nursing training. He also said that the number of those who had obtained the Health Visitor's Certificate after the two years' course and six months' hospital training was becoming very small, *e.g.*, 1934, 8 out of 190; 1935, 1 out of 216.

Dr. John Buchan said that the revised regulations of the Central Midwives Board would shortly be published and he suggested that the Society could not make any definite proposal for altering the Health Visitors' training until these alterations were known.

Recommendation.—That, in the circumstances mentioned above, the Committee are of the opinion that a conference on Health Visitors' training would not serve any useful purpose at present.

18. *Model Building Bye-Laws.*—The Committee considered a letter from the Welsh Branch enclosing a letter from Dr. Greenwood Wilson, M.O.H., Cardiff, pointing out that the Model Bye-Laws of the Ministry of Health specified that notification of changes of the drains of existing buildings are to be sent to the Surveyor only, and no mention was made of the Sanitary Inspector.

The Committee considered also separate suggestions from the Welsh Branch that representations should be made to those engaged in codifying the Public Health Acts, that the words "Medical Officer of Health" or "Sanitary Inspector" might replace the word "Surveyor" in certain sections of the Public Health Acts, *e.g.*, section 62 of the Public Health Act, 1875, *re* water supply, and section 22 of the Public Health Acts (Amendment) Act, 1890, *re* sanitary conveniences in manufactories.

Recommendation.—That the Council approach the Ministry in connection with the codification of the Public Health Acts, and suggest the alteration of the titles of the officers mentioned in the Model Bye-Laws to accord with modern practice.

In view of the omission of the titles of officers from the above sections as reproduced in the new Public Health Consolidation Bill, it was agreed to omit the reference to codification when approaching the Ministry.

19. *Health and Comfort Aspects of Housing.*—The Committee considered a letter dated January 7th from Prof. W. W. Jameson, with reference to an enquiry instituted by the Health Organisation of the League of Nations on the aspects of housing which affected human comfort, health and efficiency. The memorandum enclosed by Prof. Jameson indicated that the subjects of concern were (1) Hygiene of the building, including comfort standards, quality of building materials, heating and cooling, ventilation, orientation of buildings and lighting by natural and artificial means; (2) City planning; and (3) Housing standards and regulations.

It was proposed to hold an informal meeting to discuss the present position in this country at the London School of Hygiene and he invited the Society to send representatives.

Recommendation.—That the Council support the enquiry and nominate Drs. John Macmillan and J. J. Paterson to represent the Society at the meeting to be arranged by Prof. Jameson.

20. *International Hospital Association.*—Drs. James Ferguson and Thomas Orr attended a meeting held on November 13th last to consider the formation of an English Branch of the Association.

21. *Askwith Memorandum on Public Health Salaries.*

(a) *Board of Education.* The Deputy Medical Secretary, B.M.A., wrote on November 6th to say that he had been instructed to seek the views of the Association of Education Committees on the reply of the Parliamentary Secretary of the Board of Education, on the subject of the Memorandum (see PUBLIC HEALTH June, 1935, p. 333 and October, 1935, p. 25, para 12).

(b) *Advisory Committee.* It was reported that at the last meeting an application by the assistant M.O. for M. and C.W., of a County Borough to be graded as a Senior Medical Officer under section III had been refused.

22. *Salary of an Assistant S.M.O.*—The Executive Secretary reported that he had recently received a letter from a Fellow who was an Assistant S.M.O., in a large Borough, stating that her salary had remained fixed at £600 p.a., and requesting that the advertisements for vacancies in the department

should be refused by the medical journals until she had received increments to her salary in accordance with the Askwith Memorandum. He said that he had given the facts to the British Medical Association in view of the vacancy which had just occurred on the staff of this Borough for an Assistant School Medical Officer. The British Medical Association, however, had decided, in view of the information received from the Secretary of their local Division, and from the Borough Medical Officer of Health and School Medical Officer, that they could not take action. The Association had therefore decided to accept the advertisement for the vacancy.

The Committee decided that in view of the decision of the B.M.A. they could not take any action.

23. *Cases of Doubt and Difficulty.*

(a) The Committee are watching developments in two cases in which M.O.'s H. have been involved in difficulties with their local authorities, a borough and a rural district respectively.

(b) The Committee advised a member who sent in a number of enquiries regarding the interpretation of the Housing Act, 1935, to seek the guidance of the Ministry of Health, which he has now done.

(c) The Committee considered correspondence between a Dental Associate and his Education Committee, in which he protested against the appointment over his head of a man junior in service, to be the Senior Dental Officer of the authority. While sympathising with the position of this Associate, the Committee could take no action.

(d) The Executive Secretary reported that he had written to a borough council supporting an appeal of a Tuberculosis Officer, now due to retire, for an increase in his superannuation allowance, and that the member concerned had now been granted an addition of five years in calculating his allowance.

(e) The Committee decided to take no action on the request of a retired Fellow for the insertion of an advertisement free of charge in PUBLIC HEALTH, in view of the precedent which might be created.

24. *London Underground Stations—Sanitary Accommodation.*—The Committee instructed the Executive Secretary to refer to the Metropolitan Branch letters from the National Women Citizens' Association, protesting against the insufficiency of lavatory accommodation for women and children in underground stations being erected by the L.P.T.B.

25. *Definition of "Public Health Service Member" of the B.M.A.*—A letter was received from the Medical Secretary, British Medical Association, stating that in response to a suggestion put forward by the Society in June last, the Council of the Association had agreed to amend the Association's Bye-Laws so that the expression "Public Health Service Member" shall mean:—

"A Member of the Association who is permanently employed in the whole-time medical service (other than service at a mental hospital) of the Council or Education Authority of any County, County Borough, Municipal Borough, Metropolitan Borough, Burgh, Urban District, Rural District or Parish, or Port Sanitary Authority in Great Britain or Northern Ireland, or who has been for a period of not less than 10 years so employed and is a whole-time teacher of

public health at a University or Medical School in Great Britain or Northern Ireland."

The Council approved the above amended definition of "Public Health Service Member" and expressed thanks to the British Medical Association for the action taken.

26. *Salaries of Veterinary Officers.*—A letter was received from the Secretary of the National Medical Veterinary Association saying that his Appointments Committee had decided to adopt the suggestion made by the Society to circulate a memorandum setting out the salaries recommended by the Association for various grades of Veterinary Officers.

27. *"New Health."*—The Executive Secretary reported receipt of a letter from Dr. Greenwood Wilson stating that he had been approached by "New Health" (monthly organ of the New Health Society) to purchase copies at a reduced price for issue as health propaganda, and enquiring as to the views of the Society on this matter.

The Executive Secretary reported that he had replied to Dr. Greenwood Wilson that the Central Council for Health Education and its journal "Better Health" had the official recognition of the Society.

The Committee endorsed the action of the Executive Secretary.

28. *Voluntary Hospitals.*—The Committee considered an invitation from the Hon. Secretary, British Hospitals Association, for the submission of a memorandum to the Voluntary Hospitals Commission now sitting with the following reference:—

"To take into consideration the present position of Voluntary Hospitals of the country; to enquire whether, in view of recent legislative and social developments, it is desirable that any steps should be taken to promote their interests, develop their policy and safeguard their future; and to frame such recommendations as may be thought expedient and acceptable."

Recommendation.—That the Council reply that they do not consider that the submission of evidence by the Society would serve any useful purpose.

The Council decided to add to the above suggested reply to the Voluntary Hospitals Commission an expression that the Society would be glad to give replies to any specific questions which the Commission put forward.

29. *Consolidation of Water Administration.*—The Executive Secretary reported the receipt of a letter from the President of the National Association of Fishery Boards drawing attention to the wide distribution of water administrative functions among several Government departments and the large number of local bodies operating in watersheds.

30. *Child Guidance Service in Rural Areas.*—The Committee considered a letter from the General Secretary of the Child Guidance Council with reference to the question of providing a Child Guidance Service in areas remote from large towns. The Child Guidance Council requested an opportunity of discussing with the Society the need for and methods of organising such a service.

Recommendation.—That the Council invite the attendance of a deputation from the Child Guidance Council at their next meeting.

In view of the congestion of business at Council meetings, it was referred to the General Purposes Committee to consider whether the Committee could not themselves meet representatives of the Child Guidance Council and present a report.

31. *Ten Year Plan for Children.*—A letter was received from the Organising Secretary of the 10 Year Plan for Children asking the Society to send a representative to a meeting to be held at the House of Commons on Tuesday, February 11th.

The Committee instructed the Executive Secretary to forward this invitation to the President of the School Medical Officers' Group.

32. *Dental Officers' Group Capitation Fee.*—The Executive Secretary reported that the Dental Officers' Group were anxious to pay travelling expenses of provincial representatives on the Group Committee. Although the Group received a capitation fee of 5s. per head, their finances were not sufficient to meet the demand of these travelling expenses. The Group therefore asked whether the 2s. 6d. capitation fee payable to the Branches could be diverted in the case of Dental Associates to the Dental Group.

The Committee felt that the position of the Dental Group was already so favourable in comparison with other Groups whose provincial members travelled to London at their own expense that they could not recommend the Council to accede to the above request.

33. *North-Western Dental Officers' Sub-Group.*—The Executive Secretary reported that there was a possibility of forming a Dental Officers' Sub-Group in the North-Western Branch area. In the opinion of the Committee it would not be necessary for the Council to approve this by a formal Resolution, but it was suggested that the North-Western Branch should be informed of the proposal and asked for their approval and encouragement.

34. *Venereal Diseases Officers.*—The Committee considered the following resolutions regarding the status of venereal diseases officers of local authorities, which had been submitted to the Ministry of Health by the Medical Advisory Board of the British Social Hygiene Council.

(1) That, wherever possible, full-time Venereal Diseases Officers should have the opportunity of undertaking such alternative duties in other Departments as would equip them for promotion to administrative posts.

(2) That it was desirable that Venereal Diseases Officers be allowed consulting and private practice, it being noted that most of the larger authorities permitted this.

Recommendation.—That the Council receive these resolutions and take no further action.

35. *Medicines and Surgical Appliances (Advertisement) Bill.*—The Committee received from the Association of Municipal Corporations suggestions made by Dr. Veitch Clark for the amendment of the Bill.

The Committee advised the A.M.C., as the Bill

might shortly be introduced into Parliament, to submit these amendments to Capt. G. S. Elliston, Chairman of the Drafting Committee.

36. *Age Limit for Appointments.*—The Executive Secretary reported that he had drawn the attention of the B.M.A. to the fixing of an age-limit of 40 for the appointment of M.O.H., Middlesbrough. The B.M.A. had promised to communicate with the Town Clerk, Middlesbrough.

37. *Recruitment.*—The Executive Secretary reported that, including candidates for the February election, the total of new members since October 1st was 120, only four less than the number for the whole of the preceding session. Since October 1st 40 members had died or resigned.

The Council adopted the report of the General Purposes Committee, with the amendments or additions set out above under paragraphs 3, 5, 9, 16, 18, 25, 28 and 30.

Representation of the Society.—The Council elected representatives in connection with the following: (a) Royal Sanitary Institute Congress, Southport, July 6th-11th, The President; (b) Central Midwives Board, 1936-37, Dr. J. J. Buchan; (c) National Baby Week Council, Drs. Ethel Cassie and James Fenton, who were also nominated for election to the Executive Committee of the N.B.W.C.; (d) National Milk Publicity Council, Dr. Thomas Orr; (e) British Health Resorts Association (Medical Advisory Committee), Dr. R. H. Wilshaw.

It was decided to make no nomination in respect of the Royal Institute of Public Health Congress.

Public Health Service Representatives, B.M.A.—It was decided to support the following for election as Public Health Service Representatives on the British Medical Association: B.M.A. Council—Drs. H. J. Milligan and F. T. H. Wood; Representative Body—Drs. James Fenton, R. J. Maule Horne, E. H. T. Nash and R. H. Wilshaw.

Report of Departmental Committee on Coroners.—It was reported Dr. W. H. Davison (Coroner for Birmingham and a former member of the Society) wished to put before the Society certain comments on the above report, with special reference to the Departmental Committee's recommendation that in future appointments the only essential qualifications should be legal and not medical.

The Council asked the General Purposes Committee to consider Dr. Davison's observations at their next meeting.

The meeting then adjourned at 4.30 p.m.

ORDINARY MEETING.

An Ordinary Meeting was held at the house of the Society on Friday, February 21st, 1936, at 5 p.m.

The President (Dr. W. G. Savage) was in the chair.

Before proceeding to business, the President drew the attention of the meeting to the eloquent tribute to His late Majesty, King George V, and the expression of loyalty to His Majesty King Edward VIII, in the February issue of PUBLIC HEALTH, pages 161 and 162. The President reported that the Hon. Editor had caused copies of the journal to be conveyed, on behalf of the Society, to H.M. King Edward VIII, H.M. Queen Mary and H.R.H. Princess Louise, Duchess of Argyll, and that acknowledgments had been received.

The minutes of the last meeting were approved and signed, and a letter from Dame Louise McLroy in connection with a dinner to be held in honour of Dr. J. S. Fairbairn was read.

The following candidates, having been duly proposed and seconded, were elected to membership of the Society:—

As Fellows:—

Auld, W. J. C., M.B., CH.B. (GLAS.), D.P.H.; Begg, Norman Darroch, M.D. (ABERD.), D.P.H.; Cohen, J., M.R.C.S. (ENG.), L.R.C.P. (LOND.); Cormack, James Menzies, M.B., CH.B. (GLAS.), D.P.H.; Fairley, Helen W., L.R.C.P. (EDIN.), L.F.P.S. (GLAS.); Good, Robert Augustine, M.B., B.CH. (IRE.), D.P.H.; Harkness, Isabella McD., M.B., CH.B. (GLAS.), D.P.H.; Henderson, Peter, M.D. (ABERD.), D.P.H.; Henderson, Robert Gregory, M.D. (ABERD.), D.P.H.; Irvine, Edward D., M.D. (LIV.), M.R.C.S., D.P.H.; MacGregor, Murdoch, M.B., CH.B. (GLAS.), D.P.H. (MAN.), D.L.O. (ENG.); Mitman, Maurice, M.D. (LOND.), M.R.C.P., D.P.H.; Morland, Andrew, M.D., M.R.C.P. (LOND.); Mountain, John Quinney, B.Sc., M.D., CH.B. (LEEDS), D.P.H.; Parkman, Theodore Henry, M.B., B.S. (LOND.), D.P.H.; Riddell, John, M.D., D.P.H. (GLAS.); Rodgers, Martha Winifred, M.B. (BELF.), D.P.H.; Taylor, Isabel, M.B., CH.B. (EDIN.), D.P.H., D.C.O.G.; Thomas, Hugh Arwel, M.Sc. (WA.), M.B., CH.B. (LIV.), M.R.C.S., L.R.C.P., D.P.H.; Townsend, George William Hughes, M.B. (DUB.), D.P.H.; Wilson, James Wood, M.D., CH.B. (GLAS.), D.P.H.

As Associates:—

Adams, Arthur J., B.Sc., M.R.C.V.S.; Alley, Leonard Norman, L.D.S., R.C.S. (ENG.); Cantor, Henry, L.D.S., R.C.S. (ENG.); Elliot, David William, L.D.S., R.C.S. (EDIN.); Elmer, Lancelot William, L.D.S., R.C.S. (ENG.); Figdor, Pauline, L.R.C.P. (EDIN.), L.R.C.S. (EDIN.),

L.R.F.P. & S. (GLAS.), L.D.S.; Hilton, John Ludlow, L.D.S., R.F.P.S. (GLAS.); Jones, Frank, L.D.S. (MANC.); Phillips, Dorothy Mabel, L.D.S. (LEEDS); Richardson, John George, L.D.S., R.C.S. (ENG.); Saunders, Frederic James, L.D.S. (LIV.); Whitmore, Anne Louisa Till, L.D.S. (BIRM.); Wishart, James Rankin, L.D.S., R.C.S. (EDIN.).

The election of one candidate was postponed in accordance with the provisions of Article 11, written objections to his election having been received from two Fellows of the Society. It was agreed to refer an enquiry into this nomination to the next meeting of the Council.

A number of names were received for the next election.

There followed a discussion on "Prevention of River Pollution," opened by Dr. W. M. Ash (County M.O.H., Derbyshire). Others who took part in this discussion were the President, Sir Francis Fremantle, Drs. Veitch Clark, E. W. Goodall, E. H. T. Nash and V. F. Soothill.

Dr. Ash was warmly thanked for his interesting paper, which will appear in a subsequent issue of PUBLIC HEALTH.

The meeting then adjourned.

THE Tenth Conference of the International Union against Tuberculosis will meet in Lisbon from September 7th to 10th, 1936, under the chairmanship of Professor Lopo de Carvalho, President-elect of the Union. The discussion will be limited to three main subjects: (1) *Biological*—"Radiological Aspects of the Pulmonary Hilum and their Interpretation." (2) *Clinical*—"Primary Tuberculous Infection in the Adolescent and the Adult." (3) *Social*—"The Open Case of Tuberculosis in relation to Family and Domestic Associates." The opening report in the last-named will be made by Dr. D. A. Powell (Great Britain). The organisation committee of the conference has prepared a very attractive programme of receptions and excursions. The latter will enable members to visit the chief anti-tuberculosis institutions as well as the most picturesque scenery in various parts of Portugal. Further information may be obtained from the National Association for the Prevention of Tuberculosis, Tavistock House North, Tavistock Square, London, W.C.1, or the International Union against Tuberculosis, 66, Boulevard Saint-Michel, Paris (6e).

The Branches and the Groups.

THE NORTH-WESTERN BRANCH.

President : Dr. W. M. Frazer, M.O.H., Liverpool.

Hon. Secretary : Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held at the School of Hygiene, Mount Pleasant, Liverpool, on January 10th, 1936, the President occupying the chair. Twelve members were present.

Dr. F. A. Sharpe (Medical Officer of Health, Preston) opened a discussion on the value of **Section 19 of the Housing Act, 1930**, in dealing with individual houses and small groups of houses, and also on the question of **Re-development Areas**, in which most of the members present took part.

Dr. B. T. J. Glover (Assistant Medical Officer of Health, Liverpool) subsequently opened a discussion on **Hospital Isolation of Scarlet Fever**, which he claimed had done nothing to reduce the spread of infection nor had it succeeded in reducing mortality from the disease, while on the other hand it was recognised that hospitalisation had increased the frequency of complications.

The members were afterwards entertained at tea by the President.

The annual dinner of the Branch was held in the Adelphi Hotel, Liverpool, on January 10th, 1936, when 51 members and guests were present, the President being in the chair. Among the distinguished guests were the Lord Mayor of Liverpool, the Lord Bishop of Liverpool, Colonel Sir John Shute, C.M.G., D.S.O., M.P., Dr. J. W. Hetherington, Vice-Chancellor of Liverpool University, Professor A. Leyland Robinson, Alderman Muirhead, Chairman, Liverpool Health Committee, and Alderman Burns, Chairman, Port Sanitary and Hospitals Committee.

The toast of "The City and Port of Liverpool" was proposed by Dr. R. Veitch Clark (Medical Officer of Health of Manchester), who wished prosperity to the City and Port of Liverpool which he described as "Mistress of the Atlantic." No city, he said, had so many individual characteristics and claims to distinction as Liverpool; with her maritime communications she was England's voice to the world. London's tonnage was nearly all coastal, but Liverpool's went to all parts of the world. Not being content with being

mistress of the sea, Liverpool had had to burrow beneath it, and the Mersey Tunnel was a creditable achievement. He had travelled over most of the continent, and did not think any city could boast of two such wonderful cathedrals, even in their embryo state. The voluntary hospitals had produced an admirable report and done something which no other town had been able to achieve.

The Lord Mayor of Liverpool (Councillor R. J. Hall), responding, said that Manchester realised that she was somewhat indebted to the Mersey for her existence. Liverpool was proud of the important place she occupied in the history of medical health services, being the first city to discover the necessity for a medical officer of health in 1847, since when the responsibilities of that official had increased enormously. The poor law services had recently been merged into the public health services of the city, and while the voluntary hospitals in Liverpool had between 8,000 and 9,000. The medical services in connection with a busy port such as Liverpool carried extremely onerous duties, and he thought there was no department of local government service held in greater respect than the public health department.

In proposing the toast of "The North-Western Branch of the Society of Medical Officers of Health," the Bishop of Liverpool said he liked dining with doctors in whom he had a child-like confidence. The Society, he said, united the officers in a fellowship of service to the country, and the North-Western Branch represented the best counties in the country.

The President, in reply, referred to the changes which had taken place during recent years in the duties of the medical officer of health and in the public conception of his functions. The earlier medical officers of health were appointed for the special purpose of dealing with sanitation and infectious diseases, then problems of the most urgent importance, and as a consequence the general public quite rightly conceived the idea that sanitary problems were almost his exclusive interest. With the march of modern legislation in the direction of the care of mothers and young children, tuberculosis, hospitals and the like, practically all the time of medical

officers engaged in public health departments was devoted to questions of personal hygiene, and the purely sanitary side was looked after by officials specially trained for this purpose. An interesting feature in the life of the medical officer was that his duties brought him into close contact with persons in all grades of society and all walks of life, from the highest to the lowest, in the area in which he worked. He frequently filled the rôle of fairy godmother and might be consulted on such matters as domestic infelicity, quarrels with mothers-in-law and differences of opinion with the lady next door. There was no question, he thought, but that the vast extension of the services now going on, insistently demanded by public opinion, must add greatly to expenditure and, by so doing, increase the rates in local government areas to an appreciable extent. The medical officer might be regarded as an expensive official, but he was the servant of the community and it was his duty to carry out the policy of the legislature and the local authority.

Dr. F. T. H. Wood O.B.E. (Medical Officer of Health, Bootle) proposed the toast of "The Guests," to which Alderman R. L. Burns, in reply, said he regarded medical officers as the most important officials in the municipal service.

THE YORKSHIRE BRANCH.

President : Dr. G. C. F. Roe, M.O.H., Halifax.

Hon. Secretary : Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of this Branch was held in the Civic Hall, Leeds, on January 24th, 1936. The President occupied the chair and was supported by sixteen members.

The question of the Presidency of the Society was considered, and it was unanimously resolved that Dr. J. J. Jervis (Medical Officer of Health, Leeds) be nominated for the office.

A discussion upon "**The Desirability of Establishing a Salaried Service of Midwives**" was opened by Dr. J. J. Buchan, who was followed by Dr. T. N. V. Potts and Dr. McDowall. The meeting then proceeded to consider the recommendations of the Joint Council of Midwifery. After a very full discussion it was resolved that these recommendations be agreed to with the following amendments:—

(1) After the word "where" in the fifth line insert the words "in the opinion of the appropriate local authority."

(2) Delete the words "for gain" in the third line and substitute the words "except in emergency."

(3) Delete the last sentence.

(4) After the words "provident societies" in the second line of (4) (b) add the words "and, if necessary, maternity and child welfare authorities."

(7) After the word "representatives" in the second line insert the words "of maternity and child welfare authorities."

(8) Delete the words "and be accorded the same status in every respect as health visitors."

(10) After the word "from" in the fifth line insert the words "general state registered nurses who are."

(11) Delete the words from "or" in the fourth line to "misconduct" in the fifth line, and from "not" in the fifth line to "authority" in the sixth line, and substitute for the latter the words "to cease to practise as midwives."

(13) Delete the words "general supervision and" in the first line and substitute for them the word "routine" and insert after the word "should" in the first line the word "preferably."

THE MIDLAND BRANCH.

President : Dr. P. G. Horsburgh, M.O.H., Nuneaton.

Hon. Secretary : Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

A special meeting of this Branch was held at the Medical Institute, 154, Great Charles Street, Birmingham, on January 23rd, 1936. The President and eighteen members were present.

The special business before the meeting was the consideration of the scheme for a **Municipal Midwifery Service** prepared by the Joint Council of Midwifery. The recommendations prepared by the Joint Council were gone through *seriatim*, and certain observations and criticisms were drawn up for submission to the Council of the Society.

The Hon. Secretary reported the receipt of correspondence from Dr. A. J. B. Griffin (Medical Officer of Health, Worcester) regarding the proposed sessional meeting of the Royal Sanitary Institute to be held at Worcester in May, and asking if the meeting could be held in conjunction with the Midland Branch of the Society of Medical Officers of Health. It was agreed to co-operate with the Royal Sanitary Institute in the way suggested.

The fourth meeting of the Session of the Midland Branch was held at the Medical Institute, 154, Great Charles Street, Birmingham, on February 6th, 1936, the President occupying the chair. Twenty-eight members were present.

Dr. Charles Cookson read a paper on "**Public Health and the Position of the Medical Profession,**" in which he put forward his views on the best methods of organising doctors in the service of preventive medicine. He illustrated many of the points made by reference to the arrangements now in force in Gloucestershire or in the town of Gloucester. In his opinion, clinical work should be carried out wherever possible by general practitioners, assisted by a specialist when necessary, and only purely administrative work should devolve upon whole-time officers in the Public Health Service, with certain exceptions such as tuberculosis and venereal disease.

An excellent discussion ensued, in which Drs. Massey, Blaker, Goldie, Jolly, Bracey and Tibbetts took part.

Dr. Cookson briefly replied to some of the points raised, and received a cordial vote of thanks on the proposition of Dr. Burn, seconded by Dr. Griffin.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.

Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at 1, East Park Terrace, Southampton, on February 7th, 1936, the President occupying the chair. There was a large attendance of dentists.

Mr. R. T. Hale, L.D.S., gave some interesting details regarding a child with malposition of the upper central incisors, due in his opinion to abnormal retention of the deciduous dentition. Models were demonstrated, together with the apparatus used in the treatment, which was successful.

The Hon. Secretary read a letter from the Executive Secretary regarding the proposed salaried service of midwives, and it was agreed to postpone discussion until the next meeting of the Branch.

Mr. J. S. Roberts, L.D.S., read a stimulating and provocative paper on "**The Ideal Dental Service,**" in which he criticised the present arrangements and put forward several interesting proposals. A lively discussion followed, and a vote of thanks was accorded to the speaker on the proposition of Dr. I. M. McLachlan, seconded by Mr. K. W. Eady.

It was unanimously agreed to forward the paper to the Editor of PUBLIC HEALTH, with a view to publication.

THE FEVER HOSPITAL MEDICAL SERVICE GROUP.

President: Dr. E. H. R. Harries, Med. Supt., North-Eastern Hospital, London County Council.

Hon. Secretary: Dr. Alexander Joe, D.S.C., North-Western Hospital, London County Council.

An ordinary meeting of this Group was held at the house of the Society on January 31st, 1936, the President occupying the chair.

The announcement was made that, owing to the small number of members who had intimidated their ability to attend the proposed provincial meeting, the project had been abandoned.

Papers on "**The Serum Treatment of Typhoid Fever**" were read by Dr. A. Felix of the Lister Institute, and Dr. C. J. McSweeney of Dublin. The former explained the underlying immunological and experimental evidence upon which he based the claim that his serum had specific properties, and also gave an account of clinical trials which had been arranged in Egypt and Palestine. These, he believed, fully supported the expectations he had formed in the laboratory.

Dr. McSweeney gave a detailed clinical analysis of cases treated in Dublin, and demonstrated the temperature charts. In his view the results were favourable to Dr. Felix's serum. Discussion thereupon ensued.

Dr. E. W. Goodall, O.B.E., who, incidentally, made mention of the fact that his interest in typhoid extended for practically 50 years, traced the development of various systems of treatment in typhoid fever, including those by vaccines, bacterial protein, and serums. He considered that some of the records of the Palestine and Egyptian cases, and also those of Dr. McSweeney, showed that benefit had been derived from the serum, but doubted if the effects could be regarded as specific.

Dr. D. Sage Sutherland thought a case had been made for the serum, as did Dr. Banks, who suggested it might be possible to improve the results by earlier administration and by the intravenous or possibly the intraperitoneal route.

Dr. A. Joe stated that although, quantitatively, typhoid fever was no longer a problem, over a period of eight years his hospital case fatality was 11.5 per cent., and any treatment that promised to reduce this was worth the consideration of the Group. He was of the opinion

that on the data submitted an extended clinical trial of the serum should be made.

During the course of the discussion it was mentioned that the serum was now available commercially.

On the invitation of the President, Drs. Felix and McSweeney replied to various points, and received the thanks of the meeting for their contributions.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

A meeting of this Group was held on Saturday, January 18th, 1936, at the Willesden Municipal Maternity Hospital, Honey Pot Lane, N.W.9, at which Mr. Arnold Walker, F.R.C.S., spoke on "**The Working of a Maternity Hospital Unit.**" Twenty-eight members and friends were present. The chair was taken by Dr. Maule Horne, who expressed pleasure at the opportunity afforded members of visiting the hospital.

Mr. Arnold Walker first described the methods of administration and staffing of the hospital. He said that Dr. Buchan, the Medical Officer of Health, took the view that the obstetric side should be under the direction of an obstetrician, and that he (Mr. Walker) therefore had complete clinical control of the hospital, including the appointment of his own resident. Dr. Buchan, on the other hand, was responsible for administration, including the dealing with the lay committee. The result was very satisfactory and assured the smooth working of the hospital.

Discussing the types of case admitted, Mr. Walker explained that only patients resident in the Borough of Willesden were admitted. The number of emergencies was therefore small, some of those occurring in the borough also being admitted to voluntary hospitals, such as Queen Charlotte's and the Middlesex Hospitals. The number of deaths occurring among 3,000 booked cases was only three. There had also been three or four deaths amongst emergency admissions. The ante-natal work is done in the health centres, each

medical officer doing the clinics in his own district. All primiparæ, and selected multiparæ referred by the medical officers, are seen by Mr. Walker. Notes are written in duplicate so that there is a correlation of information at the clinics and the hospital. The hospital contains a large ante-natal ward. Mr. Walker considers that ante-natal in-patient treatment is one of the most important factors in reducing maternal mortality, and he uses ante-natal beds extravagantly and would prefer to cut down the number of lying-in beds than reduce the number of ante-natal beds. Ante-natal treatment in hospital is required, at any rate for purposes of observation and investigation, for every case of albuminuria of pregnancy. As a result of this practice there had been no cases of albuminuria among patients attending the clinics. Describing the design of the labour wards, Mr. Walker said he disliked large wards and preferred them to be small and for one patient only. Patients enter the labour ward during the second stage of labour, the first stage being passed in special individual cubicles. The hospital contains three such labour wards and 43 lying-in beds. There is also an isolation block for cases running temperatures, but cases of frank puerperal sepsis were transferred elsewhere.

The party was conducted over the hospital and admired its modern equipment, the electric radiator in the labour ward being especially noted.

In a discussion on "**Anæsthetics in Normal Labour,**" Mr. Walker said that they were very rarely administered or asked for in the hospital. He deprecated the spreading by the lay press of the idea that anæsthesia was necessary, desirable or practicable in every confinement, and he definitely vetoed the use of chloroform by midwives. He maintained that the subject was not one on which to generalise and that to do so was a way of raising the maternal mortality rate.

Tea by invitation of the hospital authorities was much appreciated. Dr. Maule Horne expressed the grateful thanks of the party (which, he said, contained members of the Group from such divergent districts as Paisley and Dorset) to the chairman and members of the health committee, to Dr. Buchan, and to Mr. Arnold Walker for the trouble taken to make the visit so extremely helpful and interesting.

BIRMINGHAM AND MIDLAND SUB-GROUP.

Chairman: Dr. Henry P. Newsholme, M.O.H. Birmingham.

Hon. Secretary: Dr. Agnes Young, ASST.M.O., Warwick C.C.

The second meeting of session 1935-36, of this Sub-Group, which took the form of a clinical week-end, was held on Friday, January 31st, and Saturday, February 1st, 1936, in Birmingham.

On Friday evening, 50 members and friends met in the Lancaster Street Infant Welfare Centre. Dr. Newsholme presided and an address entitled "**The New Midwifery Service—What Should It Be?**" was given by Dr. Stella Churchill, London. She gave a short history of midwifery, and, on the question of a future midwifery service, stated that some kind of compulsory and efficient administration was essential, though this in itself was not sufficient. Other things ought to be considered, not the least of these being the fitness of women to bear children. She thought more attention ought to be paid to preparing the bodies of girls, by means of suitable exercises, for this important function. Discussion followed, and was opened by Mrs. Bertram Lloyd (Birmingham) and Sister Thomas (Maternity Hospital, Birmingham) both of whom expressed interesting views, the former from the point of view of the consulting obstetrician, and the latter from that of the midwife. Votes of thanks to Dr. Churchill, Mrs. Lloyd and Sister Thomas were proposed by Dr. Morton (Nottingham), seconded by Dr. Crosse (Birmingham) and carried with enthusiasm.

On Saturday morning, February 1st, the members met in the Children's Hospital, Birmingham, where cases were shown by the hospital staff. Endocrine deficiency diseases, rheumatic arthritis, tubercular meningitis, and acute glycosuria were demonstrated in the wards, while cardiac abnormalities made an interesting collection in the post-mortem room. At the conclusion of this session, Dr. Newsholme expressed the thanks of the members to Professor Parsons' colleagues for their kindness in sparing so much of their valuable time for the edification of the meeting. A luncheon was held at the Garden Club, the Chairman presiding over 20 members. In the afternoon a visit was paid to the Anti-Tuberculosis Dispensary, where Dr. Dixon conducted a tour of the building while explaining the working of the dispensary. Later the members visited Yardley Wood

Sanatorium and listened to an address by Dr. Dixon on the work in the children's section. This was followed by a tour of the sanatorium. Tea was served and Dr. Bracey proposed a vote of thanks to Dr. Dixon for the excellent arrangements made for the visits.

THE WELSH BRANCH.

ASSISTANT MEDICAL OFFICERS' AND SCHOOL DENTISTS' SUB-GROUP.

President: Dr. Amy L. Jagger, Assistant School Medical Inspector, Glamorgan County Council.

Hon. Secretary: Mr. Quentin A. Davies, L.D.S., Assistant Dental Officer, Glamorgan County Council.

A representative meeting of this Sub-Group was held at the Institute of Preventive Medicine, Cardiff, on January 29th, 1936, the President occupying the chair.

Mr. P. G. Oliver, L.D.S. (Dental Officer, Swansea), read a paper on "**Ethyl Chloride and its Uses as a General Anæsthetic for Dental Operations.**"

He traced the history of ethyl chloride since it was first used in 1848, and described three methods of administration—open, closed and with nitrous oxide—outlining the routine employed. The open method was favoured for children up to five years of age, spraying the ethyl chloride from the side of the patient's head into a dental napkin in an old gas face mask. The closed method was only suitable when the patient was in bed. The mixture of nitrous oxide and ethyl chloride was described in detail, being held suitable for all normal cases, nervous and even alcoholics taking it well. Struggling while recovering followed sometimes, and occasionally headaches were a consequence, but contra-indications were few. Mr. Oliver claimed a shorter period of excitability and a longer and more profound anæsthesia, than with nitrous oxide alone.

Drs. Gwladys Evans, D. P. Holmes, Amy Jagger, Miss Blakesley, Messrs. John Young and Quentin Davies, joined in the discussion that followed, and a hearty vote of thanks to Mr. Oliver for his most instructive paper was proposed by Mr. Young and carried by acclamation.

THE Tuberculosis Association is to hold its provincial meeting in Cambridge on April 2nd, 3rd and 4th, 1936. The provisional programme, of which further particulars may be obtained from Dr. F. R. G. Heaf, Colindale Hospital, London, N.W.9, gives promise of a most attractive meeting.

The Literature of Preventive Medicine.

The Work of the Sanitary Engineer. By ARTHUR J. MARTIN, M.INST.C.E., M.INST.W.E., M.CON.S.E., F.G.S., Past-President, Institution of Sanitary Engineers, etc. London: Macdonald & Evans, 1935. pp. 472. Price 16s. net.

A great part of the author's preface is occupied by apology for his book. None, however, is necessary, since those for whom it is intended—these being, in addition to sanitary engineers, all public health workers, medical officers of health included—will find in it a store of knowledge and information accurate, helpful and most clearly put. It is unhesitatingly commended and recommended to all public health workers, whether in office or in training, as well as to sanitary engineers. By the student of sanitary engineering it is certain to be appreciated and must prove useful because, as the author claims, it gives him "a surer grasp of the principles upon which sanitary engineering is based."

Balanced Meals with Calorie Values. By CATHERINE P. LLOYD EVANS, Diploma, London School of Dietetics. London: Sir Isaac Pitman & Sons, Ltd., 1935. pp. 130. Price 2s. 6d. net.

The object of this book, according to the author, is to give "some knowledge of food values and what foods to buy to get the greatest nourishment at the least cost." Specimen meals are set out which are made up from 121 recipes for dishes which follow. The homely measures, weights of the edible portion, and caloric values are given with each recipe in order apparently that the housewife may count up the weights and calories required for the day, the total amounts necessary to obtain the best value for the money being stated. Apart altogether from the fact that it is unlikely that the housewife will take such a course to effect economies in the daily diet, the dietaries given are made up of many foods which are far from being the cheapest source of the dietetic requirements. Being very varied in character, however, they naturally ensure an adequate supply of the subsidiary food factors to which the author attaches so much importance. By those for whom the book is intended, probably it will be found of value more on account of the variety of the recipes given than because of the assistance offered in securing the greatest nourishment at the least possible cost.

Vitamins in Theory and Practice. By LESLIE J. HARRIS, SC.D., D.SC., National Laboratory, University of Cambridge, and Medical Research Council. Cambridge University Press, 1935. pp. 240. Price 8s. 6d. net.

Possibly, as Dr. Harris, the author of this book, believes, there is need on the part of the "general" reader for a book dealing popularly and in detail with vitamins and "vitaminics." If so, he has met that need very fully. By the time the "general" reader—the kind of person who is taken in by "*ex-parte*" advertisements of patent-remedy proprietors or their commercial travellers"—has finished with the book he should know most of what there is to be known about vitamins in relation to disease and dietetics. Indeed, he will be convinced that so far as these things are concerned there is nothing but vitamins and "vitaminics," Dr. Harris, unintentionally no doubt and entirely because he is an enthusiast and an expert, having failed to make it quite clear that there are or may be other things than vitamins and many who consider that as a result of stressing these "accessory food factors" the existence of others, perhaps something more than merely accessory so far as value is concerned, may be overlooked. In a popular book on health or science, however, it is useless to be half-hearted or to indulge in anything but the most special of special pleading. Because he has been so very whole-hearted, Dr. Harris may be held to have produced as completely popular a book on the vitamins as any "general" reader could desire.

The Theory and Practice of Anæsthesia. By M. D. NOSWORTHY, M.A., M.D., B.CH. (CANTAB.), Anæsthetist, Westminster Hospital, etc. London: Hutchinson's Scientific Publications, 1935. pp. 223. Price 12s. 6d. net.

The author has had wide experience both practical and as a teacher, and is therefore particularly well equipped to appreciate and elucidate the many difficulties of the would-be anæsthetist for whom the book is primarily intended. The matter is arranged so that the reader may first master the basic principles of anæsthesia with the older methods before he passes on to the more modern techniques. Of particular value to the beginner, the book contains much that the experienced anæsthetist or surgeon may read with profit, and to these as well it may be commended.

Hygiene and Public Health. By BIRENDRA NATH GHOSH, F.R.F.P. & S. (GLASG.), Examiner in Hygiene, University of Calcutta and State Medical Faculty of Bengal; etc. Revised and largely rewritten with the assistance of A. D. STEWART, C.I.E., M.B., F.R.C.S.E., D.P.H., D.T.M. & H., Lieut. - Colonel, I.M.S., Director, All-India Institute of Hygiene and Public Health; etc. London: Simpkin Marshall Ltd., 1935. pp. 660. Price 12s. 6d. net.

The first edition of this book appeared in 1912, and since then and with each succeeding edition quite obviously it has grown in favour with students of hygiene and public health in the medical schools of India particularly. Largely this is because great care and trouble are taken, by re-writing and otherwise, to secure that the contents are kept up to date. In this, the eighth edition, it is claimed that the whole text has been revised and in various sections there is evidence that this is the case. Having reached an eighth edition and having so definitely established itself as a favourite with those for whom it is intended, it is unnecessary to make any special recommendation.

The Law of Housing. By W. IVOR JENNINGS, M.A., LL.D., of Gray's Inn, Barrister-at-Law; Reader in English Law, University of London. London: Charles Knight and Co., Ltd., 1935. pp. 654. Price 35s. net.

Primarily this book is intended for the assistance of local and other authorities, whose functions so far as housing is concerned, it is well known, have been very considerably amended as well as extended by recent legislation. Secondly it aims at assisting the ordinary solicitor who is called upon to advise landowners and tenants, the experience of the author being that many practising solicitors do not pay nearly enough attention to the law of housing and town planning. Regarded as a volume providing guidance for local authorities and their officers, it may be recommended with safety. Mr. Jennings is an authority on law relating to local government in all its aspects, and has an understanding of the needs of local authorities and their officers in connection with the administration of laws with which they are given concern. This is well shown in this book, which gives

a comprehensive survey of the present law relating to housing in such a way as to provide a most useful guide both to members of local authorities and their legal and other officers having duties in connection with this matter. The value of the book is greatly enhanced, particularly to financial officers, by the chapter on housing finance and accounts by Mr. Frank Price, and the notes on the financial provisions of the Act of 1935 that he has provided.

Australian Sanitary Engineering Practice.

By H. Y. RANDERSON, A.M.I.E. (AUST.), F.I.S.E. (LOND.), Lecturer on Sanitary Engineering, Sydney and Newcastle Technical Colleges; etc. London: Australian Book Company, 37, Great Russell Street, W.C.1. pp. 430. Price 32s. 6d.

In a foreword to this extremely interesting book, Dr. Purdy of Sydney offers to it a very warm welcome and claims for it that it meets a need long felt in Australia and New Zealand for a comprehensive text-book on sanitary engineering, taking particular note of conditions peculiar to these countries. It is a pleasure to join in the welcome offered and to express agreement with the praise given to the author for having met the need so admirably and completely. Having regard to the fact that he has been a teacher in the Department of Public Health Engineering and Hygiene of the Sydney Technical College for 15 years, Mr. Randerson was well qualified to undertake the task. In carrying it out he has produced a book that it is safe to believe will be greatly appreciated not only by students but by architects and others in practice throughout the Commonwealth.

Prognosis. Volume One. Published by The Lancet Limited, 7, Adam Street, Adelphi, London, W.C.2. pp. 372. Price 10s. 6d. net.

This volume contains the first group of the series of articles on prognosis published in *The Lancet*, and thanks are due to the proprietors of that journal for having made them into a book. The field covered is extraordinarily wide and the writers are all of them of distinction and extreme reliability. Taken altogether the book is a remarkable one, and to the practitioner of medicine of outstanding value and usefulness.

In the Annual Reports.

TERMINAL DISINFECTION.—Five full years have now elapsed since routine steam disinfection was discontinued, and the following table shows in summary form the results of the last five years compared with those of the five years immediately preceding. In the table the results of five years (1925-29), during which steam disinfection had been carried out, can be compared with those of five years (1930-34) during which it had been abandoned. The table shows at a glance the total number and also the percentage of secondary cases occurring in premises from which the original cases had been removed previously. By way of explanation, it should be pointed out that, in the final comparison, secondary cases occurring within a week of the primary case have been excluded, the reason being that such cases occurring within the known incubation stage of the two diseases may have been infected by the primary case before removal to hospital.

Period.	Steam Disinfection.	Disease.	Cases Notified.	Cases Removed.	Secondary Cases After 7th Day.	Percentage of Secondary Cases.
1925/6/7/8/9	Practised.	S.F.	2,054	1,315	80	6.08
		Diph.	1,538	1,272	59	4.63
		Total	3,592	2,587	139	5.37
1930/1/2/3/4	Abandoned.	S.F.	2,542	1,683	104	5.51
		Diph.	1,050	896	33	3.68
		Total	3,592	2,579	137	5.31

It will be seen that, in the case of scarlet fever, the percentage of secondary cases has dropped from 6.08 per cent. to 5.51 per cent., whereas the relative figure for diphtheria has fallen from 4.63 per cent. to 3.68 per cent. during the two periods under review. When comparison is made between the total figures (including both scarlet fever and diphtheria) it will be seen that the percentage of secondary cases has diminished from 5.37 (with steam disinfection) to 5.31 (without steam disinfection).—*Dr. Andrew W. Forrest, Leyton.*

NOTIFICATION OF CANCER.—What useful results could be expected from the notification of cancer and from the investigations made in consequence of notification? In the first place, it would supply us with very valuable information regarding the history of individual cases, methods of treatment and results of treatment, and all the data collected could be made of real practical use. At the present time, the only information the medical officer of health gets about a cancer case is a copy of the death certificate. Apart from the mortality, he has no knowledge of the prevalence of cancer in his district. He does not know

what proportion of cases recover. He knows nothing about the social circumstances of the patients, and consequently he cannot help them in the variety of ways that he can, for example, in a case of tuberculosis. He has no direct means of knowing when cancer patients first consult a doctor, or the reasons why they often delay doing so. Such knowledge might very well prove useful in improving on the methods of health education. He has no direct knowledge as to the sufficiency of hospital accommodation for cancer cases, or of the adequacy of provision of modern methods of treatment, e.g., radium treatment. He would like to know something about the home nursing of such cases, whether there is a sufficient supply of dressings, and so on, because he might be able to help when there was a need. All that information, and much more, would be available as the result of notification. Lastly, I believe that notification would prove a powerful agency in dispelling the profound ignorance and fatalistic ideas which envelop the subject of cancer. The inquiries made as a result of notification would gradually, even if slowly, have the effect of bringing to the people knowledge about the subject, and, with knowledge, interest and hope. It would not prevent cancer arising, but it would in course of time cause more patients to seek medical aid, at a time when medical aid could help them. So far as I know, cancer has never been made a notifiable disease, but I believe the time is now ripe for that step.—*Dr. Thomas Gibson, Wakefield.*

MATERNAL MORTALITY.—There is one point which my analysis brings to light very definitely. I refer to the apparent lack of intelligent co-operation on the part of so many expectant mothers, and this is apparent more in multiparæ than in primiparæ. I suppose that a mother having been piloted successfully through her first confinement thinks she can pilot herself through the others. Until all expectant mothers realise the wisdom of seeking the early help of a pilot on every occasion, the maternal mortality will never sink as low as we would all like to see it. Again, and I do not want to be misunderstood, I have often wondered if the much improved maternity schemes have been as futile as they are made out to be. Have deaths as a result of early abortion always been included as maternal mortality and are such abortions not on the increase? It has come to the pitch now that local authorities are judged by the maternal mortality rate in their district, and it is very unfair that these deaths should be allowed to swell the total upon which they will be judged. Women who wish to procure an abortion will hide the fact that they are pregnant and will certainly not attend an ante-natal clinic. Deaths from abortion might be considered to point to foolishness on the part of certain mothers in the district, but should not be counted as a black mark against the maternity services of the local authority. They should certainly be noted as a separate item, but should not be included in the list of deaths which are due to childbirth.—*Dr. A. Ferguson, Stepney.*

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

MATERNAL AND INFANT
ILL-HEALTH.

To the Editor of PUBLIC HEALTH.

SIR,—As you say so truly in your introduction, Dr. Newsholme's paper published in the February number of PUBLIC HEALTH deals with its subject matter in a most thought-compelling way.

The compulsion to thought to which you refer owes its potency to the fact that in this paper certain questions of great importance to the public health are reviewed in the pale and unreal light of ethical transcendentalism without any attempt being made to assist the plodding reader in the difficult task of thinking out the correct mundane application of ethical principle.

One is, indeed, given furiously to think. The sudden appearance of the medical officer of health of a large and important city floating in the azure and exhorting us to virtue makes us anxious above all things to follow so inspiring and authoritative a lead. But whither are we being led?

In the first moments of uplift that every reader of this paper must experience, it seems sufficient and all we need to know that selfishness is a factor in the causation of maternal deaths and of infant ill-health. But, Sir, as I think William James pointed out, fine feelings must find their practical application, and the enraptured star gazer be judged, in part at least, by that which he sets his hand to when his eyes are again turned to matters here below.

But here a sudden chill uncertainty assails one. Only Dr. Newsholme can trace the administrative path that those should follow who wish to walk in the light of that lofty idealism of which he has given us such a generous helping.

If he will do so he will, I am sure, earn the gratitude of very many members of the public health service for whom the two practical problems that he uses to exemplify his thesis are matters of daily administrative difficulty.

May we please know what teaching should, in Dr. Newsholme's opinion, be given regarding maternal deaths? We know that a large proportion of these deaths are held by those best qualified to form an opinion to be preventable deaths. We know that the women themselves,

midwives, doctors and local authorities can all contribute towards the prevention of maternal deaths. We all agree that teaching that merely resulted in terror of child-bearing would be disastrous. We all agree (don't we?) that teaching that makes those groups of people enumerated above more efficient, and that results in public opinion bringing pressure to bear on each group to improve still further its knowledge and efficiency, is good teaching and ultimately the only method whereby these deaths can be reduced.

Does Dr. Newsholme mean anything more than that the teacher should give the taught a fair deal and teach the facts?

And again, may we know, please, what Dr. Newsholme means about birth control? We are all agreed that sexual relations should be unselfish and idealistic, but these are words in the stratosphere. What should these words mean when the advice of a medical officer at a welfare centre is asked regarding the hygiene of married life?

I am,

Yours faithfully,

MAITLAND RADFORD,
Medical Officer of Health.

Town Hall,

St. Pancras, London, N.W.1.

February 8th, 1936.

THE TREATMENT OF ACUTE
RHEUMATISM.

To the Editor of PUBLIC HEALTH.

SIR,—In your report, in the February issue of PUBLIC HEALTH (p. 186), on the meeting of the Midland Branch, there is one quite important omission from my remarks on the treatment of acute rheumatism.

I should not like it to come out that I stated that the treatment of acute rheumatism was quite so extremely simple as reported, for, in addition to the rest of mind and body, adequate doses of salicylates are essential.

I am,

Yours faithfully,

K. DOUGLAS WILKINSON.

89, Harborne Road,
Edgbaston.

February 24th, 1936.

PUBLIC HEALTH

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Editorial.

The Midwives Bill.

THE bill presented by Sir Kingsley Wood and supported by Mr. Shakespeare, and described as a bill to amend the Midwives Acts 1902-1926, brings nearer the possibility of a salaried service of midwives and the realisation of a hope, widely entertained, that with such a service there will come a reduction in maternal mortality and morbidity. So far as the provisions go, the "explanatory and financial memorandum" prefacing the bill gives interesting and useful details with regard to the main purposes of the proposed measure and the manner of securing improvement in "the standard of domiciliary midwifery in England and Wales by establishing an adequate service of salaried midwives"; by, in fact, placing an obligation on each local supervising authority to secure an

adequate service within its area, provides for an exchequer grant towards the cost of the new service, and deals with other related matters.

Under clause 1 it will be the duty of every local supervising authority to secure, whether by making arrangements with welfare councils or voluntary organisations for the employment of midwives as whole-time servants or by itself employing midwives, that an adequate number of salaried midwives is available in its area to attend on women in their own homes as midwives or maternity nurses: the clause provides for the submission to the Minister of proposals for carrying out this duty after consultation with the local bodies concerned, amongst them those of registered medical practitioners and midwives. A welfare council, it may be noted, is the council

of a county district, not being a local supervising authority, which has established a maternity and child welfare committee under the Maternity and Child Welfare Act, 1918. The number of such councils, excluding the county district councils who are local supervising authorities, it is explained, is about 220.

Clause 2 provides for the advertisement by each authority of the terms of employment in the new service, which is to be on a whole-time basis, and for certain superannuation matters in relation to midwives so employed.

By clause 3, authorities will be required to fix scales of fees for the services of their midwives, when acting as such or as maternity nurses, and to recover in each case the appropriate fee, or, if the financial circumstances of the patient do not permit of the payment of the whole charge, such part, if any, as she or the person legally liable to maintain her can afford.

Clause 4 sets out the provisions governing the grants which it is proposed shall be made by the exchequer towards the cost of the new service, providing that during the initial period of five years from April 1st, 1937, to March 31st, 1942, each authority shall be paid annually a grant in respect of the additional expenditure imposed on it by reason of the new service. The additional expenditure which is to be regarded as so imposed in any year during this period will be the amount of expenditure estimated to the satisfaction of the Minister to have been incurred by the authority on the service in excess of the amount of the expenditure incurred for similar purposes in the area of the authority in the year 1936-37. With a view to minimising the departmental examination of the detailed arrangements of the authorities and simplifying the grant calculations, the additional expenditure on midwives directly employed by the authorities will be calculated on a "unit" basis, this unit representing the estimated average net annual cost incurred by authorities in employing a midwife in pursuance of the Act. The rules for the calculation of the grants are set out in the first schedule.

Admitting that it is not possible at present to forecast accurately what the total additional expenditure of the authorities on account of the new service will be, the memorandum indicates that on such statistics as are available it is estimated that it may

ultimately amount to approximately £500,000 per annum.

Clause 5 of the bill provides that a midwife who is not appointed by an authority as a salaried midwife and who agrees to cease practice and to surrender her certificate shall receive compensation based on her emoluments for the last three years, and that any midwife who is required to surrender her certificate by reason of age or infirmity shall receive compensation based on her emoluments for the last five years. One-half of the expenditure incurred by an authority under this clause will be borne by the exchequer. No reliable estimate can be made of the numbers of midwives who will cease to practise under these provisions, but it is anticipated that the total number under both categories will not exceed 3,500.

The remaining clauses contain provisions for preventing unqualified persons from practising as nurses in maternity cases, for securing the periodical attendance of certified midwives at courses of instruction to be provided by authorities and for certain miscellaneous amendments in previous Midwives Acts, including a provision enabling authorities to defray certain expenses incurred by them under those Acts.

Careful study of the bill will no doubt reveal the existence of matters that call for amendment or elucidation, but in the meantime it is proper to accept it as a welcome addition to the various measures designed to deal with a problem calling urgently for solution.

English Life Table No. 10.

PART I of the Registrar-General's Decennial Supplement, England and Wales, 1931, consists of a Report by the Government Actuary, Sir Alfred W. Watson, K.C.B., on the mortality experience of England and Wales in the three years 1930, 1931 and 1932. The experience of males and females has been examined separately, a number of interesting tables having been produced, the principal table being a new national life table for England and Wales. This continues the series of life tables constructed after each successive census, and is henceforth to be known as English Life Table No. 10. An indication of the trend of mortality in recent years is afforded by the comparison of the expectations of life according to English Life

Tables, No. 8, No. 9 and No. 10, which may be taken as representative of the conditions existing in 1911, 1921 and 1931 respectively.

EXPECTATION OF LIFE (YEARS).

Age.	MALES.		
	English Life Table, No. 8, 1910-12.	English Life Table, No. 9, 1920-22.	English Life Table, No. 10, 1930-32.
0	51.50	55.62	58.74
10	53.08	54.64	55.79
20	44.21	45.78	46.81
30	35.81	37.40	38.21
40	27.74	29.19	29.62
50	20.29	21.36	21.60
60	13.78	14.36	14.43
70	8.53	8.75	8.62
80	4.90	4.93	4.74
90	2.87	2.82	2.63

Age.	FEMALES.		
	English Life Table, No. 8, 1910-12.	English Life Table, No. 9, 1920-22.	English Life Table, No. 10, 1930-32.
0	55.35	59.58	62.88
10	55.91	57.53	58.87
20	47.10	48.73	49.88
30	38.54	40.26	41.22
40	30.30	31.86	32.55
50	22.51	23.69	24.18
60	15.48	16.22	16.50
70	9.58	9.95	10.02
80	5.49	5.56	5.46
90	3.16	3.13	2.98

An examination of the rates of mortality at individual ages shows even more emphatically the great improvement in the vitality of the people which has taken place at all but the most advanced ages. The improvement is specially marked at the youngest ages. The probability that an infant will die within a year of birth has decreased between 1931 and 1911 by as much as 40 per cent. Out of every 1,000 boys born the number who died before attaining the age of one year was in 1911 about 120, in 1921 about 90, but in 1931 about 72 only. Out of 1,000 girls born the numbers of deaths in the first year of age were 98 in 1911, 69 in 1921, and 54 in 1931. During childhood and adolescence also the improve-

ment in mortality experience, though not so pronounced, has still been substantial, while from ages 20 to 60 the 1931 mortality rates are much less than those for 1911, the difference being greatest round about age 40, where it is well over 30 per cent.

By contrast at the advanced ages the 1931 rates of mortality, it is notable, are rather heavier than those for 1921 or 1911. The deterioration as compared with the 1921 rates first becomes apparent at age 69 in the case of males and at age 78 in the case of females. One cause of this phenomenon is probably the survival to old age in the present generation of many of the weaker members of the community who, under the conditions prevailing in the past, would have succumbed before old age was in sight.

Rates of mortality are given for females according to marital condition—single, married, and widowed. The mortality of widows is found to be heavier than that of either single or married women. At all ages from 25 to 60 the rates of mortality for married women are lighter than those for spinsters, but at the higher ages there is little difference between the two classes.

Between 1921 and 1931 there has been a substantial improvement in the mortality experience of all three classes of women, but the most remarkable feature disclosed by this section of the investigation is the increase at the younger adult ages in the vitality of married women, as compared with single women. In recent years there has been a marked reduction in the number of births. It follows that though the maternal mortality rate, which is the ratio of the deaths assigned to childbirth to the number of births, has slightly increased, the actual number of deaths associated with childbirth has decreased. Apart, therefore, from variations in the numbers of deaths due to other causes, the reduction in the birth-rate has diminished the rate of mortality among married women at the child-bearing ages.

An interesting part of the Report is that containing an account of an investigation of the mortality experience of sections of the country with reference to (a) geographical situation and (b) density of population. Generally, it seems, the mortality among both sexes is heaviest in the north of the country and tends to become lighter as the locality approaches the south. The effect of density

of population on death-rates is measured by the relative mortality experience of county boroughs, urban districts and rural districts, in the several geographical areas. Whilst in the county boroughs, where the mortality is usually heaviest, the degree of excess over the national rate of mortality is in most cases similar for both sexes, in the rural districts, which usually experience the lightest mortality, the males are invariably subject to a much more favourable mortality in relation to the general average of their sex than are the females.

In order to illustrate the magnitude of the differences between the sections typical of the heaviest and lightest mortality a detailed investigation has been made of the experience of (a) the county boroughs of Northumberland and Durham and (b) the rural districts of the east region. The results of this comparison are very striking. For example, out of every 1,000 boys born the number who fail to survive for one year is 96 in the county boroughs of Northumberland and Durham, but only 57 in the east region rural districts. The corresponding numbers in relation to 1,000 female births are 73 and 45 respectively.

Another table in the Report shows, out of every 1,000 persons of various ages, the numbers who die within ten years in England and Wales, and in the two selected sections. Taking the age of 50 for example, the number out of 1,000 males who fail to survive ten years is in England and Wales 149, in the county boroughs of Northumberland and Durham 165, and in the east region rural districts 100 only, the corresponding numbers for females being 111, 125 and 97.

In the case of London, the life tables given for the area covered by the City of London and Metropolitan Police Districts, *i.e.*, Greater London, show that for males the death-rates for Greater London are more favourable than for England and Wales up to age 45, and less favourable thereafter, but the differences are usually small. The death-rates for females are lower at all ages in Greater London than in the country as a whole. Figures relating to the mortality experience of the two constituent sections of Greater London, (a) London administrative county and (b) the outer ring, indicate the marked superiority of the mortality experience of the outer ring over that of the administrative county. The figures also show that the

London suburban areas are subject to a much lighter death-rate than the country as a whole, in respect of both sexes. It is found, in fact, when the figures are compared with those for other urban areas, that the "outer ring" of London is conspicuous for the lightness of its death-rates over the whole span of life.

The Report naturally is one of those that every health officer finds it necessary to possess and to consult from time to time, and the fact that it is now available and that it records so much that is remarkable in the way of improvement will be noted.

The Health of Glasgow School Children.

IN a preface to the report on medical inspection and treatment of school children for the year ended July 31st, 1935, Dr. A. S. M. Macgregor, Medical Officer of Health for the City, points out that these reports are based on the records of the routine medical examination of about 50,000 scholars annually, as well as the records of a still larger number of examinations made for special medical purposes. The report itself has been prepared by Dr. George Arbuckle Brown, Senior Deputy Medical Officer of Health, who, in his introduction, claims that, if allowance is made for slight differences in average age of the children at the date of inspection, the heights and weights in nearly every age-group are higher than any recorded during the past fifteen years, and further that the figures relative to the average nutritional condition of the children are definitely the best recorded since 1919. The attendances for treatment at school clinics showed considerable reduction as a whole, although there were some temporary increases apparently due to the severe climatic conditions which prevailed in December, 1934, and also to the short epidemic of influenza early in 1935. The introduction of the daily milk ration in March, 1935, is referred to as having apparently augmented the average rates of increase in height and weight of the children during the latter part of the session.

The visits of the medical officers numbered 2,419 for the purpose of systematic routine inspection, 48,033 children being examined in the ordinary schools and 1,765 in the schools for physically and mentally defective children. In addition, 13,248 children specially presented by teachers and others on account of suspected defects were examined and 21,785 were re-examined as "abnormals." The results of

routine inspection in the ordinary schools are tabulated, and many of the percentages thus obtained are noted as being "as good as or better than any since 1919." Among these are: attendance of parents at inspection, 77.2 per cent.; clothing—insufficient, 0.1 per cent., in need of repair, 0.2 per cent., dirty, 0.2 per cent.; footgear—unsatisfactory, 0.3 per cent.; nearly all the average heights and weights of the boys and girls of 5, 9 and 13 years of age; cleanliness of head—dirty, 0.1 per cent.; cleanliness of body—dirty, 0.4 per cent., verminous, 0.1 per cent.; nutrition—good, 56.2 per cent., bad or very bad, 3.1 per cent.; teeth—sound, 17.5 per cent. (the highest percentage for 13 years); rickets, 2.0 per cent. Children free from irremediable defects, it is revealed also, constituted 95.6 per cent. of the 48,033 children inspected in 1935, as compared with 94.3 per cent. of those inspected in the previous year.

The number of children treated at the school clinics showed a reduction of 8.1 per cent. as compared with the previous year. The total numbers seen and for the most part treated at the clinics (71,271) included the following:—Diseases of the ear, 4,358; diseases of the eye, 4,707; skin, 16,553; defective vision, 9,614; defective teeth, 19,739; tonsils and adenoids operations, 1,426; deformities (exercises, massage, appliances, etc.), 1,383.

The work involved 423,967 attendances by children at school clinics—a decrease of 7.6 per cent. from the previous year, a figure which, it is claimed, is in itself highly significant of improved health and economic conditions.

An interesting part of the report is that in which are given the results of the supply of a daily milk ration to about 78 per cent. of the children on the roll of the schools. This was introduced on March 4th, 1935, and tables are given which compare the average physical measurements of the children examined during routine inspection before and after that date with the measurements of the children of like ages and sexes in the corresponding months of the preceding session. The average measurements of the children inspected in 1935 when compared with similar measurements for the previous year are shown to have been higher throughout the session but, while the increase was observable before the introduction of the ration, increase was more frequent and of greater extent after the introduction of the milk supply. Dr. Arbuckle Brown, to whom, as to Dr. Macgregor, congratulations are offered on the

results obtained, concludes that these increases are sufficiently noteworthy to justify the inference that the accelerated rate of growth was due to the daily ration of milk.

Rivers Pollution Prevention.

IT is interesting that almost at the same moment as the Society undertook a discussion on the subject of rivers pollution at the instance of Dr. Ash of Derbyshire, whose excellent paper appears elsewhere, another body, the National Association of Fishery Boards, met also to give consideration to the same subject. Curiously enough, though the angles from which the problem was regarded were somewhat different, the Association being concerned largely with the rivers as sources of fish—of which over a million pounds, mainly salmon of first-class edible quality, are taken annually—the conclusion arrived at was practically the same as regards the conditions existing, their effects and the need for the taking of action. Moreover, the line suggested so far as this last is concerned is almost identical; in a word, the establishment of a central water authority whose duty it would be to safeguard all interests and to deal with all forms of pollution. In a very comprehensive memorandum, which in many respects resembles an indictment, the Association, after charging the government with apathy and with procrastination—"the only bright spot in the sad history of our rivers" being, in fact, "the work of the Water Pollution Research Board, which necessarily deals with only one side of the difficulties"—as already stated, declared in favour of a central water authority. This, it is mentioned, has been urged during the last 60 years, has been recommended in strong terms by no fewer than seven royal commissions, two select committees, as well as the Society of Arts and numerous deputations to the government from informed associations. "If the constitution of a separate water department is considered inexpedient on the grounds of expense or otherwise," says the memorandum, "then it should be practicable to form a committee from all the existing departments concerned with our rivers with an independent chairman, who might be drawn from the Treasury. Such a committee should be capable of formulating a water policy, having regard to all the interests concerned. Above

all, some body that can agree upon a comprehensive policy, taking into consideration all the interests involved, is essential." That local jurisdiction as regards the different water interests should be centralised it has been frequently recommended also, and it would not seem difficult to constitute an authority within each watershed to co-ordinate policy without prejudice to the functions of the various interests concerned. Incidentally, such an authority should be given anti-pollution powers for the protection of all water interests. New government committees on the subject, it is urged, are not necessary. Every point has been abundantly threshed out in existing reports, and there is no reason why steps should not be taken without waste of time and money on more committees and reports. The whole water question is a national one, for the nation is dependent upon pure water for health and well-being, and all the interests involved in our rivers are of the utmost importance to the community. Government, therefore, should shoulder the responsibility and regard the matter as one demanding immediate action. The fact that a Rivers Pollution Prevention Bill, though not yet available, had been prepared and provided for the acceptance of trade effluents into the sewers of local authorities was mentioned at the meeting, the claim being made that it should be regarded as non-controversial and forthwith placed on the statute book.

As a result of the publicity given to the matter at the Association's meeting in the press, it may be hoped that something in the nature of progress may be made.

Epidemic Poliomyelitis.

DR. MACNALT'S Chadwick lecture at the Royal United Service Institution, Whitehall, on March 19th, 1936, on poliomyelitis, which he described as one of the saddest of diseases, deservedly attracted a large and interested audience. The subject is one to which Dr. MacNalty has devoted a great deal of attention, and in the course of his talk he was able to offer a wealth of information and suggestion based upon a very wide experience.

Discussing spread of infection, he impressed that human contact from one individual to another is the chief, if not the sole, means by which poliomyelitis spreads in epidemic form, and gave examples from the Surrey outbreak

of 1917 and the Broadstairs epidemic of 1926. In regard to prevention, he showed that much can be effected by notification, isolation, prompt treatment and hospital provision. In epidemic periods special care should be paid to the detection of mild cases, and crowded gatherings should be discouraged. Orthopædic treatment should be available. Naturally, the efficacy of human convalescent serum and of vaccine in the prevention of poliomyelitis was discussed, and the lecture closed on a note of encouragement, Dr. MacNalty venturing the belief that, in view of the knowledge of epidemic poliomyelitis that has been acquired within a comparatively short period of time, the omens are propitious for future work.

Brompton Hospital Reports.

IN the fourth volume of the series* the standard of excellence set by the preceding three is well maintained. It is an admirable publication of use not only to the specialist in diseases of the chest, but one in which all those engaged in general medicine and in public health work should find much of interest and value.

From the public health point of view, chief interest will centre around the first article on "The Expectation of Survival in Pulmonary Tuberculosis," by Sir Percival Horton-Smith Hartley, Dr. R. C. Wingfield and Mr. V. A. Burrows, and that on "Re-infection in Tuberculosis," by Dr. L. S. T. Burrell. The former, which has not previously been published, deals with an investigation into the after-histories of 8,766 patients admitted to Frimley Sanatorium during the period 1905-31, these patients being traced through successive years from the date of their admission. The cases have been classified according to age, sex, and condition of the disease, and for any one group the probability of living five years calculated for each year after the date of entry. The results have been expressed clearly and simply in the form of graphs, and the main facts emerging from the investigation may be summarised as follows:—

- (a) The mortality experienced by patients suffering from pulmonary tuberculosis depends almost entirely on the classified stage of the disease and is relatively unaffected by age or sex.
- (b) The probability of survival improves year by year after the passage of the initial two years.
- (c) The probability of survival is materially

* Price 2s. 9d., post free, from the Secretary, The Hospital for Consumption, Brompton, London, S.W.3.

increased in cases treated by artificial pneumothorax.

(d) The mortality experience of patients who have had sanatorium treatment is slightly more favourable than that of members of the general population suffering from pulmonary tuberculosis.

(e) The prognosis of the average case of pulmonary tuberculosis has not materially changed in the past 30 years, but in the selected class treated by artificial pneumothorax the prognosis has improved considerably.

The task of maintaining contact with such a large number of patients over a period of years must have been a very difficult one, and it is a tribute to those engaged in this section of the work that less than 8 per cent. of the total number of patients included in the investigation passed out by reason of the failure to trace the person concerned. This concise report embodies the results of a great deal of labour and the authors are to be congratulated upon it.

Dr. Burrell, in writing on "Re-infection in Tuberculosis," attacks—probably with justice—the theory that "secondary tuberculosis" is always the result of reactivation of the primary infection. Were this so, it would follow that the body had become so altered by allergy that, whilst still susceptible to the tubercle bacilli it already harboured, it had become immune to others which might be introduced from other sources—a position very difficult to maintain. The author holds that repeated exposure to infection is the important factor in the chronic types of pulmonary tuberculosis. The article gives much food for thought and the views on natural and acquired resistance are interesting.

Mr. Tudor Edwards, reviewing the treatment of bronchiectasis, points out that the ideal treatment of the diseased lobe: other operative treatment is less certain in action, although in unilateral bronchiectasis, thoracoplasty holds out hope of considerable amelioration of the symptoms. In bilateral cases treatment must be confined to postural drainage and bronchoscopy which may give a fair measure of relief.

The same author, with Mr. C. Price Thomas, gives an account of 48 cases of one stage lobectomy for bronchiectasis. Of the 48 cases, four died from conditions essentially associated with the operation itself, and three died later, one from cerebral abscess and two from tuberculosis of the other lung. Of the remaining 41 cases, six have some residual symptoms and 35 are virtually symptomless. The results would

seem to justify the operation and also the claim that lobectomy is the operation of choice in unilobar cases.

Articles on "Intrathoracic Neoplasms" and "Lung Abscess," by Mr. H. P. Nelson and Mr. Price Thomas respectively, are chiefly of interest to the specialist. The great majority of the contributions, however, are such that they should appeal particularly to those engaged in general practice. Dr. R. A. Young and Dr. T. S. Nelson each deal at length with the subject of bronchitis: both Mr. Roberts and Dr. Burrell write on the subject of empyema; while Dr. Marshall gives a concise account of the differential diagnosis of pulmonary tuberculosis. Hæmoptysis is efficiently dealt with by Dr. Beaumont, and Sir James Dundas Grant provides an excellent article on the treatment of laryngeal tuberculosis. The latter contribution is practical and provides many valuable hints on the treatment of this distressing complaint.

This small volume can be heartily recommended to all those who wish to keep in touch with the modern treatment of chest disease.

Atmospheric Pollution.

THE Twenty-First Report of the Investigation of Atmospheric Pollution issued by the Department of Scientific and Industrial Research* contains an analysis of observations made during the twelve months ended March 31st, 1935, by the seventy-eight bodies, most of which are municipal authorities co-operating with the Department in this work.

The greater part of the data presented have been obtained in the 98 deposit gauges, maintained by the co-operating bodies, but in assessing the general state of atmospheric pollution only results are used from a group of 57 stations for which the year's data can be compared with the general average of pollution for the five years 1927-32. It is pointed out that these figures do not represent an average for the whole country but simply for those stations which take observations, and that these stations are, in fact, concentrated in certain parts of the country—mainly in the industrial north. The chief and rather disturbing conclusion reached is that so far as general cleanness is concerned the condition of the atmosphere is not improving.

As in previous years, the data from the deposit gauges gives an estimate for the amount of total solids deposited, arrived at from the following

* H.M. Stationery Office. Price 5/- net.

items: tar, other carbonaceous material (including soot and organic dust blown up from the ground), and insoluble ash (including mineral dust carried by the wind from road surfaces, etc.). These items are grouped as insoluble in rain. The other items which are grouped as soluble include "soluble loss on ignition," representing combustible organic material, volatile products, such as carbon dioxide, ammonium salts, sulphuric acid, etc., and the remainder expressed as soluble ash. Figures for sulphates, chlorine and ammonia, although included in the above are also shown separately. The tables in the report giving the details of these deposits show an increase in the deposit of both tar and sulphates at: London—Archbishops Park, Finsbury Park, Golden Lane and South Kensington; Castleford; Glasgow—Alexandra Park and Ruchill Park; and Newcastle-on-Tyne—Town Moor.

The only stations which show a consistent reduction in all the components of deposit during the current year are: London—Southwark Park; Glasgow—Victoria Park; Rothamsted; Salford—Peel Park; and Wakefield—West Riding Rivers Board.

According to the report, however, the fact that the deposits for a particular town are higher than the average by no means necessarily implies that proper steps are not being taken to deal with the local problems of pollution, nor does the fact that the deposit gauge results in one town are higher than in another necessarily mean that the atmosphere of the first town is more heavily polluted. It is, in fact, quite as probable that the town in question is making a serious effort to arrive at the real measure of local pollution by placing its gauges in positions where the deposits recorded would be likely to be heaviest. In that case the very real assistance given to this co-operative investigation by the locality in question becomes a matter for appreciative comment. While criticism can more safely be made where the amount of the deposits recorded at the same station shows a consistent increase, it is clear that the only reasonable method of arriving at any comparative criterion of pollution between various districts or, indeed, of the degree of pollution in a particular area, is to make use of such a number of recording instruments as will enable the fullest possible account to be taken of the conditions obtaining in each locality.

The completion of twenty years' observations on atmospheric pollution has been made the occasion for a statistical examination of the

records obtained from the deposit gauges. This examination, which deals particularly with the records of London and Glasgow, has established that whereas the deposits of soluble matter fall to a minimum in the months of April, May and June, insoluble matter is at a maximum during these months. The general trend of the results confirms the conclusion that the level of deposited impurity is as great as ever. As regards the insoluble component, there is no foundation for the belief that there has been a progressive improvement during any part of the twenty years.

Figures are given showing the days on which definite smoke haze or fog was observed during the winter months (October-March) 1934-35 at any time in the 24 hours on any of the days on which observations were made, the records, as usual, being obtained with the instrument known as the "automatic filter," which indicates the amount of impurity suspended in the air producing smoke-haze. The presence of smoke fog, judged in this way, means that over 2.16 lb. of suspended dirty impurity was present in a cube of air of 100 yards side, that is, in one million cubic yards. In the case of London it is interesting to note that at Westminster City Hall, out of 187 days on which observations were made, there were 115 showing a definite smoke haze. At Cardiff, on the other hand, 189 days' observations revealed none with a smoke haze. From the records of results with the two methods of measuring sulphur pollution in the atmosphere developed by the Research Committee, Cardiff again creates records, being unusually free from sulphur pollution. London County Hall, Westminster Bridge, on the other hand, shows some very high figures for active sulphur. These results, according to Mr. Coste, Chief Chemist of the London County Council, and a member of the Research Committee, although showing marked seasonal variations which may be attributed, in the main, to increased fuel consumption in winter, are evidently affected to a great extent by other than domestic sources. The southward movement of industrial undertakings and the large number of tall chimneys to be seen all over London may, he considers, account for the general high sulphur content of London air.

As the result of a further review of their programme of work and of the need for more data in the interpretation of the measurements of atmospheric pollution, the Research Committee have come to the conclusion that a special investigation on a larger scale than any which

are at present being carried out will have to be attempted. One of the main requirements of the investigation into atmospheric pollution is to obtain information about the nature and extent of pollution in large industrial areas; but the instruments actually in use are too few and too widely scattered to enable anything like complete information of the extent of distribution of the various types of pollution to be obtained for any one area. The most hopeful method of obtaining such information is to supplement existing effort by the initiation of a special survey with a large number of instruments covering a specially selected industrial centre, if possible at a distance from the main industrial areas. Not only should such a survey provide the means for a better appreciation of the data which are already being obtained, but it should also throw light on a further problem which is naturally of great interest to local authorities, namely, the extent to which one area is affected by pollution coming from another area. An investigation of this character, which is expected to take at least two years, is now being carefully planned and a special investigator has been appointed to take charge of it.

During the year the standing conference of bodies co-operating with the Department gave further consideration to the question of possible dangers to public health through the pollution of the air by exhaust fumes from motor vehicles. In this connection the view of the Medical Research Council is of interest. This is to the effect that so far as the information already available goes, this shows that the health of users of even busy streets is not likely to be affected in any determinable way by such concentrations of carbon monoxide as are generally found. In the opinion of the Council also it seems unlikely that at present further investigation in this direction would be fruitful, owing to the difficulty of detecting the existence of minor degrees of ill-health possibly attributable to carbon monoxide, but yet characterised only by symptoms of a common kind that may be due to a variety of causes. For this reason any direct attack on this question must be postponed until some more positive evidence of the effects has been obtained under conditions involving much greater exposure to carbon monoxide, although not great enough to cause the acute symptoms of poisoning which are already well known. Active research is, however, being undertaken upon various aspects of the problem by Government and other organisa-

tions, the results of which will, the conference hope, throw further light on what, by its nature, is a very complex matter. The report on atmospheric pollution is one that is looked for by many others than the authorities taking part in the investigations, and this, the twenty-first of the series, will be found particularly interesting.

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Food, Health and Income.

THE object of the researches carried out by Sir John Boyd Orr and those with him, and the results obtained, are almost sufficiently indicated in the extremely attractive title—"Food, Health and Income"—given to the report and the publishers' binder declaring it to be a challenge to the nation. The report itself is rather more moderate, indicating that what was done was to attempt to show the average consumption of the main foodstuffs at six different income levels.

The standard of food requirements and the standard of health adopted in the report are physiological, which, though ideal, is attainable in practice with a national food supply sufficient to provide a diet adequate for health for any member of the community. Amongst findings the following are noteworthy:—

(i) Of an estimated national income of £3,750 millions, about £1,075 millions are spent on food. This is equivalent to 9s. per head per week.

(ii) The consumption of bread and potatoes is practically uniform throughout the different income level groups. Consumption of milk, eggs, fruit, vegetables, meat and fish rises with income. Thus, in the poorest group the average consumption of milk, including tinned milk, is equivalent to 1.8 pints per head per week; in the wealthiest group 5.5 pints. The poorest group consume 1.5 eggs per head per week; the wealthiest 4.5. The poorest spend 2.4d. on fruit; the wealthiest 1s. 8d.

(iii) An examination of the composition of the diets of the different groups shows that the degree of adequacy for health increases as income rises. The average diet of the poorest group, comprising 4½ million people, is, by the standard adopted, deficient in every constituent examined. The second group, comprising 9 million people, is adequate in

* Report on a Survey of Adequacy of Diet in Relation to Income. London: Macmillan & Co., Ltd., 1936. Price 2s. 6d. net.

protein, fat and carbohydrates, but deficient in all the vitamins and minerals considered. The third group, comprising another 9 million, is deficient in several of the important vitamins and minerals. Complete adequacy is almost reached in group IV, and in the still wealthier groups the diet has a surplus of all constituents considered.

(iv) A review of the state of health of the people of the different groups suggests that, as income increases, disease and death-rate decrease, children grow more quickly, adult stature is greater and general health and physique improve.

(v) The results of tests on children show that improvement of the diet in the lower groups is accompanied by improvement in health and increased rate of growth, which approximates to that of children in the higher income groups.

(vi) To make the diet of the poorer groups the same as that of the first group whose diet is adequate for full health, *i.e.*, group IV, would involve increases in consumption of a number of the more expensive foodstuffs, *viz.*, milk, eggs, butter, fruit, vegetables and meat, varying from 12 to 25 per cent.

The problem, as these findings show, is not one easy to solve, for the reason mainly that it is so very completely economic and political. Indeed, in regard to nutrition generally, it may be said that the terrible thing about it is that, no matter the direction taken, always it leads to a question that only the politician can answer. Sir John Orr himself has much to say of the need for "economic statesmanship" in the solution of the problem of how to take full advantage of what he describes as the "new knowledge of nutrition." The main difficulty is, in his view, that it is not within the sphere of any single department of state to deal with the problem. He would desire, apparently, the setting up of a Ministry of Nutrition. After a study of this report almost anyone would be inclined to agree that if this could really do what is needed, then the sooner the new Minister is appointed and the Ministry created the better.

"Food, Health and Income" will join the steadily increasing collection of volumes of importance relating to nutrition, will be consulted frequently, and even more frequently quoted. It is unfortunate, therefore, that with the object no doubt of keeping the price down

and making it more widely available, the publishers bound the report in boards that so very readily get out of shape.

DR. C. E. GODDARD, O.B.E., Medical Officer of Health of Wembley for many years, recently tendered his resignation to the urban district council. This was accepted with great regret, and it was resolved that a testimonial should be presented to Dr. Goddard as an expression of appreciation of the services he has rendered to the district during the long period of his tenure of the office.

THE British Broadcasting Corporation announce that the new series of health talks on Friday mornings will be given under the title "Health at Your Service." They begin on April 17th and in the series an account of a day's work will be given by a medical officer of health, a school dentist, a health visitor, a doctor at a maternity and child welfare clinic, a district nurse working in a large city, a county superintendent of nursing associations affiliated to the Queen's Institute of District Nursing, the medical superintendent of a sanatorium, a children's hospital, and an orthopaedic hospital respectively, and a bacteriologist in the public health service.

THE Welsh Branch of the Society of Medical Officers of Health has arranged to co-operate with the Royal Sanitary Institute in the holding of a sessional meeting of the Institute in Swansea on Friday and Saturday, April 17th and 18th, 1936, under the chairmanship of Mr. W. T. Creswell, K.C., Deputy Chairman of the Council of the Institute. On Friday at 2.30 p.m., following a reception by the Mayor in the Guildhall, there will be discussions on "The Co-ordination of General Hospital Services and the Provision of Additional Accommodation," to be opened by Professor Ralph M. F. Picken, Mansel Talbot Professor of Preventive Medicine, Welsh National School of Medicine; and on "The Co-ordination of Housing, Rehousing and Re-development under the Housing Acts with Regional and Town Planning," to be opened by Mr. Walter Hunter, of the Borough Engineer's Department, Swansea. On Saturday, at 9.30 a.m., visits will be made to various centres of public health interest. Dr. Thomas Evans (Medical Officer of Health, Swansea) is acting as Hon. Local Secretary of the meeting.

Prevention of River Pollution.

By W. M. ASH, M.B., F.R.C.S., D.P.H., County Medical Officer of Health, Derbyshire.

"The prevention of rivers pollution is a large and intricate subject; so large that it is impossible to do more in the time at my disposal than touch the fringes of it. Its intricacies concern the chemist, the bacteriologist, the engineer, the lawyer, and all those who are in any way connected with the various interests of water supply, power, industry, fisheries, agriculture and local amenities." These were words used by Dr. Ash in opening the discussion on this problem at an ordinary meeting of the Society held in London on February 21st, 1936. In the course of his paper, it will be seen, he managed to refer to most of the aspects of the subject. In addition, he stimulated a discussion which, though informal, largely for this reason proved one of the most interesting of the session.

IN looking for an inspiration and an opening for this paper, I came across the following introduction to a volume on trade wastes which seemed very suitable:—"The question of rivers pollution is now prominently before all local governing bodies and manufacturing interests, and the general drift of opinion and legislation in Great Britain seems likely to ensure the prominence of this subject for some time to come."

The writer is obviously expecting great things in the near future—the powerful local governing bodies and the powerful manufacturing interests are about to act. Public opinion and legislation will have the purity of the rivers prominently before them for some time to come!

Disillusionment comes, however, when we learn that the sentence was written in 1902. I quoted it, not to inspire you with hope, but to show you the futility of hoping for any improvement in the rivers unless there is a great change in the attitude of local governing bodies, manufacturing interests, public opinion and legislation.

Approximately 20 years later, on a June day in 1921, the Salmon and Trout Association held a meeting. This was followed by a deputation to the Minister of Agriculture and Fisheries in October of the same year, resulting in the establishment of a committee known as the Standing Committee on Rivers Pollution. After five years' experience that committee came to the conclusion that the problem of rivers pollution was a complex one owing to the number of interests involved, and that the matter should be dealt with in a comprehensive manner. They suggested two possible remedies, and I quote them:—

(1) "The creation, as recommended by the Royal Commission on Sewage Disposal, of some sort of

central authority to hold the scales between the various interests concerned, and to be charged with the preservation of pure water.

(2) The appointment of sufficient technical staff, working under such authority, to elucidate, not only in the laboratory but also by works experiments at the source of pollution, the scientific questions which, at present, have no answer."

The committee solemnly warned the country that the postponement of such a comprehensive effort would increase the difficulties and expense and also the risk of failure.

Ten years have passed since then and little has been done. Nothing has been done about these two recommendations, which I suggest to you are sound and should have received much more consideration.

At the annual meeting of the National Association of Fishery Boards in 1926, a representative of the Ministry of Agriculture and Fisheries was asked to attend for the purpose of providing any information available. He could report no progress in the purification of many effluents; admitted the rivers were being destroyed by pollution the meanwhile; pinned his faith in the creation of a strong public opinion, and appeared about as vague as to how to create it as the rest of us.

About ten to twelve years ago a Pure Rivers Society was founded largely to stimulate public opinion, without which there is little hope of combating vested interests. Public opinion, however, which might long before this have been expected to have made itself felt, has merely varied in the intensity of its indifference.

I have no intention of going into the various forms of pollution in detail and the means, if any, of preventing such pollution. These are very technical matters and can only be dealt with by those with expert knowledge of the processes involved.

My line of approach will be more general and directed towards showing why, generally speaking, there has been so little progress in the prevention of rivers pollution. I will deal generally with the present position of the machinery, science and law of rivers pollution prevention.

The machinery is altogether too cumbersome and complicated. The numerous interests involved, a few of which I have mentioned above, have created a multitude of bodies to represent them which appear to work in blissful detachment. Consequently the multitude of interests are reflected in the multitude of committees, boards, etc., often acting centrifugally and effecting nothing but a powerful inertia.

I will deal with the law in relation to rivers pollution later, but here I draw your attention to the authorities empowered to enforce the Rivers Pollution Prevention Acts. They are :—

- (1) County councils,
- (2) County borough councils,
- (3) Urban district councils,
- (4) Rural district councils,
- (5) Joint committees of county councils,
- (6) Fishery boards, and
- (7) Local bodies, such as the Thames Conservancy Board and the Lee Conservancy Board,

whilst under the Land Drainage Acts the Minister of Health has power to set up a rivers pollution prevention authority for a wide area. An instance of this is to be found in the case of the River Dee, whilst under special Acts, catchment boards and water undertakers may obtain authority to exercise the powers of the Rivers Pollution Prevention Act. With this complex machinery are we likely to find a solution to the problem of the prevention of rivers pollution? I think not. The tendency, however, is not to diminish the number of authorities but to create still more. Each will maintain its identity with the utmost vigour, judging from past experience.

Undoubtedly, there is a need for a central authority for preventing the pollution of rivers as suggested by the Royal Commission and the Standing Committee on Rivers Pollution. Ministry of Health circular 922 of September, 1928, urged the setting up of joint committees under section 14 of the Local Government Act, 1888, for the prevention of pollution over wide areas, but I agree with the Standing Committee that this is not enough. Joint committees might function as sub-authorities of the central

authority, but the full responsibility should be with the central authority. The Royal Commission, it will be remembered, advocated the creation of some form of central authority whose function should be to hold the scales evenly between the various interests involved, but the interests are so many that the authority would find its whole time taken up holding the scales with no time left to prevent rivers pollution. It is too much consideration for the interests involved which has hampered progress so far. Besides, there is already a central authority whose function in connection with rivers pollution might be described as holding the scales. I refer to the Ministry of Health, whose inquiry prior to the institution of proceedings under the Act might for the sake of euphony be described as holding the scales, but it cannot be said to have been successful in preventing pollution.

It is not reasonable to expect me or any other individual to say exactly what the functions of the proposed central authority should be, but as a matter for discussion I suggest that they might be given full responsibility for all rivers, and have a central legal, scientific and administrative staff and regional inspectorial staffs. Their functions, I suggest, should comprise :—

- (1) Administration of the law.
- (2) Control of rivers, either directly or through regional boards, both as river pollution prevention authorities and catchment boards.
- (3) Treatment of trade wastes in suitable areas.
- (4) Advising as to the positioning of polluting industries, so that in future these may be sited with a view to their trade wastes being treated by the central authority.
- (5) Prescribing standards of effluents.

This would necessitate legislation, and that legislation should also provide for zoning the country into areas, such as :—

- (a) Industrial.
- (b) Mixed.
- (c) Agricultural, etc.

As to the prescription of standards, these should be graded. You probably know that the Ministry of Agriculture and Fisheries divided the rivers into three classes according to their ability to support fish life, and I suggest that there might be three standards, one for each class of river. The cleaner the river the more stringent the standard.

In case I have not made it clear elsewhere, may I add that in my opinion the treatment of sewage effluents should remain in the hands of

local authorities who, as sanitary authorities, might reasonably be expected and required to turn out a high standard of effluent. They should not, however, be the river pollution authority also; you cannot be gamekeeper and poacher, or anyway you should not.

The functions of such a central body as suggested should, therefore, be to prevent the pollution of rivers by all available and reasonable means. These means are first, science; secondly, the law; and last, but not least, the force of public opinion.

The Scientific Aspect.—This is a difficult one. Much scientific research is still necessary in connection with the means of treating polluting effluents, more particularly those from certain manufactories. New forms of effluent constantly present problems, such as those from factories using molasses as raw material in the manufacture of yeast, alcohol and various industrial solvents, as an example, and the most recent report of the Water Pollution Research Board admits that a satisfactory method of dealing with this problem is not known. It is also pointed out in that report that the discharge of effluents from dairies and milk-product factories has presented instances where serious pollution has arisen. The necessity for experiments on a large scale in this connection is also pointed out. These and similar problems require expert knowledge which it is quite unusual to find, and unreasonable to expect, at the disposal of the present rivers pollution authorities. The solution of the scientific problems necessitates the constant employment of a highly qualified technical staff. The type of work involved and the complicated nature of it will be realised by perusing the annual reports of the Water Pollution Research Board under the Department of Scientific and Industrial Research, to which I have just referred. I would like to pay the highest tribute to the work of this Board and its technical staff. They have not, however, found a panacea, nor are they likely to, and if I suggest that research is not keeping pace with industry and development it is not in criticism of this Board. I realise their difficulties. I do say, however, that the Board is too remote from the actual rivers pollution prevention authorities. It should be a department of the suggested central rivers pollution authority.

The Legal Aspect.—Attempts to prevent the pollution of rivers by law date back in this country, as far as I know, to somewhere about 1360 when King Edward III, by royal order, prohibited the depositing of refuse and filth

into the water of the Thames or Fleet. Some 30 years later, in the reign of his successor, Richard II, the first Rivers Pollution Prevention Act was placed on the statute book.

I do not intend to go into the various enactments since that time, but you can take it for granted that in our grandfathers' time the generally recognised method of disposing of sewage was to put it into the nearest river or stream. The Towns Improvement Clauses Act of 1847 specifically allowed local authorities unable to make profitable use of their sewage to empty it into a river or the sea, and as late as 1862 the Chief Engineer of the Local Government Board wrote :—

"There is at present a great outcry against the pollution of rivers by sewers and the killing of fish. The question may be asked whether it is better to pollute rivers or pollute towns and houses, to kill fish or to kill men?"

So that much less than 100 years ago it is true to say that if the population was not exactly encouraged to pollute rivers by the central authority, they were certainly not deterred with vigour.

With the massing of population consequent upon the industrial revolution, pollution of rivers by sewage became a matter of some concern to the large townships. Consequently in 1865, memorials were presented to the House of Commons by Birmingham, Huddersfield, Nottingham, Rotherham, Sheffield and York urging legislation to provide for the land treatment of sewage and prevent its discharge into streams, and as a result of these memorials the Sewage Utilisation Act was passed in 1865. This was followed by a series of amending Acts, which show that Parliament was alive to the question of sewage disposal but seemed chiefly concerned with its profitable utilisation. The prevention of rivers pollution appears to have been quite a secondary consideration. The still more serious pollution from trade wastes was still to be appreciated.

The next measure I would mention is the Public Health Act, 1872. It is unique amongst the enactments because it went so far as to prescribe standards of pollution in some detail. Its supersession within three years suggests that the experiment of setting a legal standard was not popular. The legislature still seems to set its face against a legal standard, for the Royal Commission on Sewage Disposal recommended in 1912 that the Rivers Pollution Prevention Act of 1876 should be amended specifically to take into consideration standards which that commission formulated. That recommendation

has never been adopted. Both in 1876 and to-day the legislature prefer to be less definite, and enacted that an offence is committed only when it is shown that the best practical and available means of rendering the effluent harmless have not been used.

This phrase, "best practical and available means," I have no doubt, was received with thanksgiving by the legislature as a way out of their difficulties. It has, however, proved a great and perpetual deterrent to those whose duty it is to enforce the law. The case of Long Ashton R.D.C. v. S. Cox & Sons in the Bristol County Court in 1896 is a good example of the difficulty created. In this case his Honour Judge Austin, gave judgment thus:—

"He had to find out whether the defendant had used the best practicable and reasonably available means. It was a conclusion he shrank from to say that a man who had called in the best advice and who had honestly and in good faith tried to carry it out, should be told to close his factory because another chemist came along and said the result was unsatisfactory. He had come to the conclusion that though the result was unsatisfactory, Mr. Cox had satisfied him that he was using the best practicable means to render the noxious effluent harmless, and therefore he had no power to deal with him. Judgment would be given for the defendant with costs."

Commenting on this case in 1902, Mr. W. Naylor, the Consulting Engineer to the Somerset County Council, said:—

"It would appear from this judgment, and more clearly from the whole of the facts connected with the case, that so long as a manufacturer, polluting a stream admittedly to a great extent, can say that he has followed the advice of A, B, or C in good faith, it matters little what D, E, F or G may say to the contrary."

The position is much the same to-day. The way out of the difficulty is, of course, the adoption of legal standards but, as I have said, the legislature will not hear of it. In the absence of a standard, and when the Department of Scientific and Industrial Research publishes yearly the results of its efforts to find the best practical and available means, and have to admit that in many cases satisfactory means at a reasonable cost are not known (1934 report, p. 3, para. 1), an appeal to the law is out of the question.

It should be possible, with reservations, to apply standards, and the lack of powers to do so is a serious defect in the law.

Advising as to standards to be adopted and the amendment of such standards as circumstances or scientific advancement indicate, might well be left in the hands of the central authority,

either alone or in consultation with the Ministries of Health and Agriculture; preferably alone.

The legal powers, which at present exist for the prevention of rivers pollution are bound up largely in the Rivers Pollution Prevention Act, 1876, which may be considered as the principal Act, the 1893 Act being merely explanatory. The Act is in four parts: part I deals with solid matters, part II with sewage pollution, part III with manufacturing and mining pollution, and part IV with administration of the law.

Part I prohibits the putting of solid matter into a stream. Solid matter, however, is not defined, except so far as it does not include particles in suspension, and to prove an offence it is necessary to show interference with the flow or pollution of the water.

Part II prohibits absolutely the passing of solid or liquid sewage matter into a stream, whether the stream is already polluted or not, except where sewage flows along a channel constructed or in process of construction on August 15th, 1876, in which case there is no offence if the court is satisfied that the "best practical and available means" are being used to render the sewage harmless. That is the law as to sewage pollution, but with such definite powers to deal with sewage matter it is remarkable that sewage matter is not defined. The question immediately arises, is sewage effluent sewage matter? If not, at what point does it cease to be sewage matter? Take, for instance, paragraph 62 (a) of the eighth report of the Royal Commission on Sewage Disposal, which paragraph suggests that the commission considered that sewage effluent was sewage matter. If this is so, then obviously absolute prohibition is impracticable. The Royal Commission on Sewage Disposal suggests, and I agree, that the treatment of sewage plus storm water, which is certainly sewage matter, is also impracticable. The adoption of a standard below which an effluent would be considered sewage matter, and then the enforcement of absolute prohibition of sewage matter entering a stream, would make the section of the utmost value to preventing authorities.

Part III prohibits drainage into streams from manufactories and from mines. In the case of pollution from manufactories this part of the Act prohibits the discharge of liquid refuse only (it will be noted, however, that part I deals with solid refuse from manufactories), but in the case of mines both solid and liquid matter are prohibited. In both instances under part III it is

a good defence to prove that the best practical and reasonably available means have been taken to render the effluents harmless. Proceedings can only be instituted under part III by a sanitary authority, and then only with the consent of the Ministry of Health. For the purpose of this Act a county council is a sanitary authority.

Part IV deals with administration, and I draw your attention to section 7, an important one which, with certain provisos, places an obligation upon local authorities to accept trade wastes into their sewers. So that my proposal that the central authority should treat trade wastes has a legal precedent in this section.

Section 12 is remarkable and peculiar in giving absolute power to a Ministry of Health inspector to decide what is the best or only practical and available means, but not to say what is not. I suggest that if it is possible for an individual to be in possession of the knowledge to say that any particular means are the best, then he must have knowledge that any other means are not the best. Granting him that knowledge, it seems desirable that it should be used not merely for the protection of the polluter, but for the prevention of pollution, and this could be done by having such knowledgeable persons on the staff of the central authority. A central authority with such a staff obviously would be competent to set standards and apply them.

I think it is fair to say that in each part of the Act the powers given are nullified to a varying extent by provisos.

The Ministry before consenting to a prosecution under part III must be satisfied that means are available for rendering the trade liquids harmless and that no material injury will be inflicted upon the industry, and in giving or withholding their consent they shall have regard to the industrial interests involved in the case and the circumstances and requirements of the locality. Does this mean that in certain localities or zones less stringent precautions may be taken? Why not adopt defined zones and be more precise? After the Ministry's consent has been obtained, two months' notice of intention to take proceedings must be given to the offender. There is still another possible obstacle to be overcome by the rivers pollution prevention authority, for section 6 says that notwithstanding any consent of the Local Government Board, any person against whom proceedings are proposed is at liberty to object before the sanitary authority, who must hear him, his agents and all witnesses, and they

must take into consideration all those points to which the Ministry of Health are directed to have regard. This seems redundant to say the least of it.

Where an order is obtained from the court it is in the form of an injunction restraining the offender from polluting the stream. Generally, however, the order is suspended for a reasonable period to enable remedial work to be carried out. It is no exaggeration to say that from the commencement to the conclusion of proceedings for pollution under part III, months must, and years may, elapse. It has been suggested that "the inadequacy of the law, however, seems due not so much to the failure of Parliament and the judges to give a remedy, as to the difficulty of stimulating the proper persons and bodies to ask that the remedy be applied." It is not surprising that authorities are reluctant to enter into a prosecution in the circumstances.

The Salmon and Freshwater Fishery Act of 1923 gives fishery boards full powers under the Rivers Pollution Prevention Act and, further, authorises them to aid any person or body in this connection and empowers them to take action against industrial pollution *without the necessity of a preliminary Ministry of Health inquiry*. It also prohibits the discharge of any trade effluent from new works unless notice of the proposed construction of the works has been given to the fishery board or the Minister of Agriculture and Fisheries. Section 8, however, is retrograde in allowing the continuance of existing pollution.

The Public Health Acts (Amendment) Act, 1890, section 47, prohibits the throwing of cinders, ashes, bricks, dust, etc., into any river or stream or watercourse in any district in which the Act has been adopted. This is as much a matter of disposal of refuse as rivers pollution, and is a power which is rightly in the hands of sanitary authorities as a sanitary matter quite apart from rivers pollution prevention.

So much for statute law. Apart, however, from any statutory prohibition, interference with water flowing in a defined channel which injures either its purity or volume is an offence at common law. An aggrieved person can obtain damages and an injunction to restrain continuance. The law courts have always been ready to support this common law right, but here also the law has been nullified, this time by prescription—if pollution has been going on long enough a prescribed right to continue to pollute was acquired unless it amounted to a

public nuisance or was contrary to statute law. (See *Hulley v. Silversprings Bleaching Co.* (1922). 2 Ch. 268.)

It seems to have become fashionable to make sweeping statements with regard to rivers pollution law and rivers pollution prevention authorities. The statement that "the Rivers Pollution Acts are quite adequate in themselves but unfortunately the powers are not always exercised in a satisfactory manner" was made by a responsible person on a recent and responsible occasion. The first part of that statement is too sweeping. Is that law adequate to stop the pollution of rivers? The answer is obviously—"No." There are no satisfactory means of purifying some effluents, and to prevent pollution from such effluents would necessitate the closing down of the industries producing them. The law is not adequate to do that. There are many instances of such effluents and consequently there is much pollution that the law is not adequate to stop. The legislature deliberately phrased the Act so that such drastic powers should not be given. It is well to be clear on that point. On the other hand, there is the question as to whether the law is as adequate as it might be to prevent pollution by effluents which can be purified, and I am one of those who think that it is not, for the Act was passed 60 years ago and science has altered the circumstances so much during that 60 years that the law will, in my opinion, remain inadequate until it has taken into consideration the possibilities created by the advance of science. I have suggested that it is now possible to adopt standards, and this step would or could in my opinion markedly increase the effectiveness of the law.

Now as to the second part of the statement. Let us assume that the law is adequate to prevent rivers pollution. I think it is generally agreed that there is a considerable amount of river pollution going on. Such being the case, why is it that sanitary authorities, who do not hesitate to use powers given them under the various Public Health Acts and who, by the use of such powers, have raised the sanitation of this country to a very high level, are so singularly recalcitrant in the application of the Rivers Pollution Prevention Acts? Is it not that the law is so cumbersome that it is a bigger deterrent to the rivers pollution prevention authority than to the polluter of the river? However, it is an illusion to suppose that failure to fly to law is tantamount to neglect of duty by a rivers pollution prevention authority.

This leads me to deal with the last means by which one hopes to prevent pollution of the rivers, that is by the force of public opinion.

I am firmly of opinion that before there can be a solution to this problem of rivers pollution it must first of all be decided whether it is the wish of the people as a whole that the purity of the rivers shall take precedence over industrial or other vested interests, and to what extent. If public opinion requires that the country should remain beautiful, then it must stimulate the legislature to protect rural areas from indiscriminate industrial encroachment, confine industrial pursuits to definite areas, and stop chain building of houses. Much as we deplore the marring of the landscape and the pollution of the rivers by that industrialism which is taking from us the æsthetic pleasures which were once available to rich and poor alike, we must, however, realise that over 40,000,000 of people cannot in this country be sustained in adequate material comfort by any other means than industrialism. The legislature has obviously and rightly been influenced by this consideration; the question is whether it has not been influenced too much and whether scientific advancement has not reached a stage where the law can with justice and consideration for industry be more stringent and prohibit absolutely the discharge of effluents below an agreed standard.

So far the voice of vested interests only has been heard, but each and all of them have a particularly selfish outlook. The water undertaker blames the local authority for sewage pollution and the rivers pollution prevention authority for not absolutely preventing it under part II, but the Royal Commission on Sewage Disposal were definite that "while it would be practicable to render sewage effluents fairly pure, bacteriologically, the cost of the necessary additional treatment would be serious," and that the cost of the abolition of storm overflows and the treatment of all such storm water would be "practically prohibitive." They pointed out that, even so, river water would still require to be treated before it could be distributed for drinking purposes, and they add a very important statement which should not be overlooked, and which I quote in full:—

"Apart from the question of drinking waters, we find no evidence to show that the mere presence of organisms of a noxious character in a river constitutes a danger to public health or destroys the amenities of the river. Generally speaking, therefore, we do not consider that in the present state of knowledge, we should be justified in recommending that it should be

the duty of a local authority to treat its sewage so that it should be bacteriologically pure."

Further, the agriculturist blames the industrialist and requires a clean river purely for his own needs, and whilst the outcry of the agriculturists against the pollution of streams by industrialists is sometimes heart-breaking, the agriculturists themselves have a peculiar disregard of the state of the stream after it has passed their pastures. They take no more care to prevent their cattle standing in and polluting the stream with that most devastating virus, *Johne's bacillus*, than does the manufacturer to prevent pollution by his trade wastes, and nothing like the care local authorities take for preventing pollution by sewage effluents which, though constantly blamed by the agriculturist, has little, if any, effect on the health of cattle, as the Research Institute on Animal Pathology have shown.*

The problem is, therefore, one which is something more than a purely scientific one. Science must find ways of purifying effluents but, allowing for a marked success, it is inconceivable to me that purification can for many years be brought to such a state that effluents can be poured into rivers without any regard to the relative volume of the stream and total effluent. Supposing, however, this happy state of affairs is obtained, then the present system of indiscriminate expansion of industrialism and housing does not lend itself to the application of scientific methods for purifying effluents, but on the other hand results in numerous sources of pollution. In the case of housing it is productive of numerous septic tanks and cesspools, the whereabouts of which are often difficult to trace. It is especially in rural areas where this sort of thing is going on, and it is particularly to these areas that we must look more and more for our public water supplies.

The remedy for this is country planning and zoning. It is surprising that to-day it has not been considered essential to regulate the outward spread of industrialism and housing from the town into the country. This can only be done by Act of Parliament. Again, it is going to be opposed by vested interests, and one can only express the hope that the need for firm legislation will be rapidly appreciated. The difficulties of formulating such legislation would be such that no Government is likely to undertake it unless pressure is brought to bear by very strong and unprejudiced public opinion.

* *Journal of Land Agents Society*, Vol. xxxiii, No. 6, June, 1934.

I believe that if the beauty of the country, including the purity of its rivers, is to be preserved this step is essential. When the people of the country decide that they will not allow the despoilation of the country, then and then only shall we be given adequate powers to deal effectually with rivers pollution.

DISCUSSION.

Sir Francis Fremantle, O.B.E., M.P., agreed that the present arrangements were absurd. The question, however, involved so many interests that it was difficult to secure any line of advance on the subject as a whole. There was need for public opinion behind the demand for revision of the law, and the question might well be taken up by the bodies concerned with the preservation of rural England.

Dr. R. Veitch Clark said that the only real thing which had ever been proved in the way of damage had been that affecting fishery boards. Unless actual danger to the well-being of a community could be demonstrated—and that was extremely difficult—he failed to see how public opinion could be roused. In his opinion, river pollution could not be placed on a public health basis. A central authority could be of use only with scientific help. He disagreed with Dr. Ash if he meant that the central authority was to be an administrative body. Administratively it would probably be essential to have large local authorities controlled by a central authority in whose hands were placed the suggested standards, which he agreed were necessary.

Dr. E. W. Goodall, O.B.E., explained that in Germany the government had to be satisfied that proper provision was made for disposal of waste from industrial undertakings, and in many instances factories built away from rivers were still able to dispose of their refuse satisfactorily.

The President (Dr. W. G. Savage), speaking out of twenty-five years' experience of river pollution, dealt with the question of pollution standards. There could, he said, be three standards: the first, that the water should be fit afterwards for drinking purposes, was an impossibly high standard; the lowest standard, that it should not cause nuisance, was ridiculously low; and the standard usually adopted—one under which fish life was not damaged—was a very good one to employ. Standards of the Royal Commission on Sewage Disposal, though widely adopted, were not legal standards. The law was thoroughly bad: there were no powers of prevention, and it was necessary to wait until a river had been polluted before lengthy proceedings against the offender could be commenced.

Dr. Ash, in reply, said that though river pollution might not be considered a public health question in industrial areas, it certainly could be so regarded in the rural areas where it was necessary to look for water supplies. He still considered the proposed central authority should have the forming of the standards, and should be the body, acting through regional boards, to say when action was to be taken. Dr. Ash agreed that before a factory was erected on the bank of a stream, it should be possible to require an undertaking that processes known to be effective should be employed, failing which there should be power to have the factory closed. The greatest difficulty of to-day, however, was the lack of standards.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

The March Meetings.

Though it was not Council day, the Society's House was a scene of marked activity on Friday, March 20th. The Central Council for Health Education had a meeting in the forenoon and spent until lunch time discussing matters of moment appropriate from the point of view of that body. Immediately after lunch—at 2 p.m., in fact—met the General Purposes Committee of the Society, with Dr. Wood of Bootle in the chair—acting for Dr. Fenton, now on his way back from Africa *via* Palestine and a variety of other places and due to arrive before Easter—and, attending, the President (Dr. Savage) and a number of very prominent members of Council, amongst them Dr. Veitch Clark of Manchester, Dr. J. J. Buchan of Bradford, Dr. Pearce of Batley, Dr. Ernest Ward of the Tuberculosis Group, Dr. Joe of the Fever Hospital Medical Service Group, Professor Picken, and several others. The business of the committee was, as usual, preparation for the next Council meeting, the clearing up of matters calling urgently for attention, and so on. Since the sitting lasted well over two hours, it may be taken that the agenda was one of some length and included a number of questions definitely of importance and calling for careful consideration. And after the committee meeting was the ordinary meeting at 5.30 p.m.

Nutritional Factors in the Prevention of Disease.

The reason for making the call half-an-hour later than usual was presumably to allow members of the Maternity and Child Welfare Group time to get to headquarters from clinics and so on. This was a very thoughtful move, and was dictated, no doubt, by the fact that the President of the Group, Dr. M'Gonigle of Stockton-on-Tees, was one of the openers of the discussion on "Nutritional Factors in the Prevention of Disease," a subject not without interest and importance to members of the Society generally, but especially so to those operating amongst infants and young children and greatly concerned with dietetics. The principal speaker was Professor Cowell, Professor of Dietetics in the University of

London, and even though such special arrangements as have been mentioned had not been made to ensure a good meeting, it is probable that the fact of Professor Cowell's presence would have brought together an exceptional attendance. The number present was distinctly above the average, and though the bulk of those present were members having association with the Maternity and Child Welfare Group, there was quite a fair sprinkling of representatives of other branches of the Society.

Professor Cowell on Vitamins.

In opening the meeting the President pointed out that, as the title chosen for the discussion showed, the intention was to have the question of nutrition regarded from an angle within the field of the health service. In his talk, Professor Cowell strove to adhere to the text and to show that, in fact, in relation to disease prevention, nutritional factors played an outstanding part. Examining each of the factors and primarily the vitamins, he seemed to find evidence difficult to secure that, so far at any rate as the infections were concerned, the influence was marked. Vitamin A, suggested by some as possibly, in good supply, preventive in the case of measles was rather doubtful, one of its most interesting and unexpected influences being exerted in relation to night blindness. Vitamin B and vitamin C were even more doubtful than A, in this country at least, though that the latter possibly might play a preventive part in the case of rheumatic fever was a thing to be remembered. Discussing the case of vitamin D and in connection therewith certain of the mineral deficiencies, Professor Cowell referred to work done, particularly in the United States, showing the value of the milk of irradiated cows in the prevention of rickets. He had references to make also to the importance of iron in relation to nutritional anæmia in women, and of vitamin D in the toxæmias of pregnancy and disturbances of calcium metabolism.

Dietetics and the Housewife.

Dr. M'Gonigle, who followed, had a most useful and practical contribution to offer and, like Professor Cowell, provided not only much

food for thought but for discussion also. As a matter of fact, though it was perhaps a little slow at starting, the meeting showed itself most eager to consider the problem of nutrition and to add to the fund of knowledge on the subject. Some of the statements made by Dr. M'Gonigle and others, based on practical experience and observation, were of real interest. Without hesitation, Dr. M'Gonigle gave it as his opinion that it was impossible to associate definitely any particular disease with any particular deficiency. Dental defect and deficiency of vitamin D were, of course, related, and the almost miraculous effect of additional calcium in freeing pregnant women from the agonies of cramp was something worthy of note. To vitamin E, it was clear, he had devoted a good deal of attention, and his announcement that there was ground for believing that its deficiency might serve to account not only for the occurrence of repeated abortions in women but also for the persistence of worms in children, was received with very real interest.

The Solution of the Problem.

Discussing what was to be done about it, Dr. M'Gonigle, like so many others, found the problem of nutrition largely economic and political. It was something for the statesmen. His statement that the average housewife does not need much teaching on dietetics and, given money enough, women would assuredly get the things that were needed, coming from so capable an investigator and one so exceptionally well placed for observation, proved most impressive and must be given great weight. The difficulty is to know just how the government is to proceed in the direction of a solution. Possibly, as one speaker suggested, if we grew more fruit the case might be entirely met and the people not only be better fed but more prosperous. Somehow, however, the feeling cannot be avoided that there must be something more in it than that. Certainly there would be, it seems, very little fun in being healthy and prosperous if all there was to do was to eat fruit or grow it. Even in California they found time hang heavy on their hands with nothing to do but grow and eat fruit, so that eventually, in addition to canning what they could not consume, they had to take to canning drama in order to bring prosperity to a section of the population, at any rate.

Just What Happens.

"The gall bladder is part of the urinary bladder. Fæces and all digested foods pass through and is then expectorated." This, one gathers, was the written answer given by a nurse to a question in a paper set on the day following attendance at a class in which the subject was fully considered and explained. And yet it appears there still exists in certain minds some doubt as to the necessity for a preliminary educational examination for entrants into the nursing profession such as that presently to be imposed at the instance of the General Nursing Council. The fear is, of course, that recruitment will suffer, though this, it has been shown, is groundless, the reasons for unwillingness on the part of girls to adopt nursing as a career being other than a mere dread of an examination test.

P.

"THE Problem of Physical Education in Schools" is the title of a discussion to be opened by Dr. E. K. le Fleming (Chairman, Physical Education Committee, British Medical Association) at a meeting of the Royal Sanitary Institute to be held on Tuesday, April 21st, 1936, at 5.30 p.m., at 90, Buckingham Palace Road, London, S.W.1. The chair will be taken by Dr. George F. Buchan, Vice-President of the Institute.

DR. CHARLES PORTER, Registrar of the Royal Sanitary Institute, will preside at a sessional meeting of the Institute to be held in Nottingham on Friday and Saturday, May 1st and 2nd, 1936. On Friday, at 4 p.m., tea will be taken in the Guildhall at the invitation of the Health Committee. At 4.45 p.m., there will be papers on "A Municipal Common Lodging-House," by Dr. Cyril Banks, Medical Officer of Health, Nottingham (who is also acting as Hon. Local Secretary of the meeting); on "Nottingham Main Drainage Works," by Mr. R. C. Aldous, Deputy City Engineer, Nottingham; followed by a discussion on "The Survey of Overcrowding," opened by Mr. Alfred Wade, Chief Sanitary Inspector, Nottingham. On Saturday, visits to the municipal common lodging-house, to the sewage disposal works and to other places of public health interest have been arranged.

The Control of the Pasteurisation Process.

By WILLIAM G. SAVAGE, M.D., B.SC. (LOND.), D.P.H., County Medical Officer of Health, Somerset; President, Society of Medical Officers of Health.

This is an abstract of a lecture given by Dr. W. G. Savage, County Medical Officer of Health of Somerset. Readers will be grateful to the President of the Society for consenting to publish it in the Journal and allowing them to share with the medical officers of health and sanitary inspectors in Somerset, for whom it was intended, the advantage of learning something of a complex subject from one who is a recognised expert.

WHILE most experts are satisfied as to the necessity of pasteurisation and that it is reliable and without damage to the nutritive quality of milk, the control of the process requires careful consideration. Pasteurisation is a technical process and it is essential that it should be efficiently controlled to obtain reliable results.

Under the 1923 Milk (Special Designations) Order, and in the draft 1936 Order which is to come into force on June 1st, 1936, the granting of licences to sell pasteurised milk remains in the hands of the councils of boroughs, urban and rural districts. In other words, it remains in the hands of a multiplicity of local authorities guided by their health officers. An extensive experience compels me to express the opinion that a very large number of these officers, apart from the experienced men in the county boroughs, have no clear ideas of the numerous factors which have to be considered before a licence is granted and of the subsequent steps necessary to control the efficiency of the process. I have come across many instances of plants working under official licences which are inefficient in type and never adequately supervised. The aim of this article is to set out clearly the essential points, omitting many things of minor importance.

OFFICIAL REQUIREMENTS OF PASTEURISATION.

Essential points in the new Order are:—

The milk in relation to which the special designation is used shall be pasteurised, that is to say, retained at a temperature of not less than 145° and not more than 150° F. for at least 30 minutes, and be immediately cooled to a temperature of not more than 55° F.

An indicating thermometer and a recording thermometer shall be inserted in suitable places in the apparatus used for pasteurising during the whole of the pasteurising process. The type of apparatus and thermometers used and the methods employed shall be such as are satisfactory to the licensing authority.

Temperature records shall be made and all such records shall be preserved for a period of not less than one month.

On a sample of the milk being taken after pasteurisation and before delivery to the consumer, the milk shall be found to contain not more than 100,000 bacteria per millilitre.

The second and third requirements are new.

PASTEURISATION PLANTS.

The three main components are the heater, the holder and the cooler. Other less important features are a pre-heater (which may be absent), a form of filter, various pumps to move the milk from one part to another, pipe lines for the milk and the bottling plant. These are important but present no special technical difficulties so space forbids their discussion.

One of the difficulties of control is the rather bewildering number of actual pasteurisers on the market. From the point of view of their supervision they can be divided into two main types.

Heat and hold in one vessel—these are the batch or vat types. The milk can also be cooled in the same chamber but as this involves delay it is more usual to cool over a separate cooler.

Heat, hold and cool in separate apparatus.

Batch or Vat Type.

The milk is conveyed to a vessel the outside of which is jacketed so that by the use of steam or hot water the milk can be raised to the official temperature and after the 30 minutes let out at the bottom and then cooled. Since vats of small capacity are obtainable, it is a convenient type for small distributors. It can be perfectly efficient in working but certain requirements must be fulfilled for success. It requires more individual attention than the larger separate types.

A stirrer to keep the milk in agitation is essential.

With steam heating it is difficult to regulate

the heat applied to stop just so as to get the milk up to the correct heat, and hot water heating is decidedly preferable, especially if it can be thermostatically controlled.

Dead ends and leaky valves (see below) must be looked out for here as for the larger types.

The vat must be covered and the cover should be insulated.

A recording thermometer (see below) is essential and in this type must be fixed in the vat itself. An indicating thermometer is now required in the Order, and also must be registering the milk temperature in the vat.

Foam is a weakness of this type and is important because the temperature in the foam may be several degrees below that of the milk. Foam is a mixture of air and milk and is often present because the milk is poured in by pail without any precautions into the vat. It can be minimised by pouring the milk down the side and in spite of the drawback of something else to keep clean I advise a large funnel with a long delivery tube so that the milk is admitted only to the bottom of the vat. Efficient stirrers also minimise foam.

Separate Heater and Holder Types.

The Heater.—It is unnecessary to describe the various ways the milk may be heated, the only essential point is that all the milk must be heated as recorded. Necessary inspection points are the following:—

The part in which the milk flows must be capable of being thoroughly cleaned without allowing deposits of coagulated albumin.

The apparatus must have a mercury thermometer (indicating thermometer) fixed to record the temperature of the milk. This is better than a recording thermometer here (although one is affixed by some makers and is more convenient in certain types). The thermometer must be fully visible to the operator. It must have wide spacings so as to be easily read, and must not be one of the dial type.

The operator must be instructed to work to *this* thermometer and not bother when using the heater to consult the recording thermometer (on the holder) and he should be told to work to a temperature of 148° F. (for reason, see below).

The Holder.—This is the most important part and many points have to be investigated.

(a) All the milk must be held between 145° and 150° F. for 30 minutes. This means that the filling time cannot be included as part of the 30 minutes since while the first lot gets 30

minutes the later portions do not. The time control must be automatic so that it cannot be altered by the operator for any given batch. The actual time should be checked by a watch since experience shows the apparatus is not always set correctly.

(b) *The temperature* must not fall below 145° F. Usually the holder is lagged (*i.e.*, heat insulated) but without a hot water jacket. It also must have a cover which should be lagged. My own experience is that in such insulated chambers the drop in temperature is not more than 2° F. If, therefore, the milk is sent into the holder at 148° F. as advised it will pass out not below 146° F., the one degree above 145° F. being a safety factor.

(c) *Recording thermometer.* An excellent account has recently been given by Dalrymple-Champneys¹ so only essential points are mentioned.

The instrument must record both time and temperature. This is usually done but the records must be examined to note the point and that the time is the full 30 minutes. The arrangements, *i.e.*, width of spacing, etc., must be such that this is readily read off.

The accuracy of the records cannot be taken for granted. They are not infrequently incorrect and it is quite easy for any person wishful to do so to make them record incorrectly. Scott and Wright² give some interesting examples of inaccuracy and found 6 out of 18 with errors exceeding 1° F.

For ordinary inspection work they can be checked in part by a comparison with the indicating thermometer on the heater and by direct testing the milk in the holder with an accurate thermometer. An *essential* part of the equipment of every inspecting officer is a suitable mercury thermometer with a very open scale and a narrow range, 140° to 155° F. for example, and preferably fitted with a maximum reading device. The milk temperature in the holder can be tested and compared with that indicated on the recorder. This thermometer also is used to check the indicating thermometer on the heater.

The position of the recording bulb is, of course, most important. The last authorised holder I inspected had it on the inlet pipe where it was useless. The exact position must vary somewhat with the type of pasteuriser but it must record the temperature of the milk *after* holding, and therefore it should be, if possible,

on the outlet pipe, preferably a common outlet pipe from all the holders.

The charts must now be retained for at least one month and it should be the routine procedure to initial the one on the day of inspection and look back through all those until the previously initialled chart is reached. Only those before the previously initialled chart should be thrown away.

(d) *Defects in the type of apparatus.* Foam has already been discussed. Excessive foam should not be allowed as arrangements can be made for introducing the milk at a suitable angle so that it flows down the sides and is not splashed into the holder.

Dead ends are still not uncommon. They are usually where the milk flows out and all it means is that between the milk in the receptacle and the outlet valve is a pipe which, of course, is air-exposed and the contained milk is rapidly cooled. One I saw recently had a capacity of about three-quarters of a pint of milk. The outlet valve should be flush and this is managed in the best types.

Leaky inlet or outlet valves. If inlet valves are leaky it may mean that heated milk passes into the holder before the outlet valves are closed so the milk is not held at all. With leaky outlet valves the danger is that the inadequately (in time) held milk passes into the pipe line of the pasteurised milk. If it simply escapes into an under channel and is not treated as pasteurised milk no great harm is done. While perfect outlet valves are made, some leakage is frequently found in practice and attention must be paid to see that this milk does not run on as pasteurised milk.

There is one other defect in working which must be kept in mind. The holder is lagged not water heated, and the statement made above that heat loss is not greater than 2° F. only applies if the heated milk is run into a heated holder. This necessitates that before the first batch of heated milk is admitted the holder must be warmed, by passing hot water through it, to the required temperature. Failure to do this will result in the first holdings being held at too low a temperature, a fact disclosed by the readings on the recording charts. The point must be kept in mind and the practice of the operator directed on this matter.

The Cooler.—This is usually of the corrugated vertical type in the small and medium sized plants. In the large plants the very much more satisfactory plate type coolers are often em-

ployed. The coolers are usually efficient as regards doing their job, *i.e.*, cooling the milk to the stipulated temperature, but they are liable bacterially to contaminate the milk. They are usually placed in the worst place possible as regards dust collection (designers of plant layout need a good many lessons on the bacteriology of milk), the chief redeeming feature being that the floors are usually wet. Some coolers are covered in with outside plates but it is only partial and I doubt whether they are very efficient protectors and personally I do not insist upon them.

The other point is their cleaning. The play of a steam jet looks effective but it is not, and the use of boiling water after thorough washing is more efficient.

Bottling.—The cleanliness and efficiency of the bottling plant, the methods of cleanliness and of sterilisation all need careful investigation but do not raise many technical points.

Cooling and bottling supervision affect the bacterial content of the milk subsequently but do not affect the *safety* of the milk; that is controlled by the heating and holding and therefore all the stress has been laid on these two processes. Bacterial counts will check the cleanliness of cooling and bottling but not the safety factors of pasteurisation.

The Lay-out.—It is difficult continuously to produce a satisfactory result with a cramped, bad lay-out. Usually, however, we are faced with an accomplished fact, but we can sometimes improve matters. What we must be satisfied about is that it is not possible by carelessness for unpurified milk to pass through and be included and labelled as pasteurised. Of course, right-angled pipes and efficient methods of cleaning and sterilisation must be insisted upon.

The Operator.—This needs more attention than is usually given. In most of the medium-sized plants, if you draw the attention of the operator to a defect in management he immediately states that you must consult the manager as he is in charge. This is all wrong. The manager has a multitude of duties. The operator of such a responsible job as pasteurisation should be responsible and held responsible for its correct management although, of course, he is not for the type of apparatus. As I pointed out in 1933,³ I consider it should be a legal requirement that all operators of pasteurisation plants should be licensed. That at present is an academic question but we should insist *before a licence is granted* that the operator

understands his job and is made responsible for it. The new Order states "the methods employed shall be such as are satisfactory to the licensing authority" and the efficiency of the operator is certainly part of the method.

It is obvious that the officers of local authorities have two jobs. One to be satisfied on all the points indicated, before a licence is granted; the other is regular and systematic subsequent inspection. The modern regrettable tendency to allow laboratory control to dispense with regular inspection is nowhere more fallacious than in regard to the control of pasteurisation.

LABORATORY CONTROL.

It cannot be too strongly insisted upon that the legal bacterial standard of 100,000 bacteria per millilitre is not intended to be and is of no value whatever as a control of the efficiency of pasteurisation. It merely refers to the quality of the milk *as delivered to the consumer* and samples for this purpose should be taken as near delivery to the consumer as possible and never at the pasteurising plant.

The best bacteriological control of the efficiency of pasteurisation is the Coliform test, and from numerous experiments I have made I consider milk just after leaving the holder should contain no coliform organisms or, to make it practicable, none in 20 or 50 c.c. Testing 1 or 0.1 c.c., as is often done, is rather absurd. Allowing for some contamination in cooling and bottling I suggest only one tube positive out of three 10 c.c. tubes for milk collected after bottling. Wilson⁴ in his recent extremely valuable report also considers the test is of value for pasteurised milk. It is mainly useful on the positive side. If coliform organisms are present above a permitted figure there are defects somewhere. Their absence does not demonstrate efficient pasteurisation.

The phosphatase test.—Fortunately we now have a test which experience shows gives us what we require, *i.e.*, a reliable test of the efficiency of the pasteurisation process, and which we owe to Professor Kay. I refer you to Kay and Graham's⁵ paper for full particulars. Phosphatase is an enzyme which happens to be destroyed at the temperature required by the regulations for officially pasteurised milk. If, therefore, appreciable quantities are present it demonstrates that all the milk has not been held at the requisite time and temperature. The test is quantitative and depends upon the ability of phosphatase to liberate free phenol

from disodium phenyl phosphate, the resulting phenol being estimated colorimetrically by the amount of blue colour obtained from the action of the phenol upon the rather complicated Folin and Ciocalteu reagent. With a simple colour comparer, which is now available, the test can be readily carried out and the degree of blue measured. In the artificial Lovibond blue units, 2.3 units is taken by Kay and Graham as the maximum colour allowable for properly pasteurised milk.

We have used this test regularly in the county laboratory for the past six months and find it reliable and most valuable. Its reliability is shown by the fact that all unfavourable results are traced back to the particular plant and found to be associated with definite faults in the plant or in its management at the time the sample was collected.

For example, in a recent test the phosphatase figure was 20 blue units and when I personally visited the plant the charts for that day (and others when no samples were taken) showed the milk was being held several degrees below the permitted minimum.

To sum up I would point out that pasteurisation reliably performed gives us a degree of protection for our milk supply attainable by no other method. To obtain these reliable results the officers responsible must make themselves acquainted with the principles involved. A further implication is detailed investigation of every plant before a licence is granted, so that only producers with reliable and efficiently operated plants are licensed, and that after a licence is granted there is need for systematic control to be exercised by regular inspection aided by the use of the phosphatase test and, to a lesser extent, by coliform and plate count enumerations.

REFERENCES.

- ¹Sir Weldon Dalrymple-Champneys, Bt. 1935. Report on the Supervision of Milk Pasteurising Plants. No. 71, Reports on Public Health Subjects: Ministry of Health.
- ²A. W. Scott and N. C. Wright. 1935. An Inquiry into the Design, Operation and Efficiency of Pasteurising Plants. The Hannah Dairy Research Institute. Bulletin No. 6.
- ³W. G. Savage. 1933. Milk Pasteurisation as a Technical Problem. *The Journal of Hygiene*, xxxiii, p. 42.
- ⁴G. S. Wilson, *et al.* 1935. The Bacteriological Grading of Milk. Med. Res. Council. Special Report Series, No. 206.
- ⁵H. D. Kay and W. R. Graham, Junr. 1935. The Phosphatase Test for Pasteurised Milk. *The Jour. of Dairy Res.*, vi, p. 191.

The Society. Reports, Proceedings and Announcements.

NOTICES.

DENTAL OFFICERS' GROUP.

A meeting of the above Group will be held at the house of the Society on Friday, April 3rd, 1936, at 8 p.m. Casual communications will be contributed by K. C. B. Webster, Esq., L.D.S., on "Unusual Impaction of a Lower Molar," and by J. F. Pilbeam, Esq., L.D.S., on "A Dentigerous Cyst." A paper on "Dental Disease in Relation to General Disease" will be read by Grantley Smith, Esq., L.M.S.S.A. (LOND.), H.D.D. (EDIN.), L.D.S. (ENG.), Municipal Dental Officer, Bermondsey Borough Council.

J. F. PILBEAM,
Hon. Secretary.

Dental Clinic,
Lodge Road,
Croydon, Surrey.

MATERNITY AND CHILD WELFARE GROUP.

Meeting in London, Friday and Saturday, May 15th and 16th.

Friday Morning.—Visit to Walthamstow Nursery School, and Welfare Centre, which will include a film and a talk by Miss Lillian de Lissa, Principal of Gipsy Hill Training College (for Nursery School Teachers) and Chairman of the Nursery School Association of Great Britain. *Afternoon.*—Visit to St. Thomas's Hospital, including (a) a lecture-demonstration by Dr. Doyne Bell, M.A., M.R.C.P., Chief Assistant in the Children's Department, and (b) a demonstration by the Margaret Morris Movement of ante- and post-natal exercises for women and of exercises for young children.

Saturday Morning.—Two lectures at Guy's Hospital, London Bridge, S.E.1. 10.15 to 11.15 a.m., "Endocrine Therapy with Special Reference to Pregnancy and Children," Dr. Bishop. 11.30 a.m. to 12.30 p.m., "The Renal Complications of Toxaemias in Pregnancy," Dr. Osman. *Afternoon.*—River Trip to Woolwich to see M. & C.W. Department, Woolwich Metropolitan Borough. Cost of this trip approximately 6s. 6d. per head.

The Minister of Health is prepared to entertain applications from local M. & C.W. Authori-

ties for sanction to payment of reasonable expenses of one or two medical officers attending the above meeting. The Secretary of State for Scotland is prepared to entertain applications in respect of one delegate from County Councils and large Burghs.

Will those taking part notify the Hon. Secretary not later than Monday, May 11th, 1936, stating which sessions they wish to attend? This is most important, as all those who are so kindly lecturing, etc., wish to know the numbers they may expect.

(MRS.) MURIEL RADFORD,
Hon. Secretary.

1, Manor Way,
Potter's Bar, Middlesex.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, March 20th, 1936, at 5.30 p.m.

The President (Dr. W. G. Savage) was in the chair and there was an excellent attendance of some 40 members.

The minutes of the last meeting having been approved and signed, the following, having been duly proposed and seconded, were elected to membership of the Society:—

As Fellows:—

Johnston, Lillian Agnes Mima, B.Sc., M.B., CH.B. (ST. AND.), D.P.H.; Wallace, E. J. Gordon, M.B., CH.B. (EDIN.), D.P.H.

As Associates:—

Allin, John Freeman, L.D.S., R.C.S. (ENG.); Broughton, Harry, L.D.S. (V.U., MANCH.); Parsons, Thomas Harold, L.D.S., R.S.C. (ENG.); Poulter, Eric Seymour, L.D.S. (V.U., MANCH.); Stewart, Samuel Ogden, L.D.S., R.C.S. (ENG.); Wain, Douglas, O.B.E., L.D.S., R.C.S. (ENG.).

A number of nominations were received for the May election.

There followed a discussion on "Nutritional Factors in the Prevention of Disease," opened by Professor S. J. Cowell (Professor of Dietetics, University of London), and Dr. G. C. M. M'Gonigle (President of the Maternity and Child Welfare Group). Others who spoke in the discussion were Drs. E. H. T. Nash, Maitland Radford, T. W. Hill, Victor Freeman, E. H. R. Smithard, Agnes Nicoll,

P. A. Galpin, M. Mitman, S. W. Savage and Robert Sutherland.

The President conveyed a hearty vote of thanks on behalf of the Society to the opening speakers.

A full report of the meeting will appear in a later issue of PUBLIC HEALTH.

The meeting then adjourned at 7.30 p.m.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.

Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held in Parker's Restaurant, Manchester, on February 14th, 1936, the President occupying the chair. Thirty-five members and guests were present.

On the proposition of Dr. Lissant Cox, seconded by Dr. R. Veitch Clark and supported by Dr. G. W. N. Joseph, it was unanimously resolved that Dr. Ernest Ward (Tuberculosis Officer, Devon County Council) be nominated by the Branch for the Presidency of the Society for the session 1936-37.

Dr. E. A. Gerrard, M.C.O.G., opened a discussion on the **Report of the Joint Council of Midwifery**. The first question, Dr. Gerrard thought, was: "Will such a scheme naturally assist in reducing maternal mortality, infant mortality and post-natal disability?" His experience was that one child sterility was by no means uncommon, and prolapse was very frequently met with. There was undoubtedly possibility of an improvement in results. Sixty-five per cent. of confinements were conducted by midwives and if the standard of the midwives were improved, better results would surely be obtained. The incompetent midwife was a menace and should be replaced by a highly trained woman. To obtain better trained midwives the scheme adopted in Holland might be followed by two years' midwifery training. Good practical knowledge was essential but the practical side, to be satisfactory, must be based on sound theoretical knowledge. Nearly half the maternal mortality was due to sepsis, and the increase over the last 20 years had been ascribed mainly to that cause. The present-day midwife was weakest on ante-natal work, which was a strong argument that ante-natal supervision should be in the hands of a medical man.

Dr. Gerrard considered it unfortunate that the possession of a certificate in midwifery should be deemed a qualification for a senior post in,

say, a skin hospital or a seamen's hospital, as the training of so many persons in midwifery deprived those who intended to practise of much valuable clinical experience during their training. He thought it desirable to confine the training of the practising midwives to a few large training schools instead of spreading it over a number of small institutions as at present. To attract the right type a reasonable life and adequate remuneration must be offered. He claimed that by an amendment of the National Health Insurance Act, the money to pay for an adequate midwifery service could be found.

Turning to the Report itself, he held that it had failed in making an attempt to please everyone. He thought that all midwives, except those working under a voluntary hospital, should be on a salaried basis, paid by the local authority and under the control of that authority. To ensure a good standard of work all the midwives should be trained thoroughly; facilities for post-certificate training should be available, and the work of the midwives should be supervised not as at present but by a practical midwife in her actual work. He was also of opinion that county and district midwifery associations should be taken over to make the scheme satisfactory. He also thought the midwifery service might be based on maternity hospitals to make it more efficient.

The subject was then thrown open for discussion.

Dr. R. Veitch Clark considered that the proposals were only the beginning of a midwifery service, but it should be a completely controlled service. A full general training was an essential preliminary to midwifery training, and in order to obtain a good service those engaged in it should be contented, adequately paid and free from worry. Obstetrics should be divorced from general practice and confined to consultants and a panel of practitioners specialised in midwifery. He also stressed the importance of post-natal work in preventing disabilities of minor or major importance to the mother, which might influence future pregnancies.

Dr. J. Mackintosh emphasised the importance of the medical side of the midwifery service, and held that steps should be taken to improve that side, and also that the whole service should be controlled by the Ministry of Health, the functions of the Central Midwives Board being confined to the training and certification of the midwives.

Dr. Wood thought that the recommendations of the Council would not do much to improve maternal mortality until the medical side had also been improved. In his view, the supervision of midwives should be in the control of all local authorities administering a maternity and child welfare service, as the midwives could not be adequately controlled by large county authorities.

Dr. Yule considered the independent midwife should be abolished, and the service administered as an external service from an institution with a midwifery department.

The President, in concluding the discussion, thought the Bill would lay down an administrative scheme and that the training of midwives would be dealt with later. The scheme would ultimately abolish the free choice of midwife as the independent midwife would ultimately disappear, and in order to equalise the work among midwives it would have to be allocated among them to some extent.

A vote of thanks was accorded to Dr. Gerrard for his interesting and stimulating address on the proposition of Dr. G. W. N. Joseph, seconded by Dr. R. M. Galloway. This Dr. Gerrard acknowledged in replying to the various points raised in the discussion.

The following resolution, proposed by Dr. F. T. H. Wood and seconded by Dr. G. W. N. Joseph, was unanimously carried:—

"This Branch considers that the scheme outlined by the Joint Council of Midwifery will improve the status and ultimately the efficiency of midwives, and gives general approval to the recommendations contained in the report subject to the observation that the unit of administration of the proposed service should be those local authorities administering a maternity and child welfare service where a whole-time medical officer of health is employed."

A further meeting of the North-Western Branch was held in the Public Health Laboratory, York Place, Manchester, on March 13th, 1936. The President and twenty-nine members were present.

The method of nominating the President of the Branch was discussed, and it was resolved that the method which had been practised in the past be continued.

The Hon. Secretary referred to the roll of members of the public health service in the North-Western district which was being prepared, and it was resolved that the names of whole-time officers and part-time medical officers of health, superintendents of public health and transferred hospitals be included, but that the

names of part-time specialist officers be not included.

Correspondence was submitted from the Executive Secretary relating to (a) the Women Public Health Officers Association; (b) the proposal to form a County Borough Group in the Society; (c) the memorandum on facilities for post-graduate education, etc., for assistants in public health departments; and (d) the formation of a Dental Officers' Sub-Group in the North-Western Branch. In respect of (c) it was resolved that the Hon. Secretary obtain sufficient copies of the memorandum and circulate them to all the members of the Branch with the next circular.

A letter from Dr. D. Morley Mathieson suggesting the division of the Branch into two areas was considered, but the proposal met with little support. It was decided, however, that the question of holding some meetings at other centres be considered when arranging the annual programme of meetings.

Dr. F. A. Sharpe raised the question of the difficulty in finding suitable schools for children with mixed defects, especially any defect associated with a low intelligence quotient or epilepsy, and also facilities for the training in a handicraft of a child of good intelligence but more or less immobilised by a crippling defect, and for its establishment in trade after training. He also referred to the poor outlook for children trained in special schools in earning a living by reason of lack of mobility, lack of capital and low earning capacity.

An interesting discussion followed in which several members took part, and it was agreed that in all areas this difficulty was experienced, and at the present time voluntary associations alone were able to give any assistance to such persons. Crippled children could be trained to be expert in certain appropriate trades but difficulty was found in placing them in a suitable position to obtain a living. In consequence some organisation was necessary to assist in this work.

The question of a standard for the number of sanitary inspectors in relation to the population of a borough was discussed, and the opinion of the meeting was that one inspector per 10,000 of the population (including all sanitary inspectors on special duties) was an adequate number at the present time.

The difficulties experienced by maternity and child welfare authorities, other than cities with teaching hospitals and the county areas adjacent to them, in arranging for an obstetric consultant

service were discussed. Many members referred to their own experiences, but as the discussion disclosed so many difficulties and the time remaining was limited, it was resolved to defer full discussion until a subsequent meeting.

THE MIDLAND BRANCH.

President: Dr. P. G. Horsburgh, M.O.H., Nuneaton.

Hon. Secretary: Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

The fifth meeting of the session of this Branch was held at the Monyhull Colony, Birmingham, on March 5th, 1936. Seventeen members were present.

On their arrival the members of the Branch were conducted over the Colony by Dr. A. M. McCutcheon, the Medical Superintendent, and visited the school where children were receiving instruction, and also the shops where the adult population were busy at a variety of industries, e.g., weaving, tailoring, shoemaking, rug-making, sewing and mattress-making and repairing.

Dr. McCutcheon gave a short address on "Colony Care for Mental Defectives." He pointed out that the main objects of the Mental Deficiency Acts were the care and control of defectives and the protection of the general public. The Wood Report had considered that the incidence of mental deficiency in this country was roughly eight per thousand population and approximately one-third of these cases required some form of institutional care. Such care was particularly necessary for low-grade cases, cripples, epileptics and conduct cases, and would also include defective children where the home conditions were markedly unsatisfactory. The objects of institutional treatment were (1) to restore the defectives' self-respect and to make them happy, (2) to give them vocational training and make them partly self-supporting, and (3) to improve and stabilise them until they were fit to return to the world again, if this were possible. (This last object could not be achieved in the case of the vicious, the cripple and the permanently unstable.) In spite of its increased cost of administration, Dr. McCutcheon favoured the modern villa type of colony. It was very important to keep inmates of a colony occupied. They needed organised amusements, walks and shopping excursions as well as work. At Monyhull they were encouraged to have week-end leave to their own homes. Defective physical conditions also required attention, and

the services of specialists for the treatment of defects of the eye, ear, nose and throat should be available, as well as facilities for dental treatment. In considering the relatively high cost of institutional treatment for mental defectives, Dr. McCutcheon held that there should be taken into consideration the expenditure on public assistance and on the police and prison services which would be entailed if defectives remained in their own homes, as well as the vice and misery that might ensue. The modern colony was a place of hope in which defectives were encouraged, trained, stabilised and taught within certain limitations to discharge their duties as citizens.

A hearty vote of thanks was proposed to Dr. McCutcheon by the President for the extremely interesting demonstration and address he had given as well as for his kind hospitality. This was seconded by the Hon. Secretary and carried by acclamation.

THE WELSH BRANCH.

President: Dr. D. Rocyn-Jones, C.B.E., J.P., County M.O.H., Monmouthshire.

Hon. Secretary: Dr. D. J. Thomas, M.O.H., Rhondda.

Seventeen members of this Branch from South Wales visited Evans' Biological Institute at Runcorn on February 28th, 1936. Dr. H. A. Mitchell, the Medical Director, formally received the party and, with his colleagues, demonstrated some of the more important activities. There was considerable interest in the production and standardisation of antitoxins and immunological products, and the new stables and accommodation for small animals were greatly admired. Amongst the departments visited were the bacteriological laboratories, chemical laboratories, physiological laboratory, and ampoule filling and sealing section.

The party spent the evening in Liverpool, and were entertained at dinner by Mr. T. E. Lescher, O.B.E., Managing Director of the Company.

The pharmaceutical laboratories were visited on Saturday morning, February 29th, and the various modern methods of production of galenicals were demonstrated by Mr. C. E. J. Sendall, Laboratory Director, and his staff.

The travelling arrangements were organised by Mr. Morgan Hall, South Wales representative, who travelled with the party. That his efforts were very much appreciated was made clear when he was thanked at the dinner on the Friday evening.

THE HOME COUNTIES BRANCH.

President : Dr. A. W. Forrest, M.O.H., Leyton.

Hon. Secretary : Dr. R. P. Garrow, M.O.H., Hornsey.

A meeting of this Branch was held at the house of the Society on January 3rd, 1936, the President occupying the chair. Fifteen members were present.

The report of the Joint Council of Midwifery was discussed and general approval of it was expressed, exception only being taken to recommendation 5 on page 24, *i.e.*, "That the supervising authority (Midwives Act) should be the unit of administration for the proposed service."

THE SOUTHERN BRANCH.

President : Dr. A. B. Williamson, M.O.H., Portsmouth

Hon. Secretary : Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at the County Health Department, Winchester, on March 6th, 1936, the President occupying the chair. There was a large attendance of members.

The new bill to establish a salaried service of midwives was considered and, after discussion, it was unanimously agreed to endorse the action of the Society in giving general support to the principles of the bill.

Dr. Guy Bousfield (Director, Camberwell Research Laboratories) gave a most interesting address on "**Immunisation against Diphtheria**," illustrated by an excellent propaganda film entitled "The Empty Bed." A lively discussion followed, and a hearty vote of thanks was accorded to the speaker.

THE TUBERCULOSIS GROUP.

President : Dr. H. G. Trayer, Med. Supt., Baguley Sanatorium, Altrincham.

Hon. Secretary : Dr. Ernest Ward, T.O., South Devon.

A meeting of the Group Committee was held at the house of the Society on February 21st, 1936, the President occupying the chair. Fourteen members were present.

The Hon. Secretary and Council Representative reported that Dr. Heffernan had resigned from the Society and was therefore now unable to accept election to this committee; that he had informed the General Purposes Committee of Dr. Crowe's difficulties concerning super-

annuation and, following a communication from the Society to Dr. Crowe's authority, five years had been added to his superannuation period, while additions to his salary for the time when paid below the scale would be made; and that the Northern, North-Western, and Eastern Branches had decided to support the candidature of Dr. Ernest Ward for the Presidency of the Society.

Information regarding holiday facilities for tuberculosis officers and medical superintendents had been obtained for the Metropolis, Cornwall, Devon, Somerset, Dorset, Lancashire, Cheshire, Yorkshire, Cumberland, Westmorland, Durham and Northumberland. It was decided to continue the enquiry, and Drs. H. E. Watson and Fenwick Jones promised to make enquiries in Wales.

Facilities for radiography were discussed, and it was decided to reconsider the memorandum on this question at the next meeting, after amendments had been made.

The new recruiting circular for the Society was approved.

Cordial approbation was also expressed for Dr. Agnes Nicoll's circular on the maintenance of the efficiency of medical officers.

The Hon. Secretary raised the question of greater co-operation of the tuberculosis service with general practitioners, and was asked to prepare a memorandum on this subject for the next meeting to serve as a basis for discussion.

Friday, May 15th, 1936, at 10.30 a.m., were the date and time fixed for the next meeting of the Committee.

THE MATERNITY AND CHILD WELFARE GROUP.

President : Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary : Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

A meeting of this Group was held at the house of the Society on February 21st, 1936, and was attended by 45 members and friends.

The President, who occupied the chair, expressed profound regret that he had been unable to attend previous meetings of the Group this session owing to the fact that the dates had coincided with those of meetings of the Special Housing Investigation Committee of his Council. He desired, however, to thank the members for the honour they had done him in electing him as this year's President, and he was looking

forward to attending future meetings of the Group.

Dr. Andrew Topping (Senior Medical Officer, London County Council) read an inspiring paper entitled "**Some Factors in Maternal Mortality and the part played by Publicity in combating them.**"

In the discussion which followed, Drs. Nash, Dunstan Brewer, Nora Wattie, Maitland Radford, Stang, Margaret Strathie and the President took part, and Dr. Topping replied. The paper, together with a note of the discussion, will appear in an early number of PUBLIC HEALTH.

An enthusiastic vote of thanks to Dr. Topping was moved by Dr. Bell of Liverpool, seconded by Dr. Howie of Durham, and carried by acclamation.

A further meeting of the Group was held at the house of the Society on March 20th, 1936. The President was in the chair, and 29 members and friends were present.

A letter was read from Dr. Ethel Cassie in which she resigned from the Group Committee and as Group representative on the

Council of the Society, owing to pressure of work at Birmingham. A resolution was unanimously carried expressing regret that Dr. Cassie had found it necessary to resign, and marking the appreciation of the Group for the valuable service she had rendered during her long association with it. Dr. Morris Jones was unanimously elected in her place as Group representative on the Council.

Dr. Eric Pritchard addressed the members on "**Neo-natal Mortality: Its Causation, Prevention and Treatment**," in which he gave an interesting account of the results achieved, in spite of early discouragement, during his 25 years' connection with the infant welfare movement.

The discussion which followed was opened by Dr. Virginia Saunders-Jacobs, who read a brief paper entitled "**Underlying Causes of Neo-natal Mortality.**" Dr. Smithard, Dr. Agnes Nicoll, and the President also took part in the discussion, and Dr. Pritchard replied.

A cordial vote of thanks to the opening speakers, moved by the President from the chair, was carried with enthusiasm.

THE JOINT TUBERCULOSIS COUNCIL.

A meeting of the Joint Tuberculosis Council was held at the house of the Society of Medical Officers of Health on February 22nd, 1936, Dr. G. Lissant Cox occupying the chair. Twenty-five members were present.

The Hon. Secretary announced that he had invited the Association of Thoracic Surgeons to appoint a representative on the Council, but that they would be unable to reach a decision until their May meeting.

Dr. G. Lissant Cox was elected Chairman of Council for 1936; Drs. L. S. T. Burrell and S. Vere Pearson, Vice-Chairmen; Dr. Ernest Ward, Hon. Secretary; Dr. G. Jessel, Hon. Treasurer; and Dr. D. P. Sutherland, Hon. Auditor. A vote of thanks to these officers was accorded for their services during the past year. Dr. Esther Carling was re-elected a member of the Council.

The appointment of an assistant secretary was discussed, Dr. Ward having acted alone for 12 years. It was decided to place this matter on the agenda for the next meeting.

It was decided to circulate the Hon. Secretary's report for 1934-35 after one or two changes had been made.

The Hon. Treasurer presented his report for

1935, showing a balance in hand of £53 19s. 10d. Dr. Jessel was cordially thanked for his care of the Council's finances.

Dr. Hebert submitted the report of the Contact Committee and a brisk discussion followed, Dr. McDougall narrating some paradoxical findings during Mantoux testing of Preston Hall contacts. The report (which will be circulated with other literature) was adopted by the Council with sincere thanks to Dr. Hebert and his Committee.

The Pneumothorax Committee hoped to be in a position to report at the May meeting.

Dr. C. O. Hawthorne reported on behalf of the Milk Committee. He explained and criticised adversely the new grading of the Ministry of Health.

Dr. Tytler presented a new report on the microscopical examination of sputum for tubercle bacilli. This the Council found most informative, and it was decided that it should be circulated.

The Sedimentation Committee was not yet ready to report, and consideration of the report of the Infection Committee was postponed to the next meeting.

Dr. Brand had written to the Hon. Secretary

announcing the post-graduate courses arranged for 1936. Dr. Peter Edwards would give three courses—April 21st-23rd, June 23rd-25th, and September 22nd-24th; and a course at City Road Chest Hospital would be held from May 4th-9th. Drs. Peter Kerley and R. R. Trail would also be asked to give, at a convenient time, a series of demonstrations on X-ray interpretation in chest diseases. The question of a course in surgical tuberculosis would be considered later. Dr. Brand was heartily thanked for the arrangements already made and for those contemplated.

Professor Jameson spoke on the training of health visitors in tuberculosis, and urged the need for the giving of as many facilities as possible to assist this training.

Saturday, May 16th, 1936, at 10 a.m., were the date and time fixed for the next meeting of the Council.

After the meeting, members adjourned to the Hotel Russell, where the Council were entertained at lunch by their Chairman, Dr. G. Lissant Cox. Forty-two members and guests were present. Dr. A. S. MacNalty (Chief Medical Officer, Ministry of Health) was the principal guest, and there were also present the previous chairman (Sir Henry Gauvain); Dr. W. G. Savage, President of the Society of Medical Officers of Health; and several medical editors—Dr. Horner (*British Medical Journal*), Dr. Morland (*Lancet*), Dr. Conner (*Clinical Journal*), Dr. Charles Porter (PUBLIC HEALTH), Dr. Roodhouse Gloyne (*Tubercle*), and Captain G. S. Elliston, M.P. (*The Medical Officer*). Other guests were Mr. Girdlestone of Oxford, Dr. Maitland Radford, Dr. Allen Daley, Professor Bedson, Dr. P. Hall Smith, and Mr. G. L. C. Elliston, M.A., Executive Secretary, Society of Medical Officers of Health.

After lunch, Dr. Lissant Cox proposed the health of Dr. MacNalty and other guests. There were present, he said, all the medical editors with one exception; some were whole-time or pure editors; others part-time or unpure editors. The former usually practised the Lancashire precept: "Think owt, say nowt"!

Dr. MacNalty, in reply, described the origin of the Joint Council, its place in the national anti-tuberculosis campaign, and his own association with the earlier years of the Council.

Sir Henry Gauvain, in proposing the health of Council, related a series of interesting and whimsical experiences which befell him while participating in the British Medical Association world tour.

Dr. Ernest Ward, in reply to this toast, referred to the impression made upon him by the remark of a leading medical officer of health that tuberculosis work must be regarded as static. He urged that an endeavour should be made to belie that conception. The mortality rate had steadily diminished, but in Italy, he was told, the diminution was swifter. The increase in collapse therapy had made no visible impression on the tuberculosis death-rate. Was this because the time was too short, or was there some other reason? Ninety per cent. of cases of tuberculosis were infected from an unknown source; until those sources could be traced, the work was handicapped. He believed that more radiography of the adults in the house where a case of tuberculosis had occurred would be helpful.

Dr. Hawthorne proposed the health of Dr. Lissant Cox in a witty and apposite speech, to which Dr. Cox replied, thus ending an eventful and most successful party.

Draft Milk (Special Designations) Order, 1936.—The Minister of Health announces that, having had under consideration representations made to him upon the draft order, he has decided when making the order to give effect to certain of them, including a postponement of the date of operation until June 1st next. A copy of the order and a further circular will be sent to all local authorities as soon as possible.

A SERIES of post-graduate courses of a practical nature on modern methods of therapy in tuberculosis of the respiratory system, with special reference to collapse therapy, will be held by Dr. Peter W. Edwards in the Cheshire Joint Sanatorium, Market Drayton, Salop, from April 21st-23rd, June 23rd-25th, and September 22nd-24th, 1936. The fee for each course is £2 7s., which includes lunch and tea at the sanatorium. All enquiries with regard to the courses may be addressed to Dr. William Brand (Hon. Secretary for Post-Graduate Courses, Joint Tuberculosis Council), 8, Christ Church Place, Epsom, Surrey. From Dr. Brand also particulars may be obtained of the post-graduate course to be given by the medical and surgical staff of the Royal Chest Hospital (Royal Northern Group of Hospitals), City Road, London, E.C.1, for one week commencing May 4th, 1936. The fee for this course is £3 3s.

The Literature of Preventive Medicine.

Injury and Incapacity. By H. ERNEST GRIFFITHS, M.S. (LOND.), F.R.C.S., Surgeon, Albert Dock Hospital, etc.; Hunterian Professor in Surgery, Royal College of Surgeons. London: Baillière, Tindall & Cox, 1935. pp. 270. Price 12s. 6d. net.

The aim of this book is to try to establish a basis for estimating the probable period of incapacity for any given injury, in any particular patient, having regard to his present employment and his ability to earn in any other employment. The book is based partly on the author's personal experience, and partly on an exhaustive analysis of 50,000 consecutive cases of accidents that were reported to an insurance company which deals mainly with claims arising out of the Workmen's Compensation Acts. Having regard to the vastness of the amount of material analysed it cannot be doubted that the book must have great value, especially for those for whom primarily it is intended—medical practitioners and others concerned with industrial insurance.

Lactobacillus Acidophilus and its Therapeutic Application. By LEO F. RETTGER, PH.D., LL.D., Professor of Bacteriology, Yale University; MAURICE N. LEVY, M.D., Practising Physician, Bridgeport, Connecticut; and LOUIS WEINSTEIN, PH.D., and JAMES E. WEISS, PH.D., Research Fellows, Yale University. London: Humphrey Milford, Oxford University Press, 1935. pp. 203. Price 11s. 6d. net.

In this volume Dr. Rettger and his co-authors, who have made a clinical and bacteriological study of lactobacillus acidophilus, set out the conclusions reached as to the possibility of applying knowledge, gained as a result of research carried out, in the Yale laboratories particularly, with regard to the organism, in the treatment of intestinal disorders and ailments directly associated with such disorders. In a general way the opinion arrived at is that the administration of acidophilus milk of high viability and in massive quantities over relatively long periods of time, especially when interspersed with periods in which no acidophilus milk is taken, will in a large majority of the cases treated be beneficial in relieving patients suffering from

simple constipation, constipation accompanied by biliary symptoms, so-called "mucous colitis" or "irritable colon," and idiopathic (chronic) ulcerative colitis. There is every evidence that great care was exercised in carrying out the investigations and the book is a contribution of value to the knowledge on the subject.

Sanitary Law and Practice (Robertson and Porter). A Handbook on Public Health. By W. ROBERTSON, M.D. (GLAS.), D.P.H., F.R.C.P. (EDIN.); CHARLES PORTER, M.D., B.SC., M.R.C.P. (EDIN.), of the Middle Temple, Barrister-at-Law; and JAMES FENTON, M.D., M.R.C.P., D.P.H. Eighth edition. London: The Sanitary Publishing Co., Ltd., 1935. pp. 968. Price 25s. net.

There are no friends like the old friends. Robertson and Porter's "Sanitary Law and Practice" is an old friend which, in the thirty-two years of its existence, has established itself securely in the regard and affection of students of public health. Other treatises have come and gone but "Robertson and Porter" remains; age has only meant enrichment and the acquisition of a certain austere venerability which adds to its value. The appearance of the eighth edition will be hailed with pleasure, if not by students who see in every new edition merely added work and worry in mastering its contents, certainly by those of us to whom "Robertson and Porter" has become an institution and an indispensable book of reference.

The new book is very much like its predecessors both in size and format. Actually it contains 84 more pages of reading matter than the previous edition. It is unfortunate, though I suppose inevitable, that text-books on public health should wax and not wane in size. What they will be like when finality is reached—if ever—I shudder to contemplate. In the book now before me the authors have evidently had the question of size in mind and have made a genuine effort to keep it as far as possible within reasonable compass.

For me to attempt a criticism of a book held in such veneration by the older school of sanitarians would be presumptuous, bordering almost on impertinence, but without sacrificing any of my regard for an old friend, I may be permitted to comment briefly on one or two features which I think might be improved.

In the first place, the book tends to enter into too much detail, and the student, unless to some extent already familiar with the facts and able to separate the gold from the dross, may lose his way and become befogged. With such a wide field to cover, the student of to-day must have his information served up to him in as concise and succinct a form as possible. A little lightening of the book would therefore not be amiss.

Secondly, there is a marked dearth of illustrations. "Robertson and Porter" has never been strong on the pictorial side. When the book was first published that was perhaps not a serious disadvantage, but to-day it definitely is. The eye is such a help to the mind in grasping the detail of, say, the one-pipe system or a disinfection station that without an illustration it is difficult, almost impossible, to comprehend fully the description, no matter how clearly expressed. A good photograph and key are worth pages of printed matter.

There is, however, one feature of the book which I think is most commendable, and that is the due importance it gives to the environmental as contrasted with the personal aspect of the subject. The fashion to-day is to force the purely personal into the foreground and to neglect the environmental as if it did not matter. Infant welfare, school medical work and the care of mothers are all very important but not more so than housing and ventilation. When one considers the far-reaching effects on health of dampness in a dwelling or the breathing of impure air, one is a little sceptical of the wisdom of devoting the amount of space some writers do to the care of the skin and teeth of an infant. A book on hygiene is no less valuable because it deals as fully with the soil as with the seed. A knowledge of both is necessary.

"Robertson and Porter" has a great tradition which is worthily upheld in the new edition. The advent of a third collaborator, Dr. James Fenton, though indicative of the inevitability of *anno domini*, is an added assurance, if such is necessary, that every endeavour is being made to keep the book up to date and in the forefront of the literature on the subject.

The success of the eighth edition is assured without any commendation from me, but if there be any student who has not yet made its acquaintance, or any public health officer who has forgotten or has only a first edition to remind him of its existence, let me strongly advise him to make good the omission without delay.

J. J. J.

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

THE BATHING POOL AND DEAFNESS.

To the Editor of PUBLIC HEALTH.

SIR,—I was very glad to see Mr. Tumarkin discussing, in the March issue of *PUBLIC HEALTH* (pp. 220-223) inflammations of the ear from the national aspect. With much that he writes I am in agreement. Some of his suggestions are, as he admits, experimental; others, in my opinion (*e.g.*, notification) inadvisable; while some are debatable, *e.g.*, "unhealthy adenoids," "hypovitaminosis" and paranasal sinusitis. But what has compelled me to write to you is to join issue with him in his demand to stop children swimming.

I believe that the harm done to children's ears by bathing has been grossly exaggerated by a small number of otologists, and that their views have been put forward without considering the good that swimming and bathing may do to the damaged ear, or taking into account the general beneficial effect of the exercise and the sport upon the child's mind and body that outweigh the taking of some risk with the ear, even if one admits that to be present.

The whole subject is ripe for discussion in open debate, which should be conducted not only by otologists and medical officers of schools but also by laymen who see the child whole, such as school masters and mistresses or persons dealing with the welfare of adolescents immediately after their entry into industry.

In preparation for such a debate I shall take an early opportunity of reading Mr. Tumarkin's article on "The Bathing Pool and Deafness," for missing which, on its publication, I must apologise to him.

Yours faithfully,
T. B. LAYTON.

Guy's Hospital, S.E.1.
March 14th, 1936.

THE infant mortality rate in England and Wales of 57 per 1,000 for 1935 is the lowest so far recorded. The only other years with rates approaching that of last year were 1930 (60) and 1934 (59). Births during 1935 numbered 599,167, and deaths 477,371, giving a natural increase of population of 121,796.

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Editorial.

The Health of Scotland in 1935.

THE Department of Health for Scotland is deserving of congratulation on having, so early in 1936 as the month of April, found itself in a position to issue its report on the work done in the year 1935.* Actually, annual reports have only been issued by the department since 1929, and this now submitted is therefore the seventh of the series. In construction the volume differs very slightly from the report of the Ministry of Health. The opening chapter on the "Health of the People" gives a general review of the situation and concludes with a statement that on the whole, and from the health point of view,

* Seventh Annual Report of the Department of Health for Scotland. Cmd. 5123. H.M. Stationery Office. Price 3s. 6d. net.

conditions in 1935 were satisfactory and that, though "much remains to be done before we can claim to approximate to that ideal of optimum nutrition and physical fitness which must be the ultimate goal of public health," in many respects the year saw steady progress made. Support for these statements is to be found in various of the fourteen chapters in which, amongst other matters, are dealt with housing, general sanitation, food supply, maternity and child health, infectious diseases, hospitals, national health insurance, poor law and so on, and in the appendices.

The general death-rate (13.2) was slightly higher than the record low rate of the previous year; the maternal death-rate also showed a slight increase, and there was more incapacitating sickness among the insured population. On the other hand, the deaths of infants under

one year of age again reached a record low rate (76.8 per 1,000 births), and deaths from infectious diseases also declined. The tuberculosis death-rate (7.1 per 100,000) was lower than ever before. The available information suggests that the nutritional state of school children has been maintained, and from enquiries which the department have made it appears that the nutritional state of the population in the areas where economic distress is greatest is, if anything, better than it was in 1934. On the whole, the department, though of opinion that progress is being maintained, at the same time express themselves as far from satisfied with the rate at which it is taking place. The incidence of sickness among the industrial population (as shown by the total of over 18½ million days of unfitness for work among insured persons); the prevalence of rheumatism, influenza and gastric troubles, the cancer death-rate, and the continued heavy loss of lives of mothers in childbirth, to mention only a few of the indices of disease in the community, constitute a challenge to modern science and organisation. The way is being cleared for a development of measures against particular problems, *e.g.*, maternal mortality, but the department have felt for a long time that the health services generally, within their present limitations of scope and method, fall short of what is required to make full use of modern resources for the prevention of disease and the promotion of health. In this connection the report of the committee on Scottish health services, which is expected shortly, is awaited with keen interest and in the belief and hope that the comprehensive review of health policy and organisation which the committee have completed may give a new impetus to the health services of the country.

Substantial housing progress was made during the year. The output of houses during 1935 by local authorities—18,651—was the highest ever achieved, and the number of houses built with state aid since 1919 has now reached the total of 200,284. These accommodate probably a fifth of the total population of Scotland. Altogether over 235,000 working-class houses, with and without state aid, have been built in Scotland since 1919. Progress in slum clearance during 1935 was specially gratifying; of the total output of houses by local authorities, over 15,000 were built under slum clearance schemes, and the local authori-

ties have now completed, after only two years' work, 37 per cent. of their total programme to clear the slums within five years. An excellent start has been made also, it is declared, in bringing into action the programmes of local authorities under the Housing Act of 1935, for the relief of overcrowding, and the claim is made that the campaign to raise the standard of housing in Scotland to a reasonable level is progressing more determinedly and confidently than at any time since the national post-war housing movement began. Efforts are being put forth, it is announced, to secure that the new housing schemes will achieve a high standard in lay-out and design. Something more than hygienic and comfortable accommodation is required. Upwards of 20,000 houses will probably be built every year. To make their full contribution to civic life and to avoid creating problems for the coming generation, the schemes, it is recognised, must be laid out, planned and designed with an eye to outward appearance, amenity and civic convenience. Housing sites must be chosen so as to fit in with town and regional plans and they must be laid out and the houses designed by competent architects. That the local authorities are responding in an encouraging way to the department's efforts to secure that the housing schemes are architecturally satisfying is shown, and several noteworthy examples of well laid out schemes are referred to in the report. Scotland, admittedly, is still slow to rise to the need for well-ordered town and country planning schemes and a new drive is wanted. To this, it is promised, special attention will be given during 1936.

From the chapters dealing with these subjects it is gathered that increased employment during 1935 was reflected in a higher contribution income under the national health insurance scheme and in lower numbers on the poor roll. The numbers on the poor roll, however, are still high; on May 15th they represented about one in fourteen of the total population; and the public assistance services are still carrying a heavy burden as a result of the long-continued depression.

In spite of all this, the report may be counted an encouraging one and as reflecting credit on the department and the authorities concerned in and charged with the responsibility of attending to the health of the people of Scotland.

Physical Education.

IN January, 1935, the Council of the British Medical Association appointed a special committee to consider and report upon the necessity for the cultivation of the physical development of the civilian population and the methods to be pursued for this object. The committee began its deliberations at the end of February, 1935, and, more or less in accordance with promise, issued its report* early in April, 1936. The committee, which consisted of both medical and lay members, received evidence from numerous expert witnesses and circulated four different questionnaires to schools, colleges, voluntary organisations, industrial firms and representatives of foreign countries. On the results of these enquiries a report which is of real authority and extremely appropriate and valuable is based.

Very suitably the report opens with a discussion of the importance of exercise, fresh air, sunshine, diet, clothing, etc., in the maintenance of bodily fitness. Surveying the position of physical education in the general educational system, the committee finds, as members of the public health service have long recognised, that the existing arrangements in schools leave much to be desired. Usually too little time is devoted to the subject, and many schools possess neither suitable accommodation for gymnastic training nor sufficient playing-field space for outdoor games. To meet the situation the committee recommend that properly equipped gymnasia, together with changing rooms and shower baths, should be provided in senior elementary, central, and junior technical schools, and that facilities for games and swimming should be greatly increased. The importance of physical exercises being performed in appropriate costume is emphasised, and local education authorities are urged to supply a stock of suitable clothing and gymnastic shoes for children who cannot provide their own. Support is given to views frequently expressed in reports of the Chief Medical Officer of the Board of Education and of medical officers of health and school medical officers as to the necessity for the appointment of expert organisers of physical education by all educa-

tion authorities. Suggestions are offered also as to the numbers of organisers of both sexes required for different school populations.

The committee deprecates the tendency, especially evident in many public schools for boys, to subordinate physical education in gymnasia to field games and athletics, and "to regard games as an unduly serious business rather than to play them for the pleasure of playing." It also condemns the practice, common in public and secondary schools alike, of curtailing the physical activities of senior pupils who are preparing for examinations. With the opinion that instruction in elementary physiology and hygiene is an essential part of physical education all will heartily agree and will agree also, as the committee recommend, that such instruction should be given in all schools as a branch of general science.

After examination of the provision made for the promotion of physical fitness among persons no longer attending school, the committee finds this seriously inadequate. Despite the valuable contributions of local authorities, voluntary organisations and business firms to the bodily well-being of this section of the population, it appears that at least 40 per cent. of persons between the ages of 14 and 40 take no part in organised physical recreation. The recommendation in this connection is that the existing facilities should be greatly extended and that, as one means to this end, there should be closer co-operation between all organisations concerned with the physical welfare of the community. It is suggested also that the recently established Central Council of Recreative Physical Training may be able to act as an authoritative co-ordinating body, uniting in a common policy the endeavours of the Board of Education and the voluntary organisations.

Discussing the training of teachers of physical education, the need is stressed for a greatly increased supply of men suitably trained to teach the subject in public and secondary schools for boys. The committee deplores the comparative neglect of physical education in the university training departments and colleges for teachers, and offers as a recommendation that universities should not only provide for the physical education of undergraduates but should also establish an internal diploma in the subject.

As a final suggestion the committee urges

* Report of the Physical Education Committee, British Medical Association. London: 19, Tavistock Square, W.C.1. Price 6d.

that there should be a much closer relation between physical education and the science and art of medicine. Medical supervision is desirable in schools, in clubs, and in physical training colleges. In particular it is recommended that "adequate medical supervision should be available to ensure that unfit children do not participate in unsuitable or excessive exercises or games, and that undernourished children receive sufficient supplementary feeding to enable them to participate with benefit in the regular physical exercises undertaken by the other children."

The report is very conveniently arranged both for reading and reference, and special note may be made of the interesting appendices containing, amongst other matters, an attractively written historical sketch of physical education through the ages by Mr. Major, Warden of the Carnegie Physical Training College, Leeds; a brief outline of the position of physical education in various foreign countries, and a description of a "standards" scheme for school athletics which is suggested as an alternative to the usual school sports system.

* * * * *

The Milk (Special Designations) Order, 1936.

THE Minister of Health, after consideration of the representations made to him, and after consultation with the Minister of Agriculture, has now made the Milk (Special Designations) Order of 1936,* which will come into operation on June 1st next, and along with it, and for the guidance of local authorities, there has been issued circular 1533.† The two main objects of the order are to transfer from the Minister to local authorities the duty of granting licences to producers of certain graded milks, and to improve and simplify the special designations of milk. In regard to the former it is explained that the Minister of Health undertook the work of granting licences to producers of certified and grade A (tuberculin tested) milks only while the graded milk scheme was in its early stages. This work is appropriate to local authorities who already grant all other licences under the scheme, and the number of licences has now increased to an extent which makes

devolution necessary. As to the designations to be employed, the statement is made that there was a widely felt need for alteration in the designations of the grades of milk. Under the present regulations the designations recognised are "certified," "grade A (tuberculin tested)," "grade A" and "pasteurised." The existence of so many grades creates confusion, and some of the designations, experience has shown, are not such as to give consumers a clear indication of the nature of the milk purchased. It is for this reason that the new regulations provide for the reduction of the number of grades to three—"tuberculin tested," "accredited," and "pasteurised."

"Tuberculin tested" will replace the existing designations "certified" and "grade A (tuberculin tested)." The chief characteristic of "certified" and "grade A (tuberculin tested)" milks is that they both come from herds which have been subjected to a stringent test for the absence of tubercle. The new designation "tuberculin tested," which, when the order comes into force, will be the only designation for raw milk from tuberculin tested cows, will indicate this characteristic more clearly than the existing designations. "Tuberculin tested" milk may, if desired, be pasteurised subject to the conditions of the order and, where this is done, it must be sold as "tuberculin tested milk (pasteurised)." For the information of the consumer it is explained that this milk "will have the double security of tuberculin testing (as a safeguard against bovine tuberculosis) and pasteurisation (as a safeguard against all milk-borne diseases)." In regard to raw milk it is prescribed that, until December 31st, 1936, it must be so produced that a sample taken at any time before delivery to the consumer shall not contain more than 200,000 bacteria per millilitre; after that date it must satisfy a prescribed methylene blue reduction test for cleanliness. At all dates it must contain no coliform bacillus in one-hundredth of a millilitre. If pasteurised, it must not contain more than 30,000 bacteria per millilitre. If it is bottled on the farm the word "(certified)" may be added to its description. This will be of advantage to producers who now hold licences for the production of "certified" milk and desire to retain in some form the use of this designation.

"Accredited" milk will replace the present "grade A" milk and be subject broadly to

the same conditions, *i.e.*, it will be raw milk from cows which are regularly inspected by a veterinary surgeon but are not tuberculin tested. It will be subject to the same bacteriological test as "tuberculin tested" milk. The designation "accredited," it is claimed by the Ministry, will carry a clearer meaning than "grade A," as it will indicate that milk sold as "accredited" comes from the herds of producers, numbering now nearly 16,000, enrolled under the accredited producers' scheme initiated by the Milk Marketing Board. Where "accredited" milk is bottled on the farm the order will permit the words "farm bottled" to be added to the description.

"Pasteurised" milk will, as at present, be milk which has been held at a temperature of 145°-150° F. for thirty minutes. The designation is applicable both where "accredited" milk and where ungraded milk is pasteurised in accordance with the requirements of the order. The conditions are substantially the same as in the order of 1923, except that further requirements are made with regard to thermometers and temperature records.

In regard to bacteriological tests it may be noted that after December 31st next, the present method of prescribing the bacterial standard by a "plate-count" test of 200,000 bacteria per millilitre will be superseded in relation to raw "tuberculin tested" and "accredited" milks by a colour test as recommended in the recent report of the Medical Research Council.* The test for coliform bacillus will, however, be retained as at present.

As indicated, the order comes into operation on June 1st, 1936, and it is suggested that licensing authorities should communicate as soon as possible with persons at present holding licences granted by them, whether producers' licences relating to grade A milk or dealers' licences relating to certified, grade A (tuberculin tested), grade A or grade A (pasteurised) milks, informing them of the change of designations, and pointing out that after June 1st, 1936, the abolished designations must not be used, except that, in order that present stocks may be utilised, caps and labels complying with the orders of 1923 and 1934 may be used until December 31st, 1936. The Minister will address a similar

*Special Report Series, No. 206.

communication to producers of certified and grade A (tuberculin tested) milks.

The new order contains a number of other provisions, amongst them a power to licensing authorities to charge less than the prescribed maximum fees for licences, if they wish to do so, or to forego fees altogether. The fact that the Minister finds it desirable that local authorities should grant licences only on the advice of, or after consultation with, the medical officer of health, and that he suggests that all licensing authorities should make arrangements accordingly, may be noted.

* * * * *

Overcrowding in London.

FROM a report issued by the London County Council* it is revealed that the overcrowding survey in the metropolitan area commenced on November 1st, 1935, and was completed in all the boroughs by the first week in February, 1936. London must therefore have been not only one of the earliest to begin the survey but, having regard to its extent, must have carried it through in record time.

The main bulk of the report consists of tables showing the results obtained in each of the boroughs, and for the county as a whole, in the appropriate forms. Summarising the results the report shows that the survey has disclosed that of the 1,014,633 families in respect of which the metropolitan borough councils, who conducted the survey, have submitted particulars, 70,953 (about 7 per cent.) are living in overcrowded conditions, 57,389 (about 5·7 per cent.) occupy accommodation of the minimum size required by the Act, and 886,291 (about 87·3 per cent.) have accommodation in excess of that standard. In order to give a comparative indication of the incidence of overcrowding in the county, a table giving the extent of overcrowding in each metropolitan borough in relation to overcrowding in London as a whole, has been prepared by the county council. This gives the proportion which the "equivalent number" of persons living in overcrowded conditions bears to the estimated *total* "equivalent population" in each borough. Not unexpectedly the variations are very

*Housing Act, 1935. County of London Overcrowding Survey. Report No. 3181. London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Price 1s.

*Statutory Rules and Orders, 1936, No. 356. H.M. Stationery Office. Price 4d. net.

†Price 2d. net.

wide, extending from a percentage of overcrowding of 2·3·6 in the case of Shoreditch to 2·4 in that of Hampstead. The course followed in making selection of houses for survey seems to have differed somewhat but, as a result of correction, figures that are comparable have been obtained. Apart from Shoreditch where 3,898 families were found to be overcrowded, the number of "equivalent persons" overcrowded being 19,353, other boroughs in which high percentages were found were Bethnal Green (21·7), Finsbury (20·5), Stepney (19·7), Bermondsey (17·8) and Poplar (16·8). Next to Hampstead amongst those with low percentages comes Woolwich (2·7), Wandsworth and Lewisham giving respectively 3·2 and 3·3, Westminster ranking next with 4·2. The actual percentage for the county of London as a whole stands at 9·1, the number of overcrowded families being, as already stated, 70,953, and the number of "equivalent persons" overcrowded, 357,989. These figures represent the problem to be dealt with by the county council in co-operation with the borough councils. That a determined effort to solve it will be made, the attitude already adopted and the progress already achieved in regard to housing by all the metropolitan authorities may be taken as a guarantee.

Grants to Voluntary Maternity and Child Welfare Associations.

UNTIL the passing of the Local Government Act, 1929, approved voluntary associations providing maternity and child welfare services received exchequer grants direct from the Minister of Health. Since the Act they have ceased to receive grants from the Minister, but in place of them they receive annual contributions from the county or county borough council in whose area or for whose benefit they work. The contributions are settled by a scheme drawn up, except in London, by the council and approved, with or without modification, by the Minister; the scheme for London is settled by the Minister direct. Under section 101 of the Act of 1929, a scheme of this kind must be prepared and submitted to the Minister six months at least before the beginning of each "fixed grant period" under the Act. The next grant period begins on April 1st, 1937. The Minister has accordingly issued a circular (1538) to county and county borough councils outside London reminding them that they

must prepare a further scheme to secure the payment of annual contributions for the five years beginning on April 1st, 1937, towards the expenses of voluntary associations providing maternity and child welfare services in or for the benefit of their area. The circular suggests that each council should take its existing scheme as approved by the Minister as the basis for the new one, and copies of model schemes for use by county and county borough councils, respectively, are enclosed with the circular.

The Nutritive Value of Milk.

ONE of the earliest fruits of the labours of the Advisory Committee on Nutrition, appointed by the Minister of Health and the Secretary of State for Scotland is a memorandum* giving details in more or less popular language with regard to milk and its value from the point of view of nutrition. Presided over by Lord Luke, and consisting of practically everybody who knows anything about nutrition, amongst them Professor Cathcart, Sir F. Gowland Hopkins, Professor Mellanby and Sir John Boyd Orr, the committee has produced a statement that will be accepted as authoritative and as representing what may be taken to be the last word on the subject. Very simply the memorandum explains the high value of milk as an article of food, pointing out that analysis of its composition shows that it contains protein of high nutritive value, energy-giving nutrients, the known essential vitamins and many mineral elements, and apart from its chemical composition it derives value from other properties such as easy digestibility. References are given to investigations that have been made which justify the belief that the general health of the community, and especially of children, would be improved, and the incidence of disease, including rickets, diminished, if the present consumption of liquid milk, averaging about 0·4 pint per head per day, could be increased to about a pint. The possibility of disadvantages attaching to milk as an article of diet is discussed but these are shown to be few. For infants, after breast-feeding has ceased, it should form the bulk of the diet, with any necessary supplements to furnish iron and vitamins C and D. After infancy, milk is not a complete food but is a very

* "The Nutritive Value of Milk." H.M. Stationery Office, 1936. Price 3d. net.

important item of diet, particularly for children, who should be given one to two pints a day, and for expectant and nursing mothers, for whom about two pints a day are desirable. Other adults, who need milk especially for the sake of its calcium and animal protein, should have at least half-a-pint a day. Admitting the existence of its unfortunate liability to contamination by disease-producing bacteria, the report explains that heating by suitable methods such as pasteurisation has important advantages in making it safe for human consumption from this point of view. In this connection the authoritative declaration is made that when treated by heat, little significant change is known to occur in the nutritive properties of the milk, and such deficiencies as may be caused can readily be made good. Further, it is impressed that raw milk incorporated in other cooked articles of diet, such as bread and puddings, retains most of its nutritional properties. Apart from dealing with milk as such, the report calls attention to the degrees of nutritive value possessed by various milk products, especially separated milk.

Training of Nurses in Scotland.

ON June 25th, 1934, the Secretary of State for Scotland appointed a committee to enquire into the training and system of registration of nurses in Scotland and to recommend what amendments, if any, should be made in the Nurses Registration (Scotland) Act, 1919, or the rules made thereunder, and what other steps, if any, should be taken to improve the existing system of training and registration. Taking it that their concern was with the fundamental training of the nurse or what might be called her period of apprenticeship to fit her to take her place as a qualified member of the profession, the committee made a most exhaustive enquiry and have provided in their report recently issued* an amount of material likely to prove provocative not only of thought but of discussion. Particularly is this liable to be the case in regard to the scheme recommended for adoption by all hospitals for what are to be named "fully trained nurses," viz., training in a medical and

* Department of Health for Scotland. Report of the Scottish Departmental Committee on the Training of Nurses. Cmd. No. 5093. H.M. Stationery Office, 1936. Price 1s. net.

surgical hospital plus training in a fever hospital (either three years in the former and one in the latter, or two years in each if fever is taken first), followed by two courses of six months each out of a selection offered, such as sick children, tuberculosis, mental, orthopaedics, chronic sick. This recommendation is in reality a scheme for a comprehensive training, making it compulsory for those who wish to enter the nursing profession to spend time in being trained in certain special branches of nursing (which ultimately as nurses they may not propose to follow up), before they can have their names placed on the Central State Register. This Central State Register, which it is proposed to institute, will take precedence over the other registers, viz., general (thus reducing the general register to the level of a supplementary register), fever, sick children's, and mental registers. The subject of registration, in fact, is dealt with in several recommendations, and that offered to the General Nursing Council that they should prescribe a supplementary part of the register for tuberculosis nurses under section 2 (2) (e) of the Nurses Registration (Scotland) Act, 1919, and add to their rules provisions for admitting existing tuberculosis nurses on the lines followed earlier for other categories of nurses and for admitting to it new entrants after a two years' course of training followed by an examination, is designed to get rid of what is regarded as a distinct anomaly.

The question of recruiting and of preliminary education not unnaturally received a great deal of attention, and the following recommendations with regard to these matters are of interest:—

(1) Steps should be taken by the appropriate authorities to bring to the notice of girls at school the possibilities of nursing as a career, and educational facilities should be provided, where necessary, for the assistance of those desiring to follow it.

(2) Over the next few years, hospitals in recruiting candidates for the nursing profession should endeavour as far as possible to work towards securing candidates who have taken a five years' course in a secondary school, followed by a reasonable performance in the leaving certificate examination without necessarily having passed that examination.

(3) Steps should be taken on the lines indicated in the report to provide for the

theoretical subjects of the General Nursing Council's preliminary examination being taken as a normal procedure before trainees enter hospital.

There is much wisdom in the recommendation that "the General Nursing Council and the Royal Médico-Psychological Association should resume the negotiations broken off some years ago, and endeavour to remedy the anomalous position of the two examination systems sponsored by these bodies for mental nurses existing side by side," and there is much sound reason for wishing that not only in Scotland but in other parts of Great Britain such a suggestion might be adopted.

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Costing Returns.

IN recent years the value of costing methods in securing business efficiency has become increasingly recognised, not only in industry but also in local government. In Part I of the Costing Returns for 1934-35,* issued by the Ministry of Health, particulars of poor law hospitals, general hospitals administered by local authorities, sanatoria, and maternity homes and hospitals are set out. Showing the average weekly cost per inmate under various heads of expenditure in each institution of each class, the returns should prove of great value to county and county borough councils to whom copies have been sent along with a circular (1530) containing a suggestion that a copy should be provided for the use of the principal officer of each of the institutions concerned in the area of the authority. In order to assist local authorities in the economical administration of hospitals and such like institutions under their control, costing particulars are collected and issued annually to them by the Ministry of Health.

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Recreation and Education.

THIS is the title given to a collection of reports presented to the International Conference on Workers' Spare Time, Brussels, June 15th-17th, 1935. Issued by the International Labour Office (League of Nations) the volume will be found most informative on a number of matters not without interest to members of the health service. The papers are arranged in three groups: problems and methods; some practical achievements; and the international move-

ment. Amongst those to which special attention may be directed are those on the cinema, broadcasting, and public libraries. Extraordinary progress, it is shown, has been made in a number of countries, and the fact that, as is more than once admitted, sport is preferred to other spare time activities practically everywhere, gives added interest to the paper on "Outdoor Recreation in Great Britain" by Mr. Robert R. Hyde. Copies of the publication (Studies and Reports Series G—Housing and Welfare—No. 4) may be obtained from Messrs. P. S. King & Son, Ltd., 14, Great Smith Street, London, S.W.1, price 4s.

As announced elsewhere in this issue, the 1936-37 course of study for the Diploma in Public Health of the University of London commences at the London School of Hygiene and Tropical Medicine on September 28th next. One place will be allotted, without fees, after open competition on June 29th and 30th, the successful candidate being awarded the Fishmongers' Company Studentship. Applications to compete for this Studentship must be sent in to the Secretary of the School by June 15th.

THE Medical Research Council have appointed the following to act as a Tropical Medical Research Committee: Professor J. C. G. Ledingham, C.M.G., F.R.S. (Chairman); Professor A. J. Clark, M.C., F.R.S.; Dr. N. Hamilton Fairley, O.B.E.; Professor W. W. Jameson; Dr. Edward Mellanby, F.R.S.; Dr. Muriel Robertson; Major-General Sir Leonard Rogers, K.C.S.I., F.R.S.; Dr. H. Harold Scott; Sir Thomas Stanton, K.C.M.G.; Dr. C. M. Wenyon, C.M.G., F.R.S.; Professor Warrington Yorke, F.R.S., and Dr. A. Landsborough Thomson, C.B. (Secretary). The committee, which will be a purely scientific body, includes representatives of the Colonial Office and of the Liverpool and London Schools of Tropical Medicine, with other members appointed as individual experts in tropical medicine or in different branches of medical science. The new committee will advise and assist in the direction of such investigations as the Council may be able to promote, whether at home or abroad, into problems of health and disease in tropical climates, and make suggestions generally as to research in this field.

* H.M. Stationery Office. Price 1s. net.

The Food Trades: Registration, Licensing and Notification.

By G. H. DART, M.D., M.R.C.P. (EDIN.), D.P.H., D.T.M. & H. (CAMB.),
Barrister-at-Law, Medical Officer of Health, Metropolitan Borough
of Hackney.

Dr. Dart's choice of a subject so practical, and so definitely of the moment, for his Presidential Address gave great pleasure to the members of the Metropolitan Branch to whom it was offered. Because it is based on experience, and is so full of helpful suggestion, it will be found interesting and valuable by readers.

FOOD standards and additional powers for controlling food storage are now under consideration, so this appears to be a favourable opportunity to suggest extension to the food trades generally of registration associated with the power of refusing and revoking registration which already operate as regards the milk, meat and a few specified food trades. This is also an opportunity again to suggest compulsory notification within a reasonable period of possession of damaged or suspected food.

The most important changes resulting from these extended powers would be the opportunities afforded of taking effective and preventive action in many food trades now practically uncontrolled, particularly as regards:—

- (1) The use of unclean and unsuitable storage for food.
- (2) The manipulation of dirty and damaged food for re-sale.
- (3) Insufficient attention to premises, machinery and utensils which are used in the preparation and distribution of foods.
- (4) Neglect of personal cleanliness among food workers.
- (5) Exposure to contamination of food intended for sale for human consumption either in unsuitable premises, by unsuitable methods, or by flies and vermin.
- (6) The uncleanly distribution of food by neglect of commonsense precautions against fouling.

Registration Powers as regards Unsatisfactory Premises.—The powers of the sanitary authority to refuse and revoke registration in certain trades are, perhaps, the most valuable preventive measures yet introduced into public health administration. It must be admitted, of course, that such punitive measures as

prosecution in regard to unsatisfactory premises and seizure of unsound food are also preventive since thereby a tremendous amount of unsound food is taken off the market. However, by refusing to register unless conditions are quite satisfactory or by revoking registration when offences are committed, we have really carried out a permanent measure of reform, in other words, finality is reached, thereby preventing the commission of all future offences in such cases, including the possibility of unsound food reaching the market from such sources, to be seized if an inspector happens to pass by but otherwise to be retailed to the consumer. Moreover, the procedure of taking an occupier of an unsuitable premises, or the occupier of a suitable premises who conducts his business in an unsatisfactory manner, to the police court to be punished by fines often results in nothing more than grudging unsatisfactory measures of improvement. Even where really satisfactory conditions can be enforced, police court proceedings, penalty and costs and order for abatement have far less effect than the knowledge that the sanitary authority have the power to revoke registration; as regards unsatisfactory food premises, it is in some cases practically impossible for the occupier to introduce really satisfactory methods, and in such cases all that can be done by police court procedure, after endless preliminary effort, is to enforce a measure only of improvement. Further, it takes far less time and is far less difficult to prepare sufficient evidence to prevent unsuitable premises being registered, even when an appeal to the court against the decision is inevitable, than to obtain sufficient evidence even to justify police court proceedings, to say nothing of the difficulties that arise in obtaining a conviction that will prevent repetition of an offence. Preliminary

enquiries by the food inspector as to requirements of registration prevent, also, many unsuitable premises being put into occupation for the preparation of food when the necessities of the case are explained to the prospective occupier.

Registration Powers as regards Soundness and Cleanliness of Food.—Not for one moment do I suggest that the proposed setting up of food standards to prevent adulteration is not overdue, and not for one moment do I suggest that the time and money expended, for instance, in maintaining the very reasonable standard of milk content (3 per cent. fat and 8·5 per cent. solids not fat) is extravagant, but comparison between our activities in that direction and as regards enforcing the cleanliness of foods owing, of course, to the many difficulties of proof and the time which is required in obtaining evidence as well as the never ending legal difficulties which arise in these cases, sometimes gives an erroneous impression that we are less interested in this question of dirty food. No doubt we really require more knowledge and improved methods of estimating the presence of harmful bacteria and so forth to enable us to take adequate proceedings in the police court, except in glaring instances as regards dirty food. It is all the more reason why we should, if possible, endeavour to obtain improvements in production and distribution that would prevent such food being exposed for sale. We can claim as regards milk that under our registration powers, with possibly a few exceptions that prove the rule, that milk is not, as so often used to be the case, made dirty in London. In the milk trade we are able, generally speaking, to enforce clean conditions in the retail trade, and where dirt is present it is due to the faulty conditions on the farms. The valuable powers we have arising from registration of dairies and purveyors of milk should be exercised to the fullest extent and no departure permitted from the conditions imposed before registration is granted. Considerable annoyance is felt, for instance, by the owners of open-fronted lock-up shops in Hackney that they are not permitted to sell loose cream. One such disappointed applicant appealed to the police court and the magistrate adjourned the case to visit the premises. After the magistrate had visited the premises he refused the application but commented on the fact that such foods as

butter, cheese, biscuits, bread, sweets, pastries, dates and so forth, were permitted to be sold from stalls and open-fronted shops, continually exposed to contamination from dust, whereas the local authority rightly, in his opinion, refused registration of those premises in order to prevent cream being sold from tins which were only opened during the filling of cartons which were also closed immediately after filling. Action, of course, would not have been possible, either as regards the foods mentioned by the magistrate, or as regards the cream except the action we took in refusing registration of the premises for the sale of cream. If this power of refusing registration had not existed, no steps could have been taken by the local authority to prevent the sale of cream under these conditions, and certainly any attempt at seizure and police court proceedings for contamination of the goods mentioned by the magistrate would have been impossible. It is of the very greatest importance that we should not relax our standard as regards the registration of dairies and the sale of milk and cream, and that it should be our aim to raise the conditions governing the preparation and distribution of other foods such as those mentioned above to that standard.

It is only necessary to consider some prosecutions as regards unsound and dirty food or unsatisfactory conduct of a food business to realise how much time the staff must spend in preparing evidence and what difficulties arise from the legal point of view. Often the food inspector must become, temporarily, only a detective engaged on a particular case, corroborative evidence may be required, analytical or bacteriological. The time spent in preparing evidence is certainly not appreciated by councillors who, with that simple directness which often characterises some of them, when, for instance, dust is seen to blow over food stalls or open-fronted lock-up shops, immediately assume that "nothing is being done." Action directed towards ensuring satisfactory conditions and administration in the food trades so that food is not likely to be contaminated is surely a more helpful line of action than seizing food after contamination and prosecuting in consequence of seizure.

A Registration Difficulty.—It is true that even as regards registration some difficulties may arise in exceptional cases, but even so, I contend that those difficulties cause less waste

of time and detective work, and the final result—elimination of the offending firm—is entirely satisfactory. Moreover, these difficulties can be removed by a slight amendment of existing legal powers. As an instance of the difficulty which may arise, a dairyman who had been convicted of various offences in connection with his trade was removed from the register, his premises in Hackney also ceased to be operated as a dairy, but he continued to sell milk in Hackney, being registered elsewhere. Before the statutory period of 21 days allowed for appeal had expired an application for registration as a purveyor from this registered address outside the borough was received from his brother. In all, six such applications were put forward from this address and by using this statutory period of 21 days and sending in the application according to meetings of the sanitary authority, this dairyman was able to carry on his trade for nearly six months in spite of the fact that each application was refused. It was impossible to proceed against him for trading without being registered until the last application, which was insufficient in detail, was returned to the applicant for completion and was not sent back again for consideration by the council. Proceedings were then taken against this last applicant both for trading without being registered, and under the Merchandise Marks Act, 1887, for selling milk under a false trade description and having in possession, for the purpose of sale, milk under a false trade description, since it was a peculiarity of this dairyman that he used milk bottles belonging to other dairymen. The case was heard, defendant pleaded guilty and a very capable advocate pleaded so successfully that a fine of only £1 was imposed on each of the three counts. There is no doubt that this firm have now ceased to trade in Hackney although they appear to be trading elsewhere and have a headquarters outside the County of London.

It is, then, obviously a weakness in the procedure that although this firm were fined in a neighbouring borough a total of £200 in June, 1934, and were then taken off the register by an order of the magistrate, it was only in April, 1935, several months after the Hackney public health committee had decided to remove the firm from the register, that it was possible to prevent them selling milk in Hackney; but it should be borne in mind that registration and the powers regarding regis-

tration were really the means by which we kept in touch with, and finally got rid of, this firm and it would be sufficient merely to remove the time protection in the Milk and Dairies (Amendment) Act, 1922, as regards a convicted firm to prevent the manoeuvre whereby a firm, with no intention of appealing to the magistrate against refusal to register, can put forward a succession of applications enabling the firm to continue trading in safety as regards prosecution for not being registered.

Comparison between Registration and Prosecution under various Statutes.—Prosecution under the Food and Drugs (Adulteration) Act and similar proceedings would not alone, in all probability, have discouraged this firm, who were convicted in Hackney on three occasions for different offences of this type prior to removal from the register, and were also proceeded against unsuccessfully for conducting their business under unclean conditions. Earlier I have mentioned the difficulty of preventing offences against cleanliness even though specific powers exist with that end in view, for instance, under Sec. 21 of the Milk and Dairies Order, 1926, it is stated that all vessels and appliances brought into contact with milk shall be kept at all times in a state of thorough cleanliness, and also for this purpose every vessel, etc., shall be thoroughly washed as soon as may be after use. Every vessel, etc., when not in use shall be stored in a clean place and shall be protected from dust and dirt. This seems clear enough, and after due warning, this same firm were proceeded against for neglect to keep these utensils in a decent state of cleanliness, evidence being brought forward to show that on a certain date twelve churns standing in the yard were filthy and stinking. There was no doubt raised in the court as to the condition of the churns, but naturally we were unable to prove that these particular churns were to be used again. It was a simple enough matter for the defendants to say that they were not, and even when they were again put into use it would be quite impossible for us to prove that these were the identical churns which had been the subject of proceedings.

As regards removal from the register, consideration need not be limited to one particular offence on a particular day, but the firm's behaviour and offences generally can be considered, and a magistrate who would not

convict as regards a particular case, such as that above, would be very reluctant indeed to instruct a sanitary authority to replace on the register a firm who, from their general conduct of a business, were considered by the sanitary authority to be a danger to the public. There is no doubt in my opinion that this firm, who were removed from the register in Poplar and refused reinstatement later in that borough and were removed from the register and refused reinstatement in Hackney, would still be operating in both boroughs if it were not for the power of refusing registration.

Street Traders' Licensing.—The licensing of food stalls should not be dealt with merely from the point of view of road space or storage facilities. The time is certainly not ripe for advocating such restrictions as refusal to license a street trader to sell from a stall food of a soft or of an absorbent nature to be eaten without cooking, or such foods as are peculiarly liable to contamination, although I am sure that at some future date only tinned or packet food and greengrocery will be allowed to be sold from stalls, and that fruit, such as plums and cherries, confectionery, bread, biscuits and similar foods will certainly be prohibited. If a confectionery stallholder refuses to provide an adequate screen to his stall—and sweets are liable to all forms of street dust contamination—the matter can be taken to the police court under the by-laws, and proceedings would undoubtedly, in my opinion, be unsuccessful, and the present method of preventing contamination by dusting biscuits and similar foodstuffs with a feather duster to take away visible dirt would probably keep such foodstuffs sufficiently clean to make seizure or proceedings almost impossible. Screening, if of no other value, is a most useful way of indicating to the public that food should be kept clean from dust, and when the process of education by this and other methods has progressed far enough it may be possible, at some future time, to prevent the sale of foods of an unsuitable nature from stalls. It should, therefore, be made a condition of licensing that some attempt, at any rate, is made to prevent the exposure of such foods to dust pollution, and the powers that we possess of revoking or refusing to grant such licences should be more stringently exercised in this direction. The present method of dealing with these

applications through a works and open spaces committee or similar committees, merely from the point of view of road space, is not satisfactory.

The Principle of Compulsory Notification.—The principle of notification is already to some extent enforced in the food trades. The vendor, for instance, notifies the intending purchaser of the quality of some of his wares by means of display of notices under the Agricultural Produce (Grading and Marking) Regulations; he must notify his customers by means of an appropriate marking of the indication of origin of various imported foodstuffs in accordance with the orders made under the Merchandise Marks Act, 1926. Notice of slaughtering under the Meat Regulations, 1924, is, in a sense, a notification of suspected meat. It is enforced so that the food inspector may be present at the time of slaughtering in order to separate the good from the damaged or diseased carcasses and to prevent the damaged or diseased carcasses reaching the market.

I have mentioned legal proceedings under the Merchandise Marks Act, 1887, Section 2, arising from the use of bottles belonging to other firms than the defendants. The powers of the sanitary authority are, however, unnecessarily restricted in enforcing the Merchandise Marks Act, 1887, so much so that the sanitary inspector is only able to take proceedings as a member of the public; not as an officer of the sanitary authority. Under Section 6 of the Milk and Dairies (Consolidation) Act, 1915, the name and address of a purveyor of milk must be on the barrow. This is a form of notification and is very useful indeed, and any contravention in this respect can, of course, be dealt with by the sanitary authority. It is decided, however, that so far as the Milk and Dairies (Consolidation) Act, 1915, is concerned, a purveyor who has his name and address on the barrow need not have them on the bottles he uses provided the bottles are sold unopened, so that notification falls short in that respect. It may, however, be very necessary from several aspects, including that of investigating infectious disease, to trace a purveyor by means of the bottles; small shopkeepers, for instance, have been unable to tell us who supplied to them the bottles of milk they were selling to the public, the vendor being described in one instance as "the cheap man"

and the bottles themselves supplied by this dairyman were from various firms. It was an invariable practice of the firm I have mentioned, which could be used in so many directions as an illustration of various unsatisfactory aspects of milk distribution, to use bottles belonging to other firms. Since the sanitary authority were unable to proceed under the Milk and Dairies (Consolidation) Act or the Merchandise Marks Act, 1887, the public health committee gave permission to the food inspector to proceed as a common informer under the Merchandise Marks Act, 1887. Three such summonses have been taken out for this type of offence. On one occasion the defendants were fined £2 and £7 7s. costs for selling milk under a false trade description; on another occasion £1 on a summons for selling milk under a false trade description, and £1 for having in possession, for the purpose of sale, milk under a false trade description, and £2 costs as regards the last two summonses which were taken together. It is obviously undesirable that a food inspector should be required to act in this way even from the point of view alone that the payment of costs by the council as the result of an unsuccessful action might be questioned by the auditor. The Ministry of Health were accordingly asked to take appropriate steps to enable local authorities to take proceedings under the Merchandise Marks Act, 1887. The Ministry replied in June, 1934, enclosing an extract from the Merchandise Marks Committee Report, 1919-20, which set out that, in the opinion of the committee, local authorities should have the power to take proceedings under the Merchandise Marks Acts. The Ministry stated that these recommendations would be given every consideration when an opportunity occurred of considering regulations to amend the Merchandise Marks Acts. Proceedings also have been taken, by the way, under the 1887 Act by the food inspector, acting as a common informer, with the consent of the public health committee, as regards fraudulent labelling of imported meat in two cases concerning foreign meat labelled as English. The court imposed penalties of £5 and £1, with £3 3s. and £1 1s. costs, respectively.

Notification of Unsound Food.—Such proceedings as marking over, re-bottling, re-potting, re-labelling and sorting of foodstuffs—in fact, all manipulation of dirty and

damaged foodstuffs for re-sale—should be controlled not only by the same powers of registration that obtain in the milk trade, but also by requiring notification of possession of unsound food as suggested by the Poplar Borough Council in 1927. Section 47 of the Public Health (London) Act, 1891, is inadequate and it has been suggested that the powers contained in this section should be extended by a clause in a London County Council (General Powers) Bill. As the law stands at present, a manufacturer, wholesaler or other dealer in foodstuffs is not required to give notice to the sanitary authorities of the presence of unsound food upon his premises, and it is often a matter of chance if such unsound food is discovered by a sanitary inspector. A case was heard at Poplar in 1927 before a police court magistrate, where it appeared that although some unsound food was actually displayed for sale on a stall, and no difficulty arose as regards the food seized from the stall, the magistrate did not consider that a large consignment of similar unsound food at that particular trader's address was necessarily intended for sale for human consumption and the summons failed as regards that consignment of unsound food. If, however, it had been compulsory upon a food dealer to give notice of the possession by him of unsound food, it is obvious that the Poplar dealer, who had already attempted to sell some of it, would not have given notice, and the magistrate would have been obliged to have convicted on that charge. In consequence of this case and difficulties experienced in Hackney in preventing unsound food going on the market after sorting, the Hackney Borough Council adopted a recommendation which was a slight extension of those recommended by Poplar in consequence of their unsuccessful case already mentioned, and the London County Council were requested to include, in a General Powers Bill, clauses giving each metropolitan borough council, as the local sanitary authority:—

1. Power to ensure that where a person has in his possession any article of food which is unsound or unwholesome or unfit for the food of man, he shall either:—

(i) by written notice to the sanitary authority specifying such article and containing a sufficient identification of it request its removal, whereupon the sanitary authority shall cause it to be removed as if it were trade refuse, or

(ii) by written notice to the sanitary authority specifying such article and containing a sufficient

identification of it, state to what use the unsound food is to be put and the address of its destination if it is to be removed from the premises.

2. Power to seize and to take proceedings for unsound food intended for human consumption upon non-compliance with the conditions stated above.

3. Power to requisition the assistance of the police to obtain verification of the names and addresses of itinerant vendors and of vendors of unsound food exposed for sale which has been seized by officers of a local authority.

If these are too drastic and inconvenient from the wholesale traders' point of view, possibly, as the first step towards preventing "mixing a little bad in with the good"—the advice one such trader was overheard to give to a hawker "if he wanted to get on"—would be a clause requiring notice of purchase for the purpose of sorting or "marking over," and in such instances dispensing with the identification requirements mentioned above. Such notification would be merely an extension of the principle of notification which already exists in so many directions. The principal value of this power would be to control dealers who buy up large quantities of indifferent food at extremely low prices for the purpose of sorting out what is unsaleable and placing the remainder on the market at unusually low prices but giving sufficient return to yield substantial profit on the whole transaction. In a sense many of these operations are gambles, but the buyer is likely to have elastic judgment as to fitness or otherwise of his stock. However, the Metropolitan Boroughs' Standing Joint Committee, to whom the matter was referred, decided on June 4th, 1928, to take no further action. This decision was arrived at as a result of a successful case taken by Finsbury under the Public Health (London) Act, 1891, Section 47—Finsbury Borough Council v. Alee, heard at the Old Bailey in February, 1928. This case, in the opinion of the legal advisers of Hackney, differed in the most important particulars from the Poplar case, since the jury found in this instance that the meat had been tampered with in a way likely to deceive the inspector. It was held on the particular facts of that case that meat unfit for human consumption was deposited for sale for human consumption. What is needed, however, is compulsory notification of unsound food to facilitate proceedings where such food is distributed by sorters who often are themselves retailers, or to facilitate examination of food stored with that end in view. In other words,

powers which, in the majority of instances, will prevent unsound food being deposited for sale.

It is impossible under present circumstances to meet the defence, unless the food is actually in the shops or on the stalls, that the food is not intended for human consumption or is merely awaiting sorting. (The excuse is always put forward that such food is about to be sorted or used for animal food, for manure, or is awaiting destruction.) The following are instances of methods of preparing foods known to have been adopted in Hackney:—

(1) Buying imported unlabelled condensed milk, which was below standard, by wholesale dealers for sale to retailers who provide their own labels.

(2) A dealer admittedly buys damaged goods for sorting, but as the goods are not sold to the public in the same district it is difficult to obtain a conviction. This dealer employs a man to re-shape tins of food that are blown or bent out of shape, and to re-cover jars of jam, the covers of which have been broken, or where the jam has mildewed or become covered with dirt. Such goods have been sold to the public in another town from stalls.

(3) Unsound salmon and pilchards were surrendered by a tradesman in the provinces, the goods having been consigned to him by a dealer in Hackney. This dealer's premises, when visited by a sanitary inspector, were found to be a large warehouse used for the reception and sorting of considerable quantities of packet and tinned food. A large quantity of unsound food was found which the dealer alleged he had not had time to sort. This dealer does a wholesale and retail trade but does not sell by retail in the district in which his warehouse is situated. He buys doubtful material for sorting and supplies jam factories, confectionery makers, stallholders, shopkeepers, etc. This affords an example of the difficulty in dealing with food which is deposited, on the statement of the owner, for sorting and not for sale for human consumption. It is to be remembered that a sanitary inspector has no authority to examine food unless it is deposited for sale, exposed for sale or sold. The sanitary inspector must, generally speaking, wait until the sorting has been carried out before he can seize any unsound food in such circumstances.

The following case which occurred this year will show the difficulties that exist in dealing with this question of sorting under present powers:—

A sanitary inspector in Tottenham seized some unsound tinned goods from a dealer who at that time carried on business in both Tottenham and Hackney. The dealer instructed his men to pick up the goods, which had been placed in a box on the pavement, and put them in his motor car which he drove to Hackney followed by a Tottenham inspector in the Tottenham council van which had been sent for to remove the tins.

We were informed by Tottenham, and Hackney inspectors after considerable difficulty removed 87 tins of unsound food from the warehouse, which were condemned by the magistrate and destroyed.

Proceedings being taken, however, the case was dismissed.

That is a bald outline of a case which, among other interesting details, is stated to have included a threat of assault against the Tottenham inspector and very considerable difficulties in Hackney even as regards the examination of the tins. The defence, of course, was that the goods were awaiting sorting.

Recent Recommendations.—Recently both the Society of Medical Officers of Health and the Metropolitan Boroughs' Standing Joint Committee have had under consideration recommendations directed towards ensuring good conditions of food manufacture and distribution. The Society of Medical Officers of Health, in a memorandum published in PUBLIC HEALTH, March, 1934, recommended that all food manufacturers' premises should be registered and open to inspection and sampling by the proper authority. At the same time, however, experience in operating the Dairies, Cowsheds and Milkshops Order, 1885, which required registration but gave no power to refuse to register or to remove from the register, leads one to suppose that mere registration of food manufacturers' premises will not have a sufficiently far-reaching effect. It is certainly true that even registration would be of value, since often individuals or small firms carry on business without their existence being known to the sanitary authority, and such firms may use entirely unsuitable premises both for storage and for food manipulation, re-bottling, re-labelling and so forth, to say nothing of the methods employed at these premises to which, very often, the attention of the public health department is first directed as the result of complaint of accumulation of rubbish, foul odours, rats or other conditions causing annoyance to neighbours, or as the result of information as to seizure of food from some distant part of the country. The Metropolitan Boroughs' Standing Joint Committee have recently considered the question of storage of food on a recommendation from a borough council, suggesting to the London County Council that Section 8 of the London County Council (General Powers)

Act, 1908, should be extended so as to prohibit the storage of food in a place in which an animal is kept, and have proposed that animals should be defined so as to exclude domestic animals such as cats and dogs: dogs, by the way, must be excluded under the by-laws from slaughterhouses. This question is still under consideration. Probably the best way of dealing with the whole question of food preparation and storage is not to proceed by giving powers as regards specific details of the food trades, such as storage, but to require, in the first instance, registration of food manufacturers' premises and food dealers' premises, and power to refuse registration. With these powers each borough could then deal with applications according to circumstances, imposing any such conditions as might be found desirable; as, in fact, is done fairly successfully, and without causing any public outcry, under the Milk and Dairies (Amendment) Act, 1922, as regards dairies. In addition, it is fairly obvious, I consider, that the sanitary authority should have powers to enforce compulsory notification of unsound food, and power to proceed under the Merchandise Marks Act, 1887.

DR. CHARLES PORTER, Medical Officer of Health of St. Marylebone, who was Chairman of the Council of the Royal Sanitary Institute for the years 1931-33, has resigned from the office of Registrar, which he has held for the last three years, on his election as a Vice-President and also Treasurer of the Institute.

THE Midland Branch of the Society of Medical Officers of Health has arranged to co-operate with the Royal Sanitary Institute in the holding of a sessional meeting of the Institute at Worcester on Friday and Saturday, May 22nd and 23rd, 1936. On Friday afternoon a visit will be made to Besford Court Mental Deficiency Colony. At 5.30 p.m., in the Guildhall, discussions will take place on "The Housing Act, 1935," to be opened by Dr. A. J. B. Griffin, Medical Officer of Health, Worcester (who is also acting as Hon. Local Secretary of the meeting), and on "Some Medical and Social Aspects of Chronic Rheumatism," to be opened by Dr. J. W. Patterson, of Droitwich. On Saturday there will be visits to various municipal and other undertakings.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

Physical Education.

Amongst the editorials in this issue there is a note on the report, recently published, of the Committee on Physical Education set up by the British Medical Association. Since its appearance, numbers of persons in the press and elsewhere have pointed out that there is nothing new (as if there could be anything new in life, a process that consists entirely of going round and round in circles) in what the committee has to report or recommend. The Board of Education, it is pointed out, have had quite a good deal to say on the subject recently, and in a number of his reports the Chief Medical Officer of the Board has made reference to the need for and the benefits of physical culture. As the matter is one so very definitely within their sphere, medical officers of health and their Society—although those commenting upon the absence of newness in the views and findings of the British Medical Association committee fail to mention it—in the past and over and over again have written and spoken also at length and strongly upon it, urging the authorities to take action and promising great advantages and benefits not only to individuals but to the nation if only proper schemes and systems were adopted and operated.

Early Views of the Society.

One discussion by the Society held almost exactly 32 years ago (in February, 1904) is particularly interesting as showing how long standing has been the concern of health officers in the question, the strength of their conviction that physical deterioration was conspicuous amongst the people, and that unless provision was made for physical education and a system of physical culture introduced, things would go steadily from bad to worse. The opener of the discussion, it is interesting to note, was Dr. Lockhart Stephens, then Medical Officer of Health of Warblington Urban District, and still very much to the fore, figuring from time to time at meetings of the Southern Branch of the Society, of which he has the distinction of being the oldest member. Of those taking part and backing up Dr. Lockhart Stephens in his demands for action, mention may be made of Sir Arthur Newsholme, Dr. James Kerr (described as Medical Officer

to the London School Board), Dr. William Butler, and Dr. W. G. Willoughby, of Eastbourne, but describing himself then as "medical officer to a small education authority." How comparatively slight a change has taken place in views or in the facts and fears forming the basis of the advice offered and demands made, the excellent summary in the April, 1904, number of PUBLIC HEALTH shows. Matters giving rise to perturbation then were a tendency manifested by the Board of Education to regard the infantry drill book as a suitable model for the physical training to be given to school children and the drill sergeant as a suitable interpreter and instructor. Also it was suggested that if the school teachers were to give the instruction they themselves must first be taught. The futility of devoting a few minutes once a week to what were useless and possibly even harmful exercises, because they were so often given in "schoolrooms in which the air was vitiated and possibly infected from school or other gatherings," was stressed particularly by Dr. Stephens.

Deterioration of the Nation.

Amongst those who appeared to think that the picture painted by the opener and others of this, and of the state of the nation so far as regards deterioration, was a little too sombre was Dr. James Kerr. It was true, he admitted, that in most schools physical culture did not exist and that "degraded conditions" were being brought to light, but there was no evidence that a "general downward course was being followed by the nation." Further, he appeared to think that too much could be made by way of objection to the performing of physical exercises in class-rooms: "schools were not such dreadful dens as had been pictured . . . and mere exercising of the children in schools would not add materially to the risks of contagion." In expressing views so very moderate—though he did have a fling at the Education Department, which "seemed to be like other government departments, managed by experts who know next to nothing of what they should have to deal with"—Dr. Kerr stood almost alone. Possibly it was because the suggestion was not offered until after he had spoken, that he had nothing to say with regard to the

proposal that the Council of the Society should be urged to set up a standing committee to study the various questions connected with the subject under discussion. Possibly, however, it may have been because he knew something of what was in the mind of the Board of Education—though he condemned it—and was aware that it was about to issue the first official syllabus of physical training for schools, which, being based on the Swedish system, marked the formal throwing overboard of the drill manual and the end of the drill sergeant in the school.

The Part of the Health Service.

That there has been steady and continuous advance since then cannot be doubted, though it is perhaps less complete and spectacular than some would desire. At the same time there has not been that standing still that certain people, not unconnected some of them with committees of one sort and another, appear to imagine. In the progress that has been made the health service and the Society, it may be claimed with certainty, have played a most prominent part. It may be the case, indeed, that the Society did more and that possibly by such discussions as that opened by Dr. Lockhart Stephens, it was amongst the first to direct attention to the need for physical education and had a large share in the initiation of the movement for the introduction and adoption of schemes to this end. And about those schemes and systems there is this to be noted, as there is also about the matter and line of the discussion, that they differ very little from those of to-day, in spite of the fact that it was over 30 years ago that the meetings were held, and before school hygiene and school medical inspection and maternity and child welfare schemes had assumed anything like real importance; in the age, in fact, of sanitation, when somebody or other thought it appropriate enough to refer to medical officers of health, as a body, as "glorified plumbers."

*Dr. Parran, Jr., Surgeon General,
U.S. Public Health Service.*

The many friends in the health service here of Dr. Thomas Parran, Jr., Commissioner of Health of New York State, will learn with pleasure of his promotion to the important position of Surgeon-General of the United States Public Health Service. A member of that service since 1917, Dr. Parran at the request

of Mr. Roosevelt, then Governor of the State of New York, went on loan to act as State Health Commissioner of New York in the early part of 1930. Although many of the people on this side actually did not make contact with him until after he moved to Albany and settled down to carry out the brilliant work he has done in and for New York State, he had begun to make friends some years before. In 1925, he was over here studying methods of control of venereal disease; in 1926 again, he represented his country at an interchange of public health officers, and in 1935, when he was chairman of the American delegation at the International Congress on Dermatology and Syphilis. On all of these occasions he formed and cemented friendships that it may be hoped have proved as pleasant to him as they have been to those with whom they were formed. It is claimed for Dr. Parran that he will be the first Surgeon-General of the Public Health Service who has served as a State Health Officer prior to becoming Surgeon-General. More than that he has had wide experience in practically every field of public health during and before his entry into the United States Public Health Service, though it is possible that he has done more work in relation to cancer and venereal disease control than others. That he is popular in public health circles generally may be gathered from the fact that he was Treasurer of the American Public Health Association from 1931 to 1933, and Chairman of the Executive Board from 1933 till the annual meeting in Milwaukee in October, 1935, when he became President-Elect. He will assume the office of President at the sixty-fifth annual meeting in New Orleans in October of this year. He has been a member of the Association since 1919, and a Fellow since 1923. It is only the other day it was announced that he had been made an Honorary Fellow of the Royal Sanitary Institute. This may be regarded as another link binding him to the service in this country and a further reason for all his colleagues wishing him every success and happiness in his new post. As is well known, Dr. Parran succeeds Dr. Hugh S. Cumming, who was the fifth in the line of Surgeon-Generals and who has a wide circle of friends in the service here, all of whom will be delighted to learn that he has so far recovered in health as to contemplate an early visit which may be quite lengthy.

A Communal Dental Service.

By BERNARD R. TOWNEND, L.D.S. (LIV.), Senior Dental Officer, County Council of the West Riding of Yorkshire.

In this extremely interesting and practical paper, read at a meeting of the Dental Sub-Group of the Yorkshire Branch, Mr. Townend discusses the faults and failings of the existing provision made for dental care in the community, and offers suggestions for amendment and improvement which deserve most serious consideration.

THE aim of the scheme which I propose to outline in this paper is, or should be, the aim of the public health service and the dental profession as these services survey their responsibilities to the community. The ideal of such a scheme is that dental treatment should be available at a cost within the resources of every member of the community. I think this ideal can be taken as axiomatic.

At the present time probably not more than 15 to 20 per cent. of the pre-school or adult population receive sufficient or systematic dental care, and it may be safely inferred that members of the larger group only seek emergency treatment for the relief of pain. As pain does not invariably or constantly accompany dental infection, it is obvious that the mere extraction of teeth for this reason is not a complete health service and still less a satisfactory health service.

National health is steadily and progressively improving. In the sixteenth century the span of life was only two decades. In 1850 it was only four. It took 25 years to raise the span to 45 years and now it is up to 58. It is problematical whether many more years will be added to this total, but there is no doubt that if we are to add another 12 years, and so make the psalmist's three score years and ten, the addition will only be made after a close consideration of the conditions which cause impaired health, and by providing better education in eugenics and hygiene.

We are in a position to-day which enables us to control many of the microbic diseases. We understand to some extent the bacteriological method of attack, and we have by means of our health service practically stamped out the life-destroying diseases of the past, such as plague, cholera, smallpox, and typhus. Research is slowly showing us the way to control many of the infectious diseases of childhood, such as diphtheria, scarlet fever, measles, etc. Although these diseases still take a considerable toll of young life, or, if they do not actually kill, leave ineradicable stigmata on the physical make-up of the body, yet there is a gleam of light, and it

is reasonable to suppose that in a comparatively short space of time these diseases will be as rare as are the pestilences of past ages.

Checking the infectious disease of the world, however excellent this work may be, will still leave a tremendous number of people to die an individual death as a result of their own private infections, and these personal infections often have their origins in oral sepsis. A granulomatous condition at a root apex or a closed marginal pocket may be, and often is, the primary factor in such widely differing diseases as disseminated sclerosis of the spinal cord, chronic nephritis, diseases of the ureter and bladder, recurring rheumatism of the muscles and joints, chronic recurring diseases of the eye (iritis, retinal and choroidal trouble and corneal ulcer) and neuritis. This rather terrifying list includes some of the commoner diseases which are the result of private infection. Many of these diseases are the causes of premature death. Dental disease is not put on the death certificate but if we go far enough back in the history of the condition we often find that dental disease is the primary causal factor.

Another aspect of this urgent need for the control of dental disease is the economic one of the loss of time in school and industry which can be put down directly or indirectly to the effects of dental disease. If the question was tackled we could reasonably expect to find that in school life a great deal of loss of time and mental retardation, which have been shown in this and other countries to be often directly traceable to bad mouth conditions, would be saved, and the same thing would apply in industry. In this second category the loss of time due to the indirect results of dental disease is difficult to assess with any degree of accuracy, but later in the paper we shall discuss some of the ways in which dental disease, by lowering the resistances of the body, tends towards sickness or even invalidism in the individual.

The control of dental disease has a good case to present both in the improvement of the life expectancy rate and as a factor in the economic

life of the community. Let us consider the need for this control in more detail.

The population can be divided roughly into three classes so far as dental treatment is concerned:—

- (1) All children.
- (2) Adolescents.
- (3) Adults.

Adults may be sub-divided into two sections:—

- (a) Adults who are fortunate enough to have retained many teeth which can be treated by conservative methods.
- (b) Adults whose mouths are such that extensive extractions and the provision of dentures is the only treatment possible.

The first class is all children. We have already statutory provision for the aided dental treatment of elementary school children. Treatment of pre-school and secondary school children, although not statutory, is carried out by many authorities. I do not think that there can be any argument that this work for the child population is the most important, the most effective and the most economical of all dental treatment. The higher its efficiency, the less need there will be for treatment in the adolescent and adult groups, with correspondingly less expenditure.

To be effective, dental inspection and treatment should commence at not later than three years of age and the inspection should be carried out by a dental surgeon. Under present conditions the pre-school child is referred for dental treatment by the doctor, and in most cases this is only done when the mouth conditions are so bad that they are definitely endangering the child's health and extensive extractions are necessary. It is interesting to note in this connection that the children's preventive clinic of New York has been in operation now for four and a half years and not one baby tooth has been lost through decay. This is surely the ideal we should aim at.

This question of the early treatment of children is one which will have to be faced, and faced with vision, if we are to lay the foundation of the whole scheme in a stable fashion. The difficulties of administration of such a scheme are obvious. There is no common ground like the school in the case of these young children. The increase in the number of nursery schools will help to solve the problem but until the public is educated to the realisation of the importance of this work, it is inevitable that vast

numbers will slip through the net. Dental propaganda should be commenced at a very early age. It should be fitted into the curriculum of the nursery and infant schools, so that, in the words of an American hygienist, "dental health education figuratively rides into the lives of the children, seated on the children's favourite animals." The best propagandist in these younger age-groups is the child itself.

It is worth while to go back still further in the child's life at this point and consider the importance of the pre-natal life of the mother. There is no doubt that a very great amount of dental caries commences in teeth having defective structure or defective formation. The pre-natal influence must be a potent one. No effort should be spared to ensure that the diet of pre-natal and nursing mothers is adequate, particularly in the mineral and vitamin elements which appear to play so large a part in the formation of well-made teeth. Correct infant feeding, the prompt recognition and cure of mouth breathing, and the prompt correction of vicious postural habits—all these play their part in the production of subsequent dental health and efficiency.

Another branch of dental surgery which is of great importance in childhood is orthodontia. This branch of dentistry has as yet received little systematic attention by the school dental service. Again the administrative difficulties are great, particularly in a county area, as in many cases the treatment involves many periodic visits spread over a period of months. The straightening of these irregular mouths has various advantages to the patient. The regular mouth is naturally self-cleansing, whereas the irregular mouth has many tooth surfaces which it is very difficult and, in many cases, impossible to keep clean. Also the psychological effect of an irregular and ugly set of teeth often produces very undesirable and often serious effects upon the mind of the owner.

All this dental work for children is being tackled by the maternity and child welfare and the school dental services in a way. In many cases that way lacks system and vision. It should be realised by all who have the health of the community at heart that no community dental service can ever be successful, it can never be undertaken efficiently or economically, until the dental treatment of children has been carried out long enough for the children benefiting from such attention to have passed into the adult group.

As I said, we are tackling the dental treatment of the school child in a way, but the moment a child leaves school—then comes tragedy. However perfect the pre-school and school dental schemes may be; however high the percentage of children leaving school with functional mouths free from disease may be; if the facilities for continuing that treatment are not provided, a very large proportion of the work, particularly the conservative work done during school years, if not wasted, is seriously minimised in its value. What is the use of teaching oral hygiene in the schools, of insisting on the value and importance of periodic inspection and treatment, if, when school days are over, the child finds he is unable, for purely economic reasons, to carry on with the ideas he has been taught, all facilities for obtaining aided treatment being taken away? The gap between school leaving age and the time when an adolescent becomes eligible for dental benefit is one of the major blots on our public health service. This period of four or five years is a critical one in the dental history of the individual. The growing period is still in progress and there is a constant and heavy drain on the resources of the body. This state of affairs was indicated by Sir George Newman in his report for 1933, when he said that the physical condition of a boy or girl leaving school tended to deteriorate before the age of 18 or 20 was reached; also coupled with this observation is the fact that tuberculosis is the highest contributor to the death-rate between the ages of 15 and 21. What a state of affairs! Here we have a vast section of the community who, at a critical period of their lives, have practically no organised supervision or aid in matters of general or dental health, the only exceptions being a very small percentage who are able to obtain such supervision or treatment through secondary schools or through the efforts of a few commercial firms who are sufficiently sensible to realise that such treatment and care of their adolescent staffs actually pays dividends. The breakdown in the scheme is particularly serious in conservative dentistry. When we extract a septic tooth we do remove so much sepsis from the body and so do so much good, but a conservation needs following up. We have all seen conservations going to pieces through the lack of periodic attention, attention which may often be quite trivial in its character. However perfect the school dental scheme may be, however high the numbers of conservations done, if not followed up many of these conservations will

fail; the individual is turned against this type of work, and we have created the potential father or mother of another member of another generation of "refusers."

More administrative difficulties arise as to how these adolescents should be followed up. I would suggest that work of this kind might well form one of the functions of the numerous "youth" movements which are daily springing up in our midst.

This lack of provision for aided treatment in adolescents has its most far-reaching effects in the female sex. An unfit man is but a unit. The unfit woman is the potential producer of unfit children. Let us follow the dental history of a very large percentage of women in this country. The girl may leave school with a sound functional dentition if the school dental service is a reasonably adequate one. Five years now elapse before she can obtain aided dental treatment, and then only if she goes into industry and becomes eligible for the national health insurance treatment. The chances are that even if this happens, her mouth is permanently crippled and extensive extractions and the provision of dentures are required. If she does not go into industry she cannot obtain aided dental treatment until she becomes pregnant, and she is forced to enter this state with her whole body poisoned to some extent by oral sepsis. Although there is much more danger to the mother and fetus in failing to provide dental treatment than there is in giving it, yet it is obvious that it would be infinitely more satisfactory if every woman entered the condition of pregnancy with a healthy mouth. Maternal mortality is very much in the news at the present time and rightly so. Many endeavours are being made to combat this wastage of life. I am convinced that if every woman who became pregnant had a functional and disease-free mouth, the maternal mortality rate would drop by 50 per cent. I am convinced that many maternal deaths are caused by outside infection from the defective mouths of midwives and doctors, but the greatest factor to my mind is the undoubted fact that the personal long-standing infections of the individual produce such conditions of lowered vitality which are favourable to the growth of hæmolytic streptococci and subsequent puerperal fever.

The fact that oral sepsis can and does cause such lowered resistance to disease invasion has been shown by an investigation which was carried out by the Metropolitan Life Insurance Company of New York. The figures were

taken of 1,000 cases of good mouths and bad mouths, and represent the incidence of certain diseases in the two groups.

	Good mouths.	Bad mouths.
	Per cent.	Per cent.
Neuralgia and neuritis	3.8	8.3
Headache	1.9	3.2
Nervousness	1.7	4.5
Colds	19.8	23.8

It is not enough that dental treatment should be provided for the expectant mother. Helpful as this may be, it is in many cases too late, besides not being the ideal time for such work. The resistance has been gradually lowered by years of auto-infection, and as a result we have another case of maternal mortality to add to the rather terrifying list.

The dental treatment of the adult divides itself into two classes.

(1) The treatment of such persons who have been fortunate enough to retain most of their natural teeth. Such persons would need periodic examination in just the same way as the child and adolescent. As the dental treatment in the earlier age-groups becomes more complete the numbers in this group would tend to grow. A fairly large percentage of them would require comparatively little treatment after reaching maturity, but the same principle of periodic inspection and control is of just as much importance in the adult as in the child.

(2) The treatment of such persons who have lost or who, through disease, will be forced to lose so much of their natural dentition that the provision of dentures becomes a necessity. This involves a considerable expenditure but one that is not, in the ordinary course of events, recurrent except for repairs and replacements.

This adult treatment, particularly the second type, is provided in many cases for the wage earner by the national health insurance if the money is available in the funds of the insurance company. Dental treatment is an "additional benefit." In my opinion, it is more than a benefit; it is a necessity and it should not be additional but of primary importance. In other words, it should be a statutory benefit and it should be extended, out of public funds and individual contributions, to include the dependents of insured persons, and special aid should be given to all married women under the age of 45.

No dental scheme, either for children or adults, can be considered complete unless constant attention and encouragement are paid to the efforts of research workers to discover the underlying causes of dental disease. It is my considered opinion that facilities should be available and encouragement given to dentists engaged in public health work to enable them to carry out such work if at all possible or if the dentist has a leaning towards that type of investigation. Although in the present state of our knowledge, the only control of any great value we have over dental disease is operative treatment, it should be clearly understood that this work is at best, nothing more than the repairing of teeth which have already been attacked by disease. It is not preventive in the best sense of the word, but only in so far as it endeavours to repair the ravages of disease in the very early stages. Extractions, fillings and the provision of dentures are necessary and will continue to be necessary for many years to come, but the fact that control of dental disease, before it attacks the body, is the only true preventive dentistry, should not be lost sight of.

Before considering ways and means of providing community dental treatment, let us endeavour to summarise the existing facilities and discuss their shortcomings. We have:—

(1) A certain amount of treatment being done by a few authorities for pre-school children. For the most part the selection of cases is in the hands of the medical profession and most of the work consists of the removal of grosser forms of sepsis and very little constructive conservative work is being carried out.

(2) The treatment of school children. At the present time this scheme is probably the most efficient of any but it is by no means perfect. It lacks an adequate personnel; there is little uniformity, and there is a tremendous leakage due to ignorance and apathy on the part of the teaching profession and the parents of children, which ignorance and apathy will have to be fought with all the weapons at our disposal.

(3) The treatment of adolescents. There is practically a complete absence of organised effort to tackle this problem except in the case of secondary school children and a few industrial concerns, and the absence of this effort nullifies to a great extent any benefits which may be produced by the first two schemes.

(4) The treatment of adults. The only means by which this section of the community can obtain aided dental treatment are through:—

- (1) National health insurance.
- (2) A few industrial concerns.
- (3) Maternity and child welfare.
- (4) Public assistance.
- (5) Naval, army and police schemes.

It will be realised that a very large proportion of the population would not be covered by these schemes, even if they were complete, which they are not.

It is obvious that the gaps mentioned must be filled before we can have anything approaching an ideal, and there is a considerable amount of difference of opinion as to how best these problems shall be solved and how the abysses shall be made level.

There are two alternatives :—

- (1) The work to be done by private practitioners.
- (2) The work to be done in clinics by dental officers in the part or whole-time employ of the Ministry of Health.

In a revised report presented by the Insurance Acts Committee of the Representative Board of the British Dental Association in May, 1934, the first of these alternatives is strongly suggested. Although the scheme was primarily intended for the dental treatment of insured persons, yet it could be adapted to other members of the community. The practitioners so engaged should be paid on a *per capita* basis, the suggested figure being something within the limits of 12s. 6d. to 16s. The Committee pointed out that the maintenance of contact between patient and practitioner was an essential feature, and stressed the principle of the family dentist analogous to the principle of the family doctor, which was also stressed by the British Medical Association proposals for a general medical service for the nation. While agreeing that some form of control for a health service financed partly out of public funds is necessary, the Committee was "of the strongest possible opinion that the maintenance of confidence between patient and dentist, upon which the success of dental treatment depends to a far greater extent than is realised, would best be secured by limiting so far as possible the interposition of third parties."

Sir Norman G. Bennett, in a speech in 1931 which caused a considerable amount of fluttering in dental doves, made a plea for the institution of clinics for the dental treatment of the nation; an extension, as it were, of the existing school dental service. It will be realised what a storm of protest this raised from the private

practitioners. Whether this opposition to clinics is a rearguard action on the part of the private practitioner only time will show, but there is little doubt, in my opinion, that in many poor-class districts the clinic seems to be the only system holding out any hope of success. Such a scheme is already in existence in a few places—notably Bermondsey—with, I understand, a considerable degree of success. To my mind it comes to this. In a poor-class area it is impossible to expect a dentist to be in a position to offer to his patients the best type of service. It is no use attempting to evade the fact, which we all know to be true, that in an industrial area the dentist with high ideals is comparatively rare. It is partly a matter of economics, coupled with the fact that the ignorance of his patients demands that the work done for them is very often not of a high idealistic character. This ignorance can be dispelled, but the present system is a vicious circle—the patient is ignorant with no ideas above extractions and dentures, and the dentist produces the necessary blood and vulcanite, and we get no further. If treatment were carried out in a clinic, the dentist would have the advantage of such ancillary services as radiology, pathology, anaesthesia, etc., which would be out of the question in private practice. We are told that where a number of men are working together there is a tendency to a levelling down of output and mentality. I have sufficient faith in human character to disbelieve this. I think the tendency is the other way. This Society is a case in point. I am certainly convinced, and I think you will all agree, that we are all better dentists as the result of our membership of the Society, and I see no reason why the same process should not operate in the actions of men working together in a clinic towards a common purpose. If a "ca'canny" attitude is to be the underlying factor of our lives, and if our professional outlook is to be limited by the amount of money we are going to make, then God help the profession.

I think criticisms of this kind are definitely subversive to the interests of progress.

Another point of internal economy which I think is worthy of note is our own outlook. The dental profession differs from the medical profession in that it has a tradition in which the craft side has been stressed in my opinion too much. We all leave the dental school with a fairly sound knowledge of the working of vulcanite and metal. We can do a cohesive gold filling better in most cases than we ever can during the ensuing years of our lives,

because the chance is only given to a comparatively few of ever doing a cohesive gold filling again. We find post-graduate courses being given, but when we look at the curricula of these courses we find the vast bulk of them are of a craft, or at any rate an essentially practical nature. Who has ever heard of a post-graduate course on the etiology of dental caries? Who in the ranks of our profession could give such a course, and who would attend if he did? I venture to think very few. Can we expect to take our place as partners in the war against disease so long as we maintain this purely craftsman attitude. We complain that the medical profession does not give us a fair chance to show what dentistry can do in the realm of preventive medicine. It is encouraging to realise that the big men of the parent profession, men like Osler and Moynihan, appreciate the part that dentistry should play in this great work of making a healthy nation, but while they are saying this, we are arguing about the respective merits of vulcanite and the synthetic resins. I am not belittling the craft side of our profession, but I do think we ought to have or to cultivate a mass mind above that of mere plumbers of teeth. I throw these ideas into the melting pot of discussion in the hope that I may either have your support or may be proved wrong.

To get back to the practical consideration of our scheme, I have left till the end the factor which will be the first to be considered from the point of view of administration. How can all this treatment be paid for? This, of course, is the main point which will have to be considered if and when the scheme becomes a practical proposition. The bill will be a large one. As an indication of the size of the bill it is estimated that in the school dental scheme alone, if 100 per cent. acceptance of treatment was attained and every child received annual inspection and treatment if necessary, a staff of some 3,000 school dentists would be required and the cost of the service would be something like three million pounds per annum. Big money, but I think we could expect big returns. Also it is only right to offset against this figure the saving of money through improved attendance at school, and later in life the reduction of absenteeism from work which we could reasonably expect to result from the removal of oral sepsis with its direct and indirect influences for evil, to say nothing of the general improvement of the physique of the nation.

Then again I think it is beginning to be

realised that we have, perhaps, made a mistake in offering so many free or practically free services to the nation. We have undermined to a serious degree that spirit of independence which has been in the past such a praiseworthy attribute of the British character. Would it not be possible to extend the insurance principle, by which benefits are received on the payment of a small weekly or monthly contribution, to the whole community from the day of birth? Such a scheme is in practice to-day in many industries by means of clubs through which the dependents of employees obtain medical attention. The possibilities of a wider application of such a scheme are worthy of consideration.

I have satisfied myself in this paper with merely pointing out the needs and very sketchily filling in some of the details of what I think will inevitably become in time an accomplished fact. It seems to be the only logical conclusion to what we shall be driven by the circumstances. Dental disease is almost universal, its incidence is increasing, the sickness and invalidism brought about directly or indirectly by the disease is growing in amount. The only action we can take is to attack the disease as it exists and devote all our powers to gain further knowledge of its etiology. At present the only way in which we can control dental disease is by the periodic inspection and, if necessary, treatment of the individual. We may be told this would never be accepted, that it would never be done; but the time has come when the dental profession and the powers that be should rid their minds of the solely critical attitude which has obsessed us of late; and try to think constructively of a practical and practicable ideal for a national dental service for the British nation.

A SERIES of three public lectures on "Modern Principles of Ventilation and Heating" will be given by Dr. T. Bedford on the second, third and fourth Mondays in May at the London School of Hygiene and Tropical Medicine. The course has been arranged by the National Institute of Industrial Psychology under the Heath Clark bequest. The Earl of Dudley (President of the Institute) will preside at the first lecture on May 11th, the subsequent chairmen being Mr. D. R. Wilson (Chief Inspector of Factories) and Professor W. W. Jameson, respectively.

The Society.

Reports, Proceedings and Announcements.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.

Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of this Branch was held in the Civic Hall, Leeds, on February 28th, 1936. The President occupied the chair and was supported by twenty-six members.

A letter was read from the Secretary, York Division, British Medical Association, forwarding for the consideration of the Branch the following resolution which had been passed at the meeting of the Division held on January 25th:—

"That in cases of school children requiring hospital treatment for tonsils and adenoids, this Division of the British Medical Association regards the opinion of a general practitioner with the opinion of the hospital consultant as being ample for all purposes, and that further compulsory examination by a school medical officer, as at present, is unnecessary and undesirable."

After very full consideration the Hon. Secretary was instructed to reply to the Division that the Branch was of the opinion that as the local education authority bore part of the cost of the treatment it was essential that such treatment be approved by a responsible officer of the authority.

Dr. G. H. Pearce brought to the notice of the Branch the very gallant action of Miss Agnes Jervis (daughter of Dr. J. J. Jervis, Medical Officer of Health, Leeds) who last summer, at the risk of her own life, rescued three children who were being carried out to sea whilst bathing. The Branch expressed the greatest admiration for her bravery, and the Hon. Secretary was directed to convey this expression to Miss Jervis and her father.

Mr. D. S. Rabagliati (Chief Veterinary Officer, West Riding County Council) read a paper on "**A Consideration of the Accredited Producers' Scheme of the Milk Marketing Board,**" which it is hoped will appear in an early issue of PUBLIC HEALTH.

Dr. Jervis congratulated Mr. Rabagliati on his paper. He was somewhat disappointed with the new order and criticised the methylene blue test. He instanced cases where the discovery of abnormal numbers of streptococci or colon bacilli had enabled the producer to find and eliminate the cause, and he doubted whether this could have been equally well done with the

methylene blue test. He also thought that the standard of 200,000 bacteria per c.c. was much too low.

Mr. Dixon said that in Leeds it was intended to conduct both bacterial counts and methylene blue tests and compare results. He claimed that one outstanding difficulty in the accredited producers' scheme was the lack of uniformity in the standard adopted by different local authorities, and put in a strong plea for greater uniformity.

Dr. J. J. Buchan also criticised the methylene blue test. He thought its adoption would tend to lower the standard of cleanliness of the milk produced in that part of the country, and also felt that more work should have been done in connection with this test before it was adopted by a government department.

Mr. Rabagliati, in reply, was also somewhat critical of the methylene blue test and agreed that the standard of 200,000 bacteria per c.c. was low; on the whole, however, he thought that the scheme would do a great deal to improve matters and that it was a step in the right direction.

On the proposition of Dr. Pickering-Pick, a hearty vote of thanks was accorded to Mr. Rabagliati for his excellent paper.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.

Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held in the School of Hygiene, Mount Pleasant, Liverpool, on April 3rd, 1936, the President occupying the chair. Thirty-one members and visitors were present.

The Hon. Secretary submitted correspondence concerning the formation of a North-Western Dental Officers' Sub-Group, and it was resolved to hold a joint evening meeting with the Sub-Group on its inauguration in the autumn.

Dr. B. T. J. Glover, Senior Assistant Medical Officer of Health, Liverpool, read a paper on "**Active Immunisation against Diphtheria.**" Immunisation against diphtheria was commenced in Liverpool in 1925 in the various institutions and residential schools in the city, and in 1931 it was extended to the infants'

departments of the public elementary schools. It has been found that 10 to 50 per cent. of parents are willing to accept immunisation, the average being 27 per cent. Schick testing has not been carried out because without it more immunisation could be carried out by the staff in the available time; the proportion of negative reactions among young children was very small and post-immunisation Schick testing, when a powerful prophylactic such as F.T. was used, revealed only a small residuum of Schick positive cases. True diphtheria does occur in children who give a Schick negative reaction, and 22 such cases were admitted to the Liverpool hospitals in 1935; therefore it is inadvisable to state that even a Schick negative reaction after immunisation is a guarantee against the risk of contracting the disease. A level of circulating antitoxin equivalent to 1/250-1/500 unit per c.c. is required to give a Schick negative reaction but to protect against *gravis* or intermediate infections the level of circulating antitoxin should be equivalent to 1/50 unit per c.c. M.T. toxoid was used in the early days but it was found that, after immunisation with this prophylactic, many children remained Schick positive, and F.T. was substituted for children under seven years and T.A.F. for children over seven years. Alum precipitate toxin is now used in two doses for children under the age of eight years; immunisation by a single dose of A.P.T. is not recommended as many children so inoculated remain Schick positive. Dr. Glover emphasised the importance of immunisation of children under school age, but it was found that parents were much less willing to accept immunisation for pre-school children. In order to control diphtheria by immunisation it is necessary to inoculate about 30 per cent. of the children under five years and 50 per cent. of those over the age of five years. Immunisation of older children alone produces a number of Schick negative carriers who are liable to carry infection home to the younger children. In dealing with the duration of immunity, Dr. Glover stated that the immunity rose rapidly during the three months following inoculation and then fell steadily but was being continually boosted up and maintained at a high level by sub-clinical infections with *C. diphtheriae*. He thought it might be desirable to re-inoculate nurses in children's hospitals annually, and during the prevalence of severe epidemics of diphtheria it might be advisable to protect children up to ten years by further doses of prophylactic each year. Copies of an interesting table showing

the incidence of diphtheria among children immunised with the M.T., T.A.F., and F.T. prophylactics, and among non-immunised children in Liverpool, were distributed among the members and explained by Dr. Glover, who afterwards exhibited two films dealing with immunisation against diphtheria, one entitled "The Empty Bed," and another prepared by Dr. E. H. T. Nash. Dr. Glass demonstrated a series of cultures of *C. diphtheriae gravis*, intermediate, and *mitis*, and also cultures of diphtheroids.

Dr. Glover's paper was followed by an interesting discussion in which Dr. V. J. Glover (Medical Officer of Health, Waterloo and Seaforth) and Dr. A. E. Hodgson (Medical Superintendent, Fazakerley Hospital) took part, and a vote of thanks to Dr. Glover was proposed by Dr. H. Whitehead, seconded by Dr. F. A. Sharpe and carried unanimously.

After the meeting the members were entertained at tea by the President.

THE HOME COUNTIES BRANCH.

President: Dr. A. W. Forrest, M.O.H., Leyton.

Hon. Secretary: Dr. R. P. Garrow, M.O.H., Hornsey.

A meeting of this Branch was held at the house of the Society on March 6th, 1936, the President occupying the chair, supported by seventeen members. There were also present ten student visitors from the London School of Hygiene and Tropical Medicine.

Mr. H. Gartside, B.Sc., Ph.C., of the Evans Biological Institute, showed a film on the subject of the production of antitoxins, prophylactics and vaccine lymph, and provided a running commentary. The film proved of great interest to all present, and at the conclusion the President thanked Mr. Gartside and, through him, the Evans Biological Institute for the trouble they had taken in arranging for its presentation.

A further meeting of the Branch took place on April 3rd, 1936.

By kind permission of the Medical Director, some eight members visited the Radium Institute in Riding House Street, Portland Place, London. The medical staff of the Institute gave an interesting demonstration of the "beam" system of radium therapy in operation. Thereafter the members were conducted

over the building and shown the accommodation and facilities for the treatment of in-patients, interesting coloured drawings and charts demonstrating the results of treatment by radium, and the laboratory where "radon" is prepared.

THE EAST MIDLAND BRANCH.

President: Dr. W. S. H. Campbell, M.O.H., Lindsey (Lincs.) C.C.

Hon. Secretary: Dr. J. A. Stirling, M.O.H., Chesterfield.

A meeting of this Branch was held in the Guildhall, Nottingham, on March 12th, 1936, the President occupying the chair. Twenty-four members and four guests were present.

Dr. E. B. Alabaster (Ophthalmic Surgeon, Worcestershire County Council) read a paper on "The Treatment of Concomitant Squint." Dealing with his subject in a very interesting and practical manner, Dr. Alabaster illustrated his points with great clearness by lantern slides, and at the close of his paper gave a demonstration of the working of the Sonoptophone, which was greatly appreciated.

After the discussion which followed, Dr. Alabaster was warmly thanked on the proposition of Dr. Newth, seconded by Dr. Barker.

THE FEVER HOSPITAL MEDICAL SERVICE GROUP.

President: Dr. E. H. R. Harries, Med. Supt., North-Eastern Hospital, London County Council.

Hon. Secretary: Dr. Alexander Joe, D.S.C., North-Western Hospital, London County Council.

A meeting of this Group was held at the Park Hospital, Hither Green, London, on March 27th, 1936. In the absence of the President, Dr. Banks took the chair and gave a most valuable demonstration on apparatus employed by him in injections by the intravenous and intraperitoneal routes. He also showed various interesting cases and conducted the party over the cell isolation accommodation recently constructed and brought into use at the Park Hospital.

At a meeting of the Council of the Group it was agreed to give general approval to the principles set forth in the memorandum of the Maternity and Child Welfare Group on the facilities desirable to improve and maintain the efficiency of the medical personnel in the public health service.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.
Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at St. Mary's Municipal Hospital, Portsmouth, on April 3rd, 1936, when the Medical Superintendent (Dr. R. C. Macpherson) delivered a most lucid and instructive address on "Encephalitis Lethargica: Aetiology, Symptoms and Treatment," in which he drew on his close personal experiences with the disease during the past three years.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

On March 27th, 1936, members of the Group attended at the house of the Royal Society of Medicine, 1, Wimpole Street, London, and took part in a discussion on "The Prevention of Neo-natal Death, Injury and Disease."

The meeting was a joint one of the Section for the Study of Disease in Children with the Sections of Obstetrics and Gynaecology and of Epidemiology and State Medicine, the Maternity and Child Welfare Group of the Society of Medical Officers of Health being present by invitation. Sir Lancelot Barrington-Ward (President of the Section for the Study of Disease in Children) was in the chair, and eighty-six members and guests were present.

Dr. N. B. Capon (Section for the Study of Disease in Children), in opening the discussion, first drew attention to the magnitude of the problem. He said that the mortality figures showed that some 20,000 babies died each year in England and Wales during the first month of life, this being about 32 per thousand born (i.e., about 50 per cent. of the total infant mortality rate). About 14,000 of the babies died in the first week of life. The morbidity figures were not available, but this aspect was at least as important as mortality. Secondly, he pointed out that the younger the patient the more important the prophylaxis, and that obstetricians and paediatricians must work in close co-operation. Thirdly, that the chief causes of neo-natal disease and death were:—

(a) Ante-natal—General hygiene, especially diet; prematurity and its various causes; syphilis.

(b) Intra-natal—Birth injury (1) cranial, (2) extra-cranial; establishment of pulmonary respiration.

(c) Post-natal—Faulty hygiene; infections and toxic conditions; failure of breast feeding.

Comparatively rare but important causes were hæmorrhagic disease, anæmia gravis, icterus gravis and congenital malformations.

Professor G. I. Strachan (Section of Obstetrics and Gynaecology) said that neo-natal death was much less frequent than stillbirth and in hospital practice was only about one-third as frequent as the latter, while in private practice it represented about 1 per cent. of all cases. The most common clinical association was prematurity, either alone or associated with such obstetrical complications as ante-partum hæmorrhage, toxæmia or syphilis.

In a series of 50 cases, the associated clinical conditions were:—

Complications of labour	...	18	cases
Prematurity	...	10	"
Congenital foetal conditions	...	7	"
Ante-partum hæmorrhage	...	5	"
Toxæmia of pregnancy	...	4	"
Syphilis	...	3	"
Cause unknown	...	3	"
		50	"

Thus prematurity alone was responsible for 20 per cent. of the cases and, in association with 15 other conditions, it was present in 50 per cent. of the series. Birth injuries were present in 24 per cent. Usually labour was complicated and the main lesion present was subtentorial hæmorrhage with laceration, but suprarenal hæmorrhage was present in one case. The mechanism of production was discussed. Pulmonary lesions such as atelectasis and hæmorrhagic consolidation were present in 28 per cent. The latter condition was associated with prematurity and was probably mechanical. The foetal states, such as anencephaly, exomphalos and others, were self explanatory. Syphilis was present in 6 per cent. of cases, and enlargement of liver and spleen with bony changes and a positive Wassermann were present. In a number of these cases, such as foetal defects, the condition was entirely unpreventable, but in others much could be done by a careful conduct of labour and by careful ante-natal supervision, to detect syphilis or physical lesions to prevent neo-natal death. In certain

cases where induction of labour or Cæsarean section was under consideration, the interests of the mother might be opposed to the interests of the child.

Dr. Ethel Cassie (Maternity and Child Welfare Group of the Society of Medical Officers of Health) said that a study of the statistical returns showed that while the general infant mortality rate had fallen 50 per cent. in the last 30 years, the neo-natal mortality had fallen very little. The stillbirth rate showed no fall, and represented a loss of life somewhat higher than the neo-natal mortality rate. Investigation showed the close association between stillbirths and neo-natal deaths, and their striking independence of environmental factors in contrast with the deaths of infants in the later months of life. She illustrated her remarks by the following table of stillbirths in Birmingham in 1935:—

Ante-natal causes	...	250
Intra-natal causes	...	174
Foetal abnormalities (including hydrocephaly), anencephaly, hydramnios, meningocele, spina bifida, monstrosities)		91
Prematurity (with no other apparent cause of death)	...	22
No information	...	11
		548

Further analysis of the first two groups gave the following figures:—

<i>Ante-natal causes</i> = 250.	
Toxæmia and nephritis	58
Ante-partum hæmorrhage (placenta prævia and accidental hæmorrhage)	71
Ill-health of mother (cardiac disease, shock, accidents, etc.)	21
Various causes	5
Insufficient information (but fœtus macerated)	95
	250

<i>Intra-natal causes</i> = 174.					
Difficult labour (including forceps deliveries, craniotomies and prolonged labours) ...	...	...	...	...	62
Breech delivery ...	...	...	...	...	37
Prolapsed cord ...	...	...	...	...	22
Various causes ...	...	...	...	...	25
Insufficient information (but foetus macerated)					28
					174

The facts influencing these rates were related to pregnancy and childbirth, and could only be affected by ante-natal care and improved obstetrics, including skilled care of the infant. The training of doctors and midwives in relation to the new-born infant was still insufficient.

Careful management of the new-born offered hope of saving many of these children, and special provision of beds for premature infants was helpful, as experience had shown in connection with the premature baby ward in the Birmingham city maternity hospital. Septic infections played an appreciable part in the loss of these young lives. Factors governing premature birth required investigation and research, since prematurity was of preponderating importance in the return of stillbirths and neo-natal deaths. Finally, Dr. Cassie claimed that the position of the ante-natal clinic at child welfare centres was of some interest. In Birmingham, during 1935, the mothers had visited these ante-natal clinics in 68 per cent. of the total births. Among the neo-natal deaths and stillbirths, only 33 per cent. had done so. She considered these figures to be definitely encouraging.

Dr. Letitia Fairfield (Section of Epidemiology and State Medicine) had prepared a paper which was read by Dr. A. Topping. She dealt with the statistical aspect of the subject, and pointed out that a large proportion of neo-natal deaths occurred during the first week of life and that very few infants died in hospital after the first seven days. Figures showing how the neo-natal mortality varied in different districts were submitted, and it was suggested that climatic conditions might be in part responsible. She mentioned the difference in the neo-natal mortality among legitimate and illegitimate children, and compared the relatively low rate among illegitimates in France, where provision is made for them, and the high rate among illegitimates in Ireland.

Dr. E. A. Barton described and illustrated post-mortem findings in stillborn infants. He showed that they had made no attempt to breathe, the glottis remaining tightly closed. The lungs were solid and the position of the chest was that of absolute expiration. He said that the first breath was accompanied by abduction of the cords but that the trachea remained very flattened until some weeks after birth. If an infant made no attempt to breathe the glottis should be artificially opened.

Dr. Helen Mackay pleaded that more attention should be paid in maternity and children's hospitals to the treatment and progress of new born infants, especially premature infants. She also drew attention to the importance of inspecting the abdomen of premature infants.

Dr. Stella Churchill suggested that neo-natal deaths were probably frequently due to unsuc-

cessful attempts at abortion, especially among illegitimates.

Dr. Virginia Saunders-Jacobs quoted figures from a detailed investigation of neo-natal deaths in the Borough of Woolwich, demonstrating the importance of looking beyond the immediate cause of death, as shown by death certificates and post-mortem findings, for some underlying reason why any particular child lacked the stamina to survive. She maintained that a reduction in neo-natal mortality could be hoped for by greater care of the expectant mother and by further investigation of the factors affecting and modifying the development of the *fœtus*.

Dr. A. A. Moneriff emphasised the importance of employing nurses trained in diseases of children. He was of opinion that babies should not be discharged from hospital unless they were making satisfactory progress and had not a falling weight curve.

Professor Browne, Dr. K. H. Tallerman and Dr. Mary Kidd also took part in the discussion, and Professor Strachan replied.

HIS MAJESTY THE KING has been graciously pleased to grant his Patronage to the Royal Sanitary Institute. The Institute is much gratified by this mark of the Royal favour which continues the long record of Royal Patronage that the Institute has enjoyed under Queen Victoria, King Edward VII and King George V.

Annual Conference for Medical Officers in Industry Overseas.—It is proposed to hold the annual conference on Thursday, July 16th, 1936, at the London School of Hygiene and Tropical Medicine, in order that medical officers in industry on leave from the tropics may be able to meet their colleagues and discuss problems. The main subject for discussion will be the prevention of disease, *e.g.*, the control of malaria and epidemic diseases in the tropics; water supplies; sewage and refuse disposal; housing; the keeping of records; and hygiene generally. Medical officers practising on plantations, mines, railways, hydro-electric and construction schemes, etc., are invited to be present. Government health officers will also be welcome. Those who are able to attend should apply as early as possible to the Organising Secretary, Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1.

The Literature of Preventive Medicine.

Food, Health, Vitamins. By R. H. A. PLIMMER, D.Sc. (LOND.), Professor of Chemistry, University of London; and VIOLET G. PLIMMER. London: Longmans, Green & Co., 1936. pp. 178. Price 3s. 6d.

Professor Plimmer claims in a note on the seventh edition of his book that "the most recent and important results of scientific research are included and demonstrate the necessity for an optimal and not a minimal supply of vitamins in the diet." Among the recommendations of subjects for further research, given in the report of the Health Committee of the League of Nations recently published, is the problem of the minimal vitamin requirements in a diet. It appears, therefore, that the leading authorities on the subject consider that the problem of the amount of vitamin required in a diet is still *sub-judice*. Professor Plimmer, however, does not consider that the problem exists and recommends liberal supplies; in fact, the diets he advises are made up almost entirely on considerations of their vitamin content. The book is well written and ~~carefully~~ edited. The coloured frontispiece, which can be obtained separately, sets out the vitamin content of various foods and should prove useful to those who make up their diets on these lines.

Black Ivory. By EDWARD SAMSON, L.D.S. (ENG.), F.C.S., Hon. Dental Surgeon, Royal Victoria and West Hants Hospital, Bournemouth; Borough Dentist, County Borough of Bournemouth. London: Henry Kimpton, 1936. pp. 179. Price 6s. net.

In this little book Mr. Samson calls attention to the remarkable freedom from dental caries of the inhabitants of the island of Tristan da Cunha, and draws a vivid picture of the ravages from caries in civilised countries. He draws attention to the apathy of the public towards this subject, and makes a most severe criticism of the methods that have been adopted by the Medical Research Council in investigating the cause of the disease. He stresses the fact that "the story of medical advancement, from Hippocrates to modern times, is one long narrative of individual endeavour." The book will doubtless arouse interest in the causation of this widespread disease, and may help to bring about the practice of the physiological mode of life which, the author claims, should lead to the prevention of dental caries.

Applied Chemistry. By C. KENNETH TINKLER, D.Sc., F.I.C., Professor of Chemistry, University of London; and HELEN MASTERS, B.Sc., Head of Domestic Science Department, Battersea Polytechnic. Vol. I. Water, Detergents, Textiles, Fuels, etc. London: The Technical Press Ltd., 1935. pp. 296. Price 15s. net.

This, the third edition of volume I of Applied Chemistry by Dr. Tinkler and Helen Masters, differs but little from the second edition of the volume. Volumes I and II of Applied Chemistry by these authors are designed primarily to cover the syllabus in applied chemistry for the B.Sc. (Household and Social Science) Examination of the University of London. So admirably have these books fulfilled their purpose that, without doubt, large numbers of ex-students—not of London University only—look upon the volumes, not as volumes for students, but almost as minor encyclopædias on chemical subjects of a domestic nature, more especially so in the case of those whose subsequent labours necessitate occasional looking up of points on such subjects as are dealt with in these volumes. With this in mind, and noting the remark of the authors in the introduction to Volume I that "it is to be hoped that the complete book will be of use to students preparing for the Diplomas and Degrees in Public Health of the various universities," it may not be inappropriate to look at one or two points of this, the third edition of Volume I, from the particular angle of those who have either never had the advantage of personal contact with the authors or those who have passed to a wider range of work. First, there is the method of distinguishing between small quantities of lead, copper and iron, as given on page 31 of Volume I. This is far too indefinite and leaves too much scope for error to any but the experienced. No definite conclusion should ever be drawn as to the presence of lead in a water unless positive reactions can be obtained by confirmatory tests of such a specific nature as to prevent absolutely the possibility of a water being wrongly accused or even wrongly suspected. Another point which ex-students of London University and, perhaps still more, those successful candidates who have obtained "the

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Diplomas and Degrees in Public Health of the various Universities" may raise quite legitimately" is that, while on the subject of soap, eleven pages are devoted to analysis and a little over two pages to the interpretation of the results of that analysis, yet out of no less than 54 pages devoted to water and its analysis no guidance is given or even indicated towards the interpretation of the results of such analysis. The young graduate, necessarily lacking in practical experience, would require at least that his tutorial traffic lights should show the amber and red as well as the green "Go." Anyone who has had extended experience of the interpretation of the results of water analysis knows that the more accurate the chemical analysis the more accurate must be the interpretation of the result of the analysis. And when this has been done, it should be emphasised that no chemical analysis which leaves a judgment on wholesomeness on the border line should be complete without a bacteriological examination. Hence the inexperienced should have due warning. Apart from these points the volume is an admirable one; it gives not only a really good chemical interpretation of the requirements of the London University syllabus referred to previously, but is a very sound and practical scientific link and interpreter between the academic and domestic; one whose usefulness will not cease even when the maiden's college hood is turned to other more homely uses.

Health and Human Progress. An Essay in Sociological Medicine. By RENÉ SAND, Lecturer, University of Brussels; Member, Health and Child Welfare Committees, League of Nations; etc. London: Kegan Paul, Trench, Trubner & Co., Ltd., 1935. pp. 278. Price 10s. 6d. net.

This is a remarkable book and one that deserves careful study. In it, in addition to noting the progress that has been made as a result of application of knowledge, medical particularly, and showing what has been done in various countries, Dr. Sand calls attention to the need for greater progress still, protesting against a tendency which he sees of being subjected by progress instead of making use of it. The effect of the writing of Dr. Sand is most inspiring and has not even lost to any extent in the translation which has been excellently done by Dr. C. F. Marshall. There is a preface by M. Edouard Herriot

and fascinating chapters on the advent and sources of sociological medicine, heredity and environment, etc., in most of which there are frequent references to works done in the field of preventive medicine and the need for extending that field.

THE Food Education Society has recently issued a booklet entitled "Meals for Day-School Children, including Packed Dinners." The introduction is written by Major-General Sir Robert McCarrison, and the contents include recipes and specimen meals. Copies may be obtained from the Society at 29-30, Gordon Square, London, W.C.1, price 3½d. post free.

"Table Badminton," by E. E. Natali.—The reason why, as the author of this volume puts it, the door to table badminton opened so slowly was because the problem of a suitable shuttlecock presented very great difficulty. This apparently has now been solved, and if the word of Jack Hobbs, who contributes the foreword is to be accepted—and who would do otherwise than accept such a word on cricket or anything else?—the game is certain soon to prove a favourite with everybody. It is to help to bring this about that Mr. Natali has written this very clear description of the game, explained the rules and offered a number of very useful hints to those who have taken it up or think of doing so. The book is published by Edward Goldston, Ltd., 25, Museum Street, London, W.C.1, and the price is one shilling net.

"The Potato as an Article of Diet," by H. K. Archbold, D.Sc., D.I.C., A.I.C., is the first of a new series of miscellaneous booklets to be issued by the Potato Marketing Board. The treatise consists of a bibliography and extracts from some eighty-two books and articles, published in many lands, on the potato. Sections are devoted to the history and composition of the potato; the potato as a source of energy, protein, mineral salts and vitamins; its digestibility; its utility in disease, and the effect on the food value of the potato of the different cooking methods. The booklet, it is claimed, will be received with interest by members of the medical profession and dietists who desire a fuller knowledge of the subject. A complimentary copy will be forwarded to any member of the Society on application to the Potato Marketing Board, Africa House, Kingsway, London, W.C.2.

In the Annual Reports.

THE POLICY OF BLOCK DWELLINGS EXAMINED.—The older type of cottage dwelling, self-contained with a small yard, packed as many to the acre as possible, is disappearing, especially in the older parts of the district. Blocks of five-storeyed tenements are taking their place, which, while providing the amenities of life absent in the cottages, are in themselves lacking in certain respects those indefinable amenities of privacy which make the Englishman's home his castle. The common staircase, the common playground, the sharing with neighbours of everything outside the flat door, and even the inability to keep a cat or dog, are factors in the life of the new inhabitants of block dwellings to which many are entirely unaccustomed. The cottage home life in which the older inhabitants grew up is being surrounded by circumstances in which the opportunities of self-expression are limited to a great extent for both adults and children. In the new buildings each family is so much more exposed to the eyes of its neighbours that the freedom of relaxation possible in the cottage yard, however small, is out of the question. As a consequence the gardens reserved for adults are seldom used, no greater degree of decorum in dress or habit being required for the much more attractive parks and public gardens. Children also, whose parents both in upbringing and behaviour wish to maintain above the level in the common playground, are kept more indoors, as, unlike the school playground, there is no master's eye on the watch. Toddlers and infants, too, especially, are in the open air far less than their counterparts in the cottage, in part for greater safety, and in part because family pride will insist upon a degree of tidiness, quite unnecessary for the informal back yard, which limits the outing to a time when the household work can be left. These considerations are apparent defects in the present policy of rehousing, apart from the proven increase in risk from the zymotic and other infectious diseases to which the inhabitants of tenements are exposed. Considerations of finance, together with many other factors which make central rehousing necessary, are responsible for the policy of block dwellings, but whether good or bad, that policy will influence the life of the Londoner for the next century and longer with effects which are quite unknown. It is conceivable that block dwellings may be made the subject of clearance orders just as are the cottages which they are now replacing, and for not dissimilar reasons.—Dr. A. G. G. Thompson, Lambeth.

LIMITATION OF FAMILIES.—It would appear that the volitional limitation of families is caused by married couples desiring their restricted number of offspring to obtain the best possible advantages of upbringing and education. Some married couples are deliberately childless either because they wish to avail themselves to the fullest extent of the present greatly extended facilities for entertainment and enjoyment or simply because they cannot afford to have any children. Another point to be borne in mind is that with the present later ages at marriage the fertility of married couples has decreased. Economic factors play a big part in the reduction of a birth-rate. It may or may not be a good thing that fewer children have been born

to occupy vacant places, so that each has more elbow room. It may or may not be true that the quality of human life has improved *pari passu* with the decline in quantity. But, subterfuges aside, we have to recognise that the birth-rate is still declining generally. Whether the decline has gained such momentum that it cannot be overtaken is another and most opportune question; but a decline which has been steady and almost persistent all over the country for the last fifty years disposes one to the opinion that a further fall is inevitable unless further State aid in encouraging larger families is forthcoming. Further State aid does not mean simply increased maternity benefits and income-tax reliefs, but to these a further provision of maternity homes and nurseries and an improved midwifery service should be added. If economic conditions do materially improve, the present trend makes it appear that a still higher standard of living will be demanded, and the question of begetting larger families, if left to individual married couples, will be answered by continued restriction.—Dr. G. M. Davidson Lobban, Bury.

THE National Baby Week Council urges that during 1936 those engaged in cultivating and informing public opinion on matters of importance to national health, should direct special attention this year to: (a) Maternal welfare (stressing the constructive aspects—welfare and happiness—as distinct from maternal mortality, disease and morbidity); and (b) the question as to whether all is being done that should be done, nationally and locally, for the welfare of the child from two to five years of age.

THE Royal Sanitary Institute has recently issued the report of the annual competition held to decide the award of the Empire Health Week challenge shields. After preliminary training in health matters, a paper of questions relating to "The Practice of Health Habits" was answered by nearly 20,000 children in schools throughout the British Isles. The senior shield was won by Heydour (Church of England) School, Grantham, and the junior shield by Corporation Road Girls' School, Newport, Mon. This is the second success of the latter school. A special medal will be given by the Institute to the two children whose efforts gained the prizes. In addition, over four hundred certificates have been awarded to children whose papers were selected as the best in the respective schools. The holding of the competition coincides with the annual celebration of Empire Health Week, which is promoted by a special committee of the Royal Sanitary Institute, of which His late Majesty, King George V, was, throughout his reign, Patron.

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

THE PREVENTION AND CURE OF DEAFNESS.

To the Editor of PUBLIC HEALTH.

SIR,—Mr. Layton's mature judgment must always command our attention. Unfortunately, lack of space has prevented him, in his letter in the April number of PUBLIC HEALTH, detailing reasons for his objections to my paper ("Conservative Treatment of Chronic Mastoid Disease"—PUBLIC HEALTH, March, 1936, p. 220). I do not, therefore, find myself inclined to withdraw one iota from my arguments.

The notification of acute otitis media might be expensive, but as part of a very necessary centralised control it is essential. Certainly none of my colleagues has condemned it on public health grounds.

I will admit of no debate on the malign effects of large unhealthy adenoids on the ears. As to the importance of that impaired physique which results from an unbalanced diet and hypovitaminosis, surely there can be no question. I should welcome the opinions of my public health colleagues who have the opportunity of observing and contrasting masses of children in different walks of life. Paranasal sinusitis, usually catarrhal, but not infrequently purulent, is a predisposing cause which is often overlooked by the general practitioner. I grieve to see Mr. Layton joining their number, the more so as he is well acquainted with its incidence in fever hospitals.

What of the effect of bathing? Whilst accepting Mr. Layton's apology for not having read my article, I must point out that it would have been more generous on his part to have delayed his criticisms till he *had* done so. To speak of *gross* exaggeration is quite unjustifiable. I said in my paper that the inhalation of infected water into a diseased ear was a potent factor in flare-ups. I repeat it now with all emphasis. My argument is supported by elementary physics, by the anatomy and pathology, and above all by clinical observation. In my paper I admitted

the difficulties in trying to stop children bathing. Actually, I know many kiddies who would prefer cricket, football, or a ramble in the country—all just as beneficial as a plunge in the municipal baths; and as to the "good that swimming and bathing may do to the damaged ear," that must be a secret of Mr. Layton's which I cannot fathom.

The prevention and cure of deafness is a matter for national legislation. I have already shown that proper measures efficiently applied can produce amazing cures on quite a large scale. Public health authorities naturally look to expert otologists for guidance in these matters rather than to school mistresses and child guidance experts; but if it will help to secure unanimity I am quite prepared once more to enunciate in debate the various principles which I laid down last year.

I am,

Yours faithfully,
A. TUMARKIN.

13, Rodney Street,
Liverpool, 1,
April 14th, 1936.

A NATIONAL CONFERENCE on Maternity and Child Welfare will be held at the Picton Hall, Liverpool, on July 1st, 2nd and 3rd, 1936, under the Presidency of Mr. Geoffrey Shakespeare, M.P. (Parliamentary Secretary to the Ministry of Health). The subject for discussion throughout the conference will be "The Promotion of Maternal Welfare in Relation to Child Health," the following aspects, among others, being included: maternal welfare and the public; ante-natal nutrition; the education of parents through day nurseries and nursery schools; parents and substitute parents; the importance of co-operation between maternity and child welfare services and the specialist health services; rest and convalescence as factors in maternal welfare." Details of the meetings may be obtained from Miss Halford, O.B.E., Hon. Secretary, National Association for the Prevention of Infant Mortality, Carnegie House, 117, Piccadilly, London, W.1.

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Editorial.

Dr. Ernest Ward: President, 1936-37.

DR. ERNEST WARD, Tuberculosis Officer for South Devon, will be President of the Society of Medical Officers of Health in the session 1936-37. In a sense this selection is one of the most noteworthy ever made by the Society, for since it came into existence in 1856 there has been no occupant of the Presidential Chair but was or had been a medical officer of health. That the day would come when there should be no such limitation was inevitable. Almost it was inevitable also that it was from amongst those engaged in the tuberculosis branch of the service that the choice would be made. That the chosen would be Dr. Ernest Ward was a certainty. Without doubt there is no one who has more thoroughly earned the gratitude not only of

those of his own group alone but of all the groups of departmental officers and of the Society as a whole as well. Not unnaturally the chief part of his devotion and his energies has been given to tuberculosis and the interests of the members of the tuberculosis branch of the service. Concerned greatly to secure the fullest possible recognition of the importance of the work done by the tuberculosis officer, Dr. Ward has never permitted himself or anyone else to forget that in relation to the disease tuberculosis there was work to be done if the problem was to be solved and the best was to be done for those who had unfortunately fallen victims to the infection. To the solution of the problem he brought qualifications, skill and experience of the highest and most valuable as a clinician. To

it also he brought a devotion completely selfless, a boundless enthusiasm and administrative gifts and qualities of the first order, so that he was able to inspire others to join with him and work under his leadership towards the goal set for himself and them. Accepted as a leader here, he was even more readily accepted as a leader in other connections, those in his own branch of the service looking to him to secure for it the recognition its importance appeared to deserve. Later also to him there turned members of other groups and departments of the health service until he came to be recognised and accepted as the champion of all. Ready to serve these he was none the less ready to devote himself, his energies and his talents to public health and the public health service also. It is no less on account of the work he has done and the wisdom he has shown in the Council of the Society than because of the high esteem and affection in which he is held personally that Dr. Ernest Ward has been chosen the first of the departmental officers to occupy the chair of the President of the Society. In choosing him the Society knows it has chosen one who deserves and has earned the honour, who will carry it with dignity, and in the course of his service will add to the great prestige that the Society already enjoys.

* * * * *

Circular 1539 and Overcrowding.

IN a circular (1539) recently issued the Minister of Health gives further instruction and guidance to local authorities with regard to the necessity to bring fully into operation the provisions of the Housing Act, 1935, relating to overcrowding. The operation of the Act, it is pointed out, depends upon the fixing of "appointed days" and these, when fixed by the Minister, determine the date from which particular overcrowding provisions take effect in any area, the pivotal date being that from which overcrowding is to constitute an offence. The first date fixed as an appointed day was June 1st, 1936, that for the submission of reports upon overcrowding surveys. The margin allowed by this appears to have been so generous that some time before it arrived so great progress had been made that the Minister had found himself in a position to proceed to the fixing of the remaining days to be appointed, including that upon which overcrowding shall constitute an offence.

Appointed for this is January 1st, 1937. This applies, subject to consideration of any representations received from individual local authorities, in the case of all those whose survey discloses a total number of overcrowded families either under 100 or less than 2 per cent. of the total number of working-class houses in the district. In other districts the same date may be fixed if the local authority desire but, when the problem is one of considerable magnitude, proposals as to other dates will be considered.

Another day necessary to be fixed is that upon which entries are to be made in rent books giving a summary of the provisions of the Act and a statement of the permitted number of persons in relation to the houses. In this connection a certain amount of work is involved, in measuring up of rooms, etc.; and for these purposes a period of at least six months is allowed, and in the areas in which January 1st, 1937, is fixed as the day from which overcrowding is to constitute an offence, the appointed date chosen is July 1st, 1936. During this period of six months it is expected that all means possible will be adopted by local authorities to see that the fullest information is made available to landlords and occupiers as to their rights and duties under the provisions which relate to overcrowding, through the press, by circulars and so on.

A further duty that falls to local authorities is to make provision of houses to abate the existing overcrowding, and to submit proposals to this end to the Minister. In the first instance what is required is a rough estimate and this is to be submitted by August 1st, 1936. By means of re-shuffling of accommodation it is expected that a considerable amount of overcrowding will be got rid of. The provision of cottages or flats for aged persons, for example, will often render available accommodation suitable for a normal sized family. The Minister anticipates, therefore, that re-housing proposals put forward will usually be made up of a certain number of one-bedroom houses for aged persons, together with houses for large families requiring three, four or more bedrooms. Discussing the question of standards of accommodation, the circular has a number of most practical and helpful suggestions to offer, indicating the amount that in a general way the Minister would regard as satisfactory for families of varying sizes. No doubt by

many authorities these suggestions will be accepted as a guide in planning.

Having regard to the views fairly widely held with regard to blocks of flats, what the circular has to say will doubtless receive careful consideration. That general areas and sizes are not laid down will be noted, along with the reason given that "the number of authorities providing blocks of flats will be comparatively small." Housing accommodation in the form of flats for large families is regarded as particularly inappropriate. Such families, it is suggested, should be re-housed in cottages, flats being reserved for families of "more normal size." In such cases, though balconies should be provided, care is to be taken that they are safe for children. In particular, they are to be kept free from objects on which children may climb, and tenants should receive warning to this effect.

For these and other regards the circular will be found most interesting and helpful both by authorities and officers charged with duties in relation to housing.

* * * * *

A Measles Epidemic in London, 1933-34.

THAT there should have been delay in getting out the report on the measles epidemic of 1933-34 in London* is understandable. Like other medical officers of health, Sir Frederick Menzies has had a vast number of matters, many of them fresh, to engage his attention. In addition, as a complication, there has been the present epidemic which appeared at its appointed time after a two years' interval. Because the epidemics in the metropolis are on rather a large scale—information of the occurrence of 59,163 cases was received by medical officers of health of the metropolitan boroughs—the report has much more than a merely local interest and value. This is all the more the case since there are included a number of notes by observers and investigators of experience and recognised ability. Amongst special notes may be mentioned that by Dr. Harries, Medical Superintendent, North-Eastern Hospital, on administrative procedure. In this mention is made of the work done in relation to complications—otitis media and broncho-

*London County Council Report No. 3180. London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Price 1s.

pneumonia particularly. In regard to the former it is pointed out that, of 1,464 measles patients up to five years of age, some 15 per cent. had otorrhœa, broncho-pneumonia contributing 14.9 per cent. In the case of otitis the necessity for barrier nursing is stressed, Dr. Harries going so far as to state that "aggregation of patients with recent otitis media in a special ear ward is not sound practice unless each patient is separately barrier-nursed." In addition to the references in the report of Dr. Harries, there is a special paper on otitis media in measles patients by Dr. Hilda Linford. In this a series of 400 cases is very fully analysed.

Important contributions to the report deal with the preparation and use of human adult and convalescent sera. Dr. McCartney, the Director of Research and Pathological Services, provides a most useful practical note on preparation of the sera. In the case of the convalescent serum, which he counts the more efficient, he points out that the amount obtained is not nearly adequate to the needs of the service. On the use of immune sera in the control of outbreaks in schools, etc., a paper contributed by Dr. Gunn, Deputy Medical Superintendent of the North-Eastern Hospital, and Mr. Russell of the London School of Hygiene, has a very particular value. Amongst the findings of the authors were that of children inoculated with adult serum with a view to prevention, a protection rate of 78.2 per cent. was obtained, but since approximately 25 per cent. escape whether inoculated or not, it may be taken that, as a result of serum administration, approximately three times as many children escape attack as would have escaped if serum had not been given. The protection rate with convalescent serum was 80 per cent. and "the superiority of convalescent serum over adult serum was not confirmed by the present study and no ready explanation of this finding has been forthcoming." Other conclusions reached that are worth noting were: (a) In order to ensure prevention, it is desirable to administer serum within six days from the earliest exposure; the difference between inoculations before and after the sixth day are statistically significant, particularly amongst children under the age of five years. (b) A dose of 10 c.c. of adult serum is more successful in procuring protection than one-half that amount. (c) The protection rates were lowest amongst children

suffering from scarlet fever and whooping-cough and highest for diphtheria. The complication rates were highest for whooping-cough and enteritis. (d) Direct comparison of the clinical attacks amongst the inoculated individuals and the control group (uninoculated) shows a significant advantage to the former, in respect of initial manifestations, severity of main features and complication and fatality rates.

The report, which was prepared by members of the Public Health Department staff under the general editorship of Dr. J. A. H. Brincker, Principal Medical Officer in the Department, is one of real importance containing information of value to all medical officers of health.

* * * * *

The British Legion Village Settlement.

THERE is no doubt that the village settlement is the ideal unit in the treatment of pulmonary tuberculosis. The latest report of Dr. J. B. McDougall, Medical Director of the British Legion Village, Preston Hall, near Maidstone, Kent, which shows the results that can be achieved, is therefore of particular interest.

The sanatorium has been considerably enlarged during the past two years and, including Douglas House, Bournemouth, which is used for patients requiring convalescence, there is accommodation for 390 patients. During the two years ending September 30th, 1935, 880 patients were admitted and 681 discharged. That the sanatorium is completely up to date in the matter of treatment can be judged from the fact that, since the inception of the surgical block in the latter part of 1933, a total of 145 thoracic operations have been performed.

Preston Hall industries continue to do well. In the past ten years the total sales per annum have increased from £15,981 to £79,809, while the wages paid to settlers have risen from £8,968 to £25,293: than this there could be no better testimonial to the efficiency of the scheme. The population employed by and dependent on the settlement on September 30th, 1935, was 635. Dr. McDougall states that the village settlement scheme at Preston Hall is practically self-supporting.

The policy of asking arrested (clinically recovered) cases to leave the village settlement and take up accommodation elsewhere has been put into force. This appears to be not

only a justifiable but a desirable procedure. All cases asked to leave were such that they were fit to resume their place in the outside world and follow their occupation under ordinary conditions. By this means a much larger number of cases will be afforded the opportunities of working in the village settlement with all its attendant advantages.

From the purely medical point of view interest is added to the report by the inclusion of a number of original articles. Mr. Laurence O'Shaughnessy provides two articles on thoracic surgery, and Dr. J. B. McDougall and Dr. J. H. Crawford discuss the relation of gassing to Buerger's disease.

* * * * *

The British Red Cross Society and Rheumatism.

THE annual report for 1935 of the British Red Cross Society's clinic in London for rheumatism, recently issued, is particularly noteworthy since it contains comparative statistics for the first five complete years of work. These and the reports of the medical board and of administration show that the need for this clinic and for a considerable extension of its services has been proved beyond all shadow of doubt. Sir Arthur Stanley in his foreword says: "The available space and time for treatments have been taxed to the uttermost, and yet some patients have been obliged to wait longer than we should have wished to commence their treatment. The need for accommodation for in-patient treatment and for specialised convalescent treatment is urgent; the progress in research only serves to show how much more research is required to solve the innumerable problems presented by rheumatic diseases; and the social problems of the patients themselves exercise all our ingenuity in finding financial and other methods of solution."

The total number of attendances for treatment in 1935 was 89,810, as compared with 77,892 in 1931. Of those patients discharged during 1935, 51 per cent. were working throughout the period of their treatment, and a further 21 per cent. were off work at the start but proposed to return to work when discharged—a striking testimony to the success of the clinic in attracting patients suffering from the early manifestations of rheumatism. Though it is recognised that many factors must modify interpretations of statistics, it is claimed that of 2,314 patients

discharged in 1935, 50.9 per cent. were cured or free from symptoms; 35.1 per cent. definitely improved; 13.2 per cent. unchanged or only slightly improved; and 0.8 per cent. worse.

The financial statements show that, excluding subscriptions and donations, the clinic has worked at a loss of approximately £3,500 per annum, so that the committee is faced with the necessity of raising a considerable sum, in addition to income from fees, with which to meet the continually increasing demands of up-to-date treatment for rheumatism. The Samaritan fund of the clinic has, during the year, received a first grant of £2,000 from the trustees of Mrs. Katherine Cargill's estate to establish the "Katherine Cargill" treatment fund.

* * * * *

Costing Returns: Part II.

THE Ministry of Health have issued a circular to county and county borough councils enclosing part II of the costing returns for 1934-35. This part contains particulars of poor law institutions (other than hospitals) and casual wards, and shows the average weekly cost per inmate under various heads of expenditure in each institution of either class. These particulars are collected and issued annually by the Ministry in order to assist local authorities in the economical administration of the institutions under their control. In recent years the value of costing methods in securing business efficiency has become increasingly recognised, not only in industry but also in local government. Other examples in the sphere of local government are provided by the costing returns for sewage disposal works, for refuse collection and disposal and for street cleansing, which are referred to in the Ministry's annual reports.

The average net cost for poor law institutions (other than hospitals and separate casual wards) is shown by the present returns to be as follows:—

Net cost.	1930-31.	1932-33.	1934-35.
Total amount ...	£8,234,170	£7,733,374	£7,819,980
Average per inmate per week ..	24s. 8.9d.	23s. 4.9d.	24s. 9.1d.
Ditto, after deducting for casu-als ..	23s. 11.5d.	22s. 2.9d.	23s. 9.0d.

Part I of these returns, which contained information for poor law hospitals, general hospitals administered by local authorities,

sanatoria, and maternity homes and hospitals, was published in March and has already been noted here. Both parts may be obtained, price 1s. 3d., direct from His Majesty's Stationery Office or through any bookseller.

* * * * *

Orthodichlorbenzene and Vermin Infestations.

SINCE orthodichlorbenzene has been and is being used to a considerable extent in inhabited houses in a number of districts, particular importance attaches to the statements contained in the circular (1544) of the Ministry of Health dealing with the matter and setting out the conclusions reached as a result of further investigations, carried out since the issue of the "Memorandum on the Bed-bug and How to Deal with It" (Memo. 180 Med.), with undiluted and diluted orthodichlorbenzene. These have shown that whilst satisfactory results have been obtained as far as the destruction of bed-bugs is concerned, it has been found in practice that it is difficult to take adequate precautions against the fumes, and the period which is necessary for proper ventilation is so long as to render the method impracticable for use in occupied premises. The toxicity of the fumes to human beings is not known at present but experiments on animals have indicated that they may be toxic in low concentrations. Pending further enquiry, therefore, the Minister considers it undesirable that orthodichlorbenzene, whether in an undiluted or a diluted form, should be used for the disinfection of inhabited houses. No doubt, even though no evidence of any harmful effects has been detected, it will be considered advisable in all areas to discontinue the use of the material.

THE "Bostock Hill Memorial" Shield, offered annually by the Royal Sanitary Institute for the best celebration of Health Week in the Empire outside the British Isles, has been awarded for the Health Week and Exhibition held in Rangoon in 1935, which was organised by the Burma Branch of the Indian Red Cross Society. Among other entrants, the adjudicators considered that the celebration of Empire Health Week in Lagos, Nigeria, was deserving of the highest commendation. They also commended the celebrations in Pretoria, Transvaal, and Port-of-Spain, Trinidad,

The Accredited Producers' Scheme of the Milk Marketing Board.

By MAJOR D. S. RABAGLIATI, O.B.E., B.Sc., F.R.C.V.S., D.V.S.M., Chief Veterinary Officer, County Council of the West Riding of Yorkshire.

This paper was submitted to the Yorkshire Branch at a meeting held in Leeds on February 28th, 1936. Since then the Milk (Special Designations) Order, 1936, has come into operation, a fact which renders the views of Major Rabagliati, whose opinion on any question affecting milk has an immense value, all the more interesting and helpful.

ARTICLE 63 of the Milk Marketing Scheme (Approval) Order, 1933, states: "The Board shall, as soon as they think it practicable, prepare a register of accredited producers and thereafter every registered producer shall be entitled to have his name registered therein upon satisfying the Board that he is complying, and will continue to comply, with such conditions as may be prescribed for securing the purity and good quality of the milk sold by such producer." This, therefore, is the origin of the scheme. The Board have power to remove from the register the name of any one who fails to carry out the conditions and shall pay to each producer whose name is on the register such additional payment, called the "guaranteed quality premium," which it has been decided shall be 1d. per gallon. I think that I shall not be contradicted if I say that the scheme has been a troubled one since its inception, during its embryonic stage and since its birth. It is still young and growing, and one may now express the hope that as time goes on many of its initial difficulties will be overcome and that it may prosper, for in principle it has many excellent qualities and should be used as a stepping stone to better things. One can foresee the day, and not in the very far distant future, when the conditions which are imposed on its licensees will be the minimum conditions required from all milk producers.

In August, 1934, the Board promulgated a scheme which, had it gone through, roughly imposed three conditions on a would-be accredited producer: (1) The veterinary examination of his cows at not more than six-monthly intervals; (2) the passing of the buildings, premises, equipment and methods of production by the agricultural organiser of the county; and (3) the bacteriological examination of his milk at least three times in the year by the county or county borough medical officer. The milk would have had to reach a required standard

of cleanliness, as laid down. This scheme was not approved by the County Councils' Association and never saw the light of day, although it was hoped that it would commence on January 1st, 1935.

After considerable discussion between the Milk Board and the County Councils' Association, it was finally agreed, with the approval of the Ministries of Health and Agriculture, that in order to qualify for being placed on the roll of accredited producers, milk producers must obtain a licence to produce grade "A" Milk. I think this proposal also received the consent of the Association of Municipal Corporations. This immediately brought all such producers under the Milk (Special Designations) Order of 1923, and technically placed all applicants under exactly the same conditions as those applicable to farmers previously licensed under the said Order. While this was true in a theoretical sense, considering that it was anticipated that a very large number of producers would apply to be included on the roll and that the majority would not be selling the milk as grade "A" nor bottling it on the farm, it, therefore, seemed reasonable that the local authorities, *i.e.*, the county councils and county borough councils, should have considered carefully the new position which had arisen, and taken stock of the situation. In the case of those authorities who had previously set a very high standard when only a few applicants had applied to produce grade "A" milk, common sense would seem to indicate that some reduction in the standard of equipment might have been conceded. The whole idea at the back of the scheme was to bring in as many producers as were consistently able to produce the quality of the milk required. The result has been complete chaos; some authorities have granted licences with far too little consideration of what is required, while others have insisted on a standard which goes considerably beyond what

seems reasonable. Both the County Councils' Association and the Milk Board asked local authorities to arrange for the veterinary examination of the cows, and also for the examination of the milk samples, to be carried out free to the producers if possible, or at all events at as small a cost as they could see their way to approve. The County Councils' Association went to one extreme and sent out a memorandum stressing the point that in their view the construction of the buildings mattered very little, while some authorities placed what undoubtedly was too high a value on the buildings, insisting on too meticulous a use of the tape measure and took too biased a view as regards the particular construction of floors and so on.

In some districts the veterinary examination of the cows is carried out with no charge to the milk producer, which is, I think, advisable, while in other areas the local authorities make no provision for this, and expect the farmers to pay all the veterinary fees themselves. In still other cases reduced fees are arranged for, or two of the examinations are free and two have to be provided by the farmers at their own expense. The same difference also applies to the collection and examination of milk samples for the bacterial count. The confusion has been the worse confounded owing to the fact that it was known that a new Milk (Special Designations) Order was about to be drafted—indeed, a draft of this new Order was first issued by the Ministry of Health in June, 1935, and has been under consideration ever since. It will readily be seen that, to discuss the Accredited Scheme just now when it is being worked under the old regulations which are about to be discontinued, and not knowing all details of the final scheme, is not a very easy or satisfactory task.

In the new Order many changes have been made with regard to milk from tuberculin-tested cattle, but so far as regards this paper, I must confine myself to that part of the Order which concerns the "accredited scheme." Grade "A" milk has been dropped and in its stead a new class of milk has been introduced and is to be known as "accredited." The conditions required are virtually the same as for the grade "A," with but certain modifications of which the following are the chief:—

While no cow may be added to the herd which has to the knowledge of the owner reacted to the tuberculin test, the owner may retain a cow in the herd which has been tested and reacted while "in the herd." This concession

has been put in after many representations by the veterinary profession and other bodies to encourage the transition from grade "A" or now "accredited" to a tuberculin-tested herd. Under the old Order a grade "A" farmer might not have his cattle tested unless he immediately removed every reacting cow, and frequently he could not afford to do so at once, whereas now he can eliminate the reactors gradually. While there may be some who would criticise this provision, I feel that it is a wise one and will do much good in improving the milk supply by facilitating the creation of tubercle-free herds from the very class of producer who ought to be the most competent to form and manage such a herd.

Although when sold in unventilated and sealed containers, milk must be labelled with the address of the dairy, the day of production and the time of production added, *i.e.*, "morning" or "evening," and the words "accredited milk," when bottled it need not be labelled with the day or time of production unless the bottler wishes. The holder of an accredited producer's licence may not sell milk as "accredited" unless it is sold in unventilated sealed containers or in bottles or cartons suitably closed and marked. This is similar to the conditions imposed under the old grade "A" licence. In a word, this means that if the milk from the holder of an "accredited" licence is sold loose, or even in bottles unless properly bottled on premises licensed for such bottling, it may only be sold as "milk." If, however, the producer has obtained a licence from his local authority to produce "accredited" milk, he is entitled to the extra 1d. per gallon allowed by the Milk Board, however it is sold.

An important innovation is the dropping of the bacterial count as a test of its cleanliness and method of production. Instead of this test, which, however, is being retained until the end of this current year only, a new methylene blue test has been substituted. The Order lays down definite instructions as to the handling of milk to be tested and thus does away with the various methods adopted in different laboratories where milk is tested by the bacterial count to-day.

A further innovation under the new order of things has regard to the fees to be paid by licensees. A scale of maximum fees is laid down, but local authorities may reduce or cancel the fees as they wish. This appears to me to be an unfortunate provision, for it will put producers under an unfair competition when one has to pay fees and another is exempted.

Administration.—The administration of the Order is comparatively easy in a county borough where the licensing authority is the sole authority to be considered, but in a county where there is dual control between the county council and the councils of non-county boroughs, urban and rural districts, the procedure at once becomes more complicated. The onus of control under the Milk Designations Order is on the county council, and this must at once be realised, although it can be no excuse for ignoring the local councils in working the Order. It is advisable for the licensing authority to delegate powers to a committee or sub-committee. This may be the public health committee, but in a county it is an excellent arrangement to form a mixed committee composed of equal numbers of members of the public health and housing and agricultural committees. Power to act should be granted to the responsible committee, whichever it happens to be. A producer who wishes to apply for a licence must apply to the clerk of the county or borough concerned and all licences should be signed and issued by the clerk. Before a licence can be given it is necessary for the premises of the applicant to be visited and examined by an official of the licensing authority. The necessity for this may be found in art. 6 (5) of the new Order which reads as follows: "Every person who applies for a licence shall satisfy the licensing authority that his arrangements for the production, storage, treatment and distribution of milk, as the case may be, are such as to comply with the conditions subject to which the licence may be granted." Also in the second schedule (1) is stated: "The arrangements and processes under and by which milk is produced, stored, treated and distributed, as the case may be, shall be such as to satisfy the licensing authority that the requirements of all Acts and Orders relating to milk and dairies and the conditions of this Order, subject to which the licence is granted, are being, and will be complied with." The question next arises as to who is the appropriate official to carry out this inspection. Up to now there has been no uniformity; for instance, the following officers are at present being employed by local authorities for this purpose: The medical officer of health, the veterinary officer, the county sanitary inspector, the local sanitary inspector, the agricultural organiser and/or his staff, the dairy instructress, the medical officer and the agricultural organiser (presumably in consultation), the lay milk

inspector, the chief inspector of weights and measures and so on. All things considered, although it may be thought I say this owing to the position I hold, I claim that the veterinary officer is the official on whose shoulders these duties, may I say these onerous duties, should be put for the following reasons: In county boroughs he is usually deputed by the medical officer of health to supervise all duties under the milk and dairies legislation and not infrequently has one or more "cowshed inspectors" under him to assist. In county areas the veterinary officers examine the cattle in grade "A" herds at least quarterly, and in those counties where the routine veterinary examination of all dairy cows is carried out (now, fortunately, these counties are numerous) the veterinary staff are in constant touch with the farmers. They are thus cognisant more or less of what each farmer is capable of achieving and are, therefore, able to make full use of this knowledge when deciding what alterations in buildings and equipment are required. The personal factor entering so much as it does into the question of clean milk production, this knowledge is of the utmost importance. Moreover, they are in close touch with the local sanitary inspectors without whose help or at least knowledge the alterations to buildings should not be made. It should also be realised that the veterinary staffs carry out their routine visits to the farms in close touch with these sanitary inspectors and that they work together, or certainly should work together, as much as possible, and are frequently asked to give advice regarding the alteration of cowsheds and premises generally. Thus the handing over of the requirements for designated farms to the veterinary staff would be nothing new. Last, but not least, they are on the spot and thus can more readily and economically do this work. When there are two officials dealing with the milk producing farms, namely, the veterinary officer, as representing the county, and the local sanitary inspector, it does seem rather superfluous and uneconomical to call in a third for a limited purpose only, whoever he be, and is apt to lead to quite unnecessary duplication. "The proof of the pudding is in the eating," and it would seem that in those counties where the veterinary officer carries out these duties for the county, there has been less overlapping, and thus friction between the two authorities has been altogether absent or at all events reduced to the minimum. As is well known, it is the local medical officer of health who is nominally

responsible for the various duties Parliament imposes on the sanitary councils under the Milk and Dairies Order, but in practice these duties are almost invariably delegated to his sanitary inspector. This explains why I mention the sanitary inspector so much in this connection rather than the medical officer.

The following is a quotation from Ministry of Health memorandum 77 (Foods) dealing with the sale of milk under the Special Designations Order of 1923, para 8: "The requirements of the Milk and Dairies Order apply to persons dealing in graded milk in the same way as they apply to other cowkeepers and dairymen. The only specific requirements as to the condition of premises are those which are contained in that Order, and if it is proposed to make any alterations to premises for the purpose of facilitating the production of clean milk or for other reasons the sanitary authority should be informed in order to ensure that the altered premises will be in accordance with those requirements." I have heard that in some counties cases have occurred where the county officials have given specifications to farmers without notifying the local officers, and even have passed the altered buildings and the licences have been granted without the sanitary authorities knowing anything about them. This, naturally, has caused great resentment. It must be admitted, however, that there do exist local inspectors who take no interest in this work and do not wish to co-operate with the county staffs.

The farmer wishing to obtain a licence applies to the clerk who sends him certain forms to fill in. The next stage is that the veterinary officer (or other official) as representing the county, is instructed by the clerk to report on the premises, and he arranges with the local sanitary inspector of the district concerned, to meet together at the farm. They then discuss the alterations deemed necessary, but the final decision must rest with the county staff. The county officer next asks the local inspector to prepare a schedule of the requirements agreed on and to give one to the farmer and to forward a copy to him (the officer). If for any reason he is unwilling or unable to do so, the county officer must prepare these specifications himself and send a copy to the sanitary authority. This system seems better than the county officer doing it all himself. The alterations must comply with the requirements agreed upon by the executive committee

of the licensing authority, but much common sense and ingenuity are necessary to meet all the requirements in a satisfactory manner without imposing undue hardships on the producer or, on the other hand, imposing on the public. Only the closest co-operation between the county and local staffs can bring about the smooth working of the regulations. The only officer who can legally insist on alterations to premises is the sanitary officer of the local district, although the county staffs can refuse to grant a licence for designated milk unless certain conditions are fulfilled. Although I have recommended that the veterinary staff should be the executive in this respect, the closest co-operation with the medical officer of the county should take place both in defining the standards to be insisted on and in working the Order. If the licensing authority consider that the premises and/or the methods are such that the applicant cannot comply with the requirements of the Order, a licence should be refused. In such a case a letter stating the reasons for such a refusal should be given to the applicant, who, however, has the right of appeal to the Minister.

Coming to the question of what the requirements should be, we are on very thorny ground. Many people consider that the Ministry of Health should define these standards, but the Ministry has so far resolutely refused to do so even when the anomalies of the present administrative chaos have been pointed out to them. The usual ministerial reply to such difficulties is that they are the price which must be paid for local government and probably this is the feeling in the present case. Personally, I think they are wise in their attitude, for I cannot see that definite conditions can be insisted on, considering the great differences found locally. All the same, it might well be decided that the provision of steam for sterilising is or is not necessary on all farms producing this grade of milk. One county known to me has stated that they have no right to insist on steam being provided, but the Ministry have at least given their ruling on this point and consider that the insistence on this is not *ultra vires*. With this I fully agree, for some form of steam sterilising is essential for all producers if the uniform standard of cleanliness is to be kept up. Just the method used and the pattern of steriliser must be a matter for local consideration.

I do not propose to go into great details as to

what measurements of cowsheds should be insisted on, but the general conditions must conform to the standard laid down in the Milk and Dairies Order as the very minimum. The width of a cowshed should approximate as nearly as possible to the following, although in old sheds, other conditions being suitable, some concession may be made in certain cases:—

Double shed (cows facing the walls).

With feeding passage, 32 feet.

Without feeding passage, 26 feet.

Single shed.

With feeding passage, 18 feet.

Without feeding passage, 15 feet.

As regards the height, where the shed has no loft, the eaves may be as low as 7 feet 3 inches to 7 feet 6 inches, but where there is a loft, a far too common occurrence in this part of the world, a minimum height of 8 feet is desirable. The light and ventilation must be adequate and an approximation to 3 square feet of glass per cow should be provided.

In preference, unless the space is adequate, feeding passages are undesirable, for they cramp the room behind the cows and also are too commonly utilised for purposes other than those for which they were constructed. Hay racks, too, are better conspicuous by their absence, for they are only the collectors of much unnecessary dust and dirt.

The floor must be of impervious material and kept in good order and there must be a suitable manure channel to drain off the fluids. The exact construction of this may vary somewhat, provided always that the water runs away from the hind quarters of the cows and that the gradients are suitable. The simpler this channel is the better, a plain one being far better than a grooved channel, but the width should not be less than 2 feet 9 inches to 3 feet. Adequate provision is necessary for the removal and storage of manure. In a word, it may be said that the better the conditions the more easily can the premises and the cattle be kept clean. It must be remembered that it is comparatively easy to arrange for model details in a new shed, but in old ones this is much more difficult, and considerable latitude must be allowed, consistent with a reasonable interpretation of the essential.

The Dairy.—A suitable dairy must be provided and this should be at least 10 feet by 8 feet with sufficient light, and impervious floor so sloped as to ensure adequate drainage to the outside. Ventilation must be provided and any

openings must have fly-proof gauze which must be kept thoroughly clean. The walls must be smooth and preferably rendered in cement or other hard material to a height of 5 feet. In preference, there should be a separate room for the steriliser, although on small farms where bottling does not take place, one room if sufficiently commodious may be allowed. A milk tipping passage is regarded by some as very necessary, but I cannot see that this should be insisted on. The dairy must not open to the cowshed directly nor to a living room. The provision of suitable dairy and sterilising accommodation on old farms requires considerable ingenuity in utilising available space.

Veterinary Examination of Cows.—In order to qualify for a licence a veterinary certificate must be produced by the applicant, stating that the milch cows in the herd have been examined not more than a month previously, and he must satisfy the authority that any cow which may have been certified to be showing any evidence of disease which is likely to affect the milk injuriously has been isolated or removed from the herd as the case may require. The cattle must then be examined once in every quarter and the certificate submitted to the licensing authority within seven days of such examination. Up to now the Ministry of Health have not issued any memorandum stating what the special diseases are which may be considered liable to affect the milk injuriously, at least not as regards the new Order. In the certificate of the old Order there are 14 conditions mentioned as rendering the milk of a cow unfit, but this list requires drastic amendment. In examining the cows for grade "A" herds the most difficult type of cow appears to be the poor class of rather unthrifty animal which, however, shows no definite sign of disease. It is sometimes extremely difficult to decide whether such animals should or should not be allowed to remain in the herd. Each case must be treated on its own merits, but if there is no evidence of one of the diseases mentioned it may not be possible to insist on the cow being removed from the herd. It is more than likely that a new list will be published and that the form of veterinary certificate to be produced will be altered. In most cases the examination of cattle under this Order is now carried out by veterinary surgeons appointed by the local authority, free or at a reduced cost to the producer, but where there is no such provision, the farmer must see that the veterinary surgeon who does this work has been

duly nominated or approved by the licensing authority. There is no legal obligation to have a new cow examined before she enters the herd, although if practicable it is very desirable. In the West Riding this used to be done for grade "A" cattle, but since the accredited scheme has been introduced this practice has become impossible and it must suffice to examine each new cow at the next quarterly examination after her admission to the herd. This is in accordance with the views of the Ministry of Health. Where there is a general routine examination of cattle in an area, and where this examination is carried out at the expense of the authority, it certainly seems more economical and satisfactory for the county or county borough staffs to examine the cows in accredited herds as they can be fitted in along with the routine work. The examination of milk samples and other material taken from individual cows can also be much more expeditiously made by these officers.

The Collection and Examination of Milk Samples.—The number of samples to be taken annually has not been stated and apparently this is to be left to the discretion of the individual local authorities. Up to the end of this year there is to be a bacterial count for cleanliness, but the standard is one of not more than 200,000 bacteria per c.c., or, as it is now put, per millilitre. On and after January 1st, 1937, the methods of examination are changed to the methylene blue test. It is stated that "any sample of milk from the herd in respect of which a licence authorising the use of the special designation is in force (whether the designation is used in relation to that milk or not) if the sample is taken before the milk has been placed in bottles or other containers for delivery to the consumer, and either while it is in the possession of the producer or before the containers in which it is consigned to another dealer are opened by that dealer, shall satisfy a methylene blue reduction test carried out in such manner as the Minister may direct." It then lays down the time required for the reductase test, but we are still waiting for more explicit directions from the Minister for carrying out the test.

In a county it is essential that there should be some official whose duty it is to collect the requisite number of samples for the cleanliness test. This official may be on the staff of the medical officer or the veterinary officer according to circumstances, but probably in most counties it would simplify control if he were attached to

the veterinary department. He should be instructed how to collect samples, which should be as uniform from the herd as possible and not contain the milk of only two or three cows out of a large number, nor should the farmers be notified that the sampling officer is coming to collect from their farms. If possible, the samples should be collected four times in the year, and the best time would be about six weeks between each quarterly veterinary examination of the herd. For this reason, supervision of this would be simplified if the sampler were attached to the veterinary staff. It would be an advantage if these samples, as is usually the case in the West Riding, were submitted to the biological test at the same time or, say, two samples per year passed through guinea-pigs.

There has up to now been a great difference in the treatment of milk samples before the bacterial counts have been carried out, and had the system been continued there was a great need for a unification of technique. Fortunately, in the new draft Order details are given for the methylene blue test, and no doubt further details will be issued before this test comes into force.

There is no doubt that the regulations for the production of "accredited milk," if properly carried out, provide for a high-class milk, which although we cannot consider as absolutely safe goes very far in this direction. I have endeavoured in the time at my disposal to try and give a general sketch of the scheme and in a perfectly impartial way indicate how it appears to me it should be worked to its best advantage. The final success or failure must in the end depend on the producer himself. If he will play his part and co-operate with the officials concerned by reporting any difficulties he may encounter and especially any cows which he may have reason to suspect are diseased or not thriving, the public should come more and more to appreciate the good qualities of milk produced under the scheme. If this is not done the scheme must be a failure. The authorities on their part must do all in their power to encourage producers, yet on the other hand should not hesitate to use the powers granted by the Order to revoke or suspend the licences of those who, after a reasonable warning, are found to be unfit to hold their licences. This in the long run must be in the interests of the producers themselves as well as of the public.

Notwithstanding this scheme, medical officers

and others should continue to push the formation of herds of tuberculin-tested cattle and endeavour to persuade their authorities to purchase milk from such herds, wherever and whenever it is obtainable.

Since giving the above paper, the Ministry of Health have postponed the operation of the draft Milk (Special Designations) Order until June 1st, 1936, and have now re-issued the Order in its final form.

The following amendments affecting accredited milk have been introduced, thereby altering some of the conditions contained in the draft Order as mentioned in my paper.

The standard of cleanliness of accredited milk is to remain as at present until the end of December, 1936, but after that date the milk must satisfy the methylene blue test *and* also "shall be found to contain no coliform bacillus

in one-hundredth of a millilitre." Thus the coliform test, which "was" cut out in the draft Order, has been re-introduced.

In a circular letter issued with the new Order it is suggested that "it is not necessary that every sample should be submitted to both tests, and authorities which require to have frequent tests made of samples of producers' milk may find it convenient to have most of the samples examined by the methylene blue test alone, reserving the coliform test for occasional use."

In the same circular letter it is advocated that licences should only be granted on the advice of, or after consultation with, the medical officer of health. This, however, does not preclude the veterinary officer acting as the executive officer regarding the examination of premises. He can always consult with the medical officer of health as to the advisability or otherwise of granting a licence.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

The Presidential Election.

As is reported formally elsewhere, Dr. Ernest Ward was elected President of the Society for the session 1936-37. Great as was the amount of business done at both the Council and ordinary meetings, and important as some of it was, there is no doubt but that this election was the most important of all. In it there was something of the making of history, although in the conduct of the election and the atmosphere in which it was carried out there was no suggestion whatever that here was the first occasion on which someone other than a medical officer of health was to be placed in the chair of the President. Probably it was because the chosen was Dr. Ernest Ward that there was something almost of matter of fact about the business. Nevertheless, it was a great occasion for the Society, for Dr. Ward and for all departmental officers, to all of whom the way to the office of highest importance in the Society of Medical Officers of Health has been shown. That there could have been no one better qualified to blaze the trail than Ernest Ward is certain. In every way he has shown himself deserving of the honour conferred. By the extraordinarily fine service he has given to the Society and in the interests of all his colleagues, not those in his own or other

departmental groups only, but everyone engaged in public health work, he has earned that honour. Nor is it only because of the work that he has done that his is the finest choice that could have been made from amongst other than medical officers of health. He is liked by everybody, and practically there is not one but will feel pleasure that he has been elected and will be delighted to sit under him at any meeting which as President he is called upon to conduct. And everybody wishes him a happy and successful year of office.

Some Decisions of the Council.

As usual, the greater part of the Council meeting was taken up with a consideration of reports from the General Purposes Committee. Some time, however, was given to elections and selections other than that of the President. The May meeting, in fact, is largely an election meeting, various offices, in addition to the Presidency, having to be filled then. The Vice-Presidencies, of course, are largely automatic, the three vacancies being filled by the immediate Past-President and the two who preceded him in the chair. For the Treasurership there was only one person possible—Dr. G. F. Buchan—and he was re-elected with acclamation. The question of the Editorship of the journal of the Society was

one upon which the General Purposes Committee had been asked to advise, and their recommendation that Mr. G. L. C. Elliston, the Executive Secretary, be appointed Editor of PUBLIC HEALTH was adopted, as was also their further suggestion as to the setting up of a Journal Committee, consisting of the President (*ex officio*), the Chairman of the General Purposes Committee, the Hon. Treasurer, Professor Picken and Dr. Wood. The opinion expressed by one of the speakers that this body, in co-operation with the new Editor, would make the journal what it had never been before—"a live 'organ'"—was received with applause. A suggestion that the present Hon. Editor on vacating the position be accorded "a hearty vote of thanks for his long and distinguished service to the Society" in that capacity "and for his conduct of the journal during that time" curiously enough was applauded also. The question of the method of appointment of medical officers, which had been before both the Council and the General Purposes Committee on several occasions, came up for further discussion. The Council heard with approval a report that Professor Jameson, as representing the Society, had been invited to advise a local authority in connection with an appointment, and that Dr. John Buchan had attended an enquiry with regard to the relative positions of certain officers of a health authority and had been able to offer most helpful advice. For the memorandum of Professor Jameson and Professor Picken on the whole subject of the appointment of medical officers of health there was warm commendation also, echoing the views of the General Purposes Committee, who recommended its circulation to the Branches. Amongst other memoranda coming before the Council was one on the Midwives Bill prepared by the Maternity and Child Welfare Group, containing certain suggested amendments and an expression of opinion, with reasons in support, that the responsibility for the employment of midwives under the enactment should be on the maternity and child welfare authority even in cases where that body was not the local supervising authority.

The Neech Prize.

Lastly, calling for mention amongst matters reported to the Council is that relating to the award of the Neech Prize, rather belatedly,

for the sessions 1932-33 and 1933-34. For the most meritorious paper submitted in the former period the award made was to Dr. J. Greenwood Wilson for his paper on "Infant Feeding and its Relation to the Health of the School Child," read before the Yorkshire Sub-Group of the Maternity and Child Welfare Group and published in PUBLIC HEALTH, August, 1933. In the case of the latter it was to Dr. J. D. Kershaw that the award was made for his paper on "The Value of Tonsillectomy in School Children," read before the Home Counties Branch and published in PUBLIC HEALTH, May, 1934. To both recipients congratulations are offered.

The Ordinary Meeting.

At the close of the Council meeting very strong appeal was made to the members that they should remain for the ordinary meeting in order to hear the papers to be submitted by Professor Jameson and Professor Picken on "Post-Graduate Teaching in Public Health." Such as did hearken to this appeal and remain found themselves members of one of the best attended meetings not only of this but of several past sessions. Persons concerned in teaching and students were present in force to hear the views of the two men most prominently engaged in the teaching of public health on the courses of instruction as they were and as they ought to be if the best results were to be obtained. Professor Jameson's contribution was a well-reasoned criticism of the syllabus for the Diploma in Public Health, more particularly of the first part in which work in the chemical laboratory is given so prominent a place and there is reference to a number of "ologies"—radiology and electrolology amongst them—the connection of which with public health and preventive medicine appeared remote. Also he pronounced himself strongly in favour of the full-time course of instruction.

Teachers and Taught on Public Health Teaching.

Professor Picken's experience had been mainly with part-time students, though his preference too seemed to be for the full-time course. Like Professor Jameson, he had no new subjects or "ologies" of any sort or kind that he thought should be included. Rather, in fact, and this particularly pleased the student members of the audience, he was of

opinion that there were some that might come out. Professor Maitland of Manchester also knew more of part-time than whole-time students and seemed to be less averse to chemistry than some of the other speakers, though he attached most importance to it in its application to physiology and nutrition. Dr. Paterson of Maidenhead, who followed him, would like to see the student given experience in committee work; while Dr. Joe of the North Western Hospital thought that, having regard to the fact that so very large a proportion of the students were destined for posts overseas, much more in the way of teaching of tropical diseases might be done. Followed a number of people who had been students at the London School: one pointing out—to the delight of certain members of the audience—the advantage, if not indeed the absolute necessity, of a period in general practice before taking up public health: another admitting that he had taken the Diploma because he hoped it would lead to a job in which there would be freedom from all the troubles that attended practice in other branches. His lines apparently had fallen in a very pleasant factory which led him to suggest that it might be well if the student saw more of factories, bad as well as good. A most useful and thoughtful contribution came from a former woman student, one of her criticisms being of the course of instruction required to be taken in the fever hospital. Professor Jervis of Leeds, speaking as one mainly experienced with part-time students, had criticisms to offer of the syllabus, its length and complexity. At the same time he thought that there should not be any too great a hurry about making alterations. In his reply to the discussion, Professor Jameson paid particular attention to this plea of Professor Jervis that well should be left alone for a time. Change, he felt, was what was wanted and the more frequent the changes the better the course was likely to become. In the London School there was hardly a year passed without some change taking place, and for these the students themselves were largely responsible, since at the end of the year they were called in conference, their views were listened to and very commonly adopted, greatly to the advantage of the course and the teaching. The discussion was one of the most refreshing and stimulating held for a very long time, and though it may not have been particularly fruitful in

suggestion, it must have been greatly enjoyed by everybody.

Honourable Mention.

These matters have been recorded already either here or elsewhere. It is worthy of more extended reference, however, that Miss Agnes Jervis (daughter of Dr. J. J. Jervis, Medical Officer of Health, Leeds) last summer, at the risk of her own life, rescued three children who were being carried out to sea whilst bathing; and that but for Dr. Cyril Banks, the Medical Officer of Health and also Crematorium Referee of Nottingham, the crime of the *soi-disant* "Nurse" Waddingham might have gone undetected. In the words of the minutes of the Yorkshire Branch on the subject of the deed of Miss Jervis, "the greatest admiration for her bravery was expressed, and the Hon. Secretary was directed to convey this expression to Miss Jervis and her father." As to Dr. Cyril Banks, hear what the *Nottingham Guardian* has to say: "When the cremation order was laid before him for approval his suspicions were aroused, first by the description of the premises as a nursing home when he knew they were not so registered, and secondly by the notification that Miss Baguley had not wished her relatives to know of her end. Dr. Banks refused his signature pending enquiries, the outcome of which is now familiar. The Waddingham case gives strong support to the argument that cremation, far from being an encouragement, is a deterrent to crime. So long as crematorium referees are alert and healthily suspicious the last thing a murderer should attempt is to secure the cremation of the victim's body, for he thereby invites a hyper-critical examination of the circumstances such as would not occur if earth burial were intended."

P.

MANGANESE POISONING.—According to a circular dated May 4th, 1936, the Secretary of State proposes, after the expiration of 40 days, to make an order requiring all cases of manganese poisoning occurring in factories or workshops to be reported to inspectors of factories and certifying surgeons in pursuance of section 73 of the Factory and Workshop Act, 1901. A copy of the draft order has been circulated and unless objection is raised it will come into operation as stated.

The Society.

Reports, Proceedings and Announcements.

NOTICES.

THE ANNUAL DINNER.

Members are asked to note that the date of the Annual Dinner this year will be Friday, November 20th, and that it will be held at the Piccadilly Hotel.

The Annual Conference of the Central Council for Health Education is to be held at the London School of Hygiene on Thursday and Friday, November 19th and 20th.

THE MATERNITY AND CHILD WELFARE GROUP.

A meeting of the Group will be held at the house of the Society on Friday, June 19th, at 5.30 p.m., when Lady Williams, Hon. Secretary of the Joint Council of Midwifery, will read a paper on "**Maternal and Infant Mortality in Relation to Nutrition.**"

(Mrs.) MURIEL RADFORD,
Hon. Secretary.

1, Manor Way,
Potters Bar, Middlesex.

Liverpool Meeting, July 3rd and 4th.

Details of the programme for the Group's meeting at Liverpool, to be held in connection with the National Maternity and Child Welfare Conference, were printed in the May notice papers, and further copies are being sent to members of the Group, together with information of hotel accommodation, etc.

The local arrangements for the meeting are in the hands of Dr. Ruby E. Bell, Maternity and Child Welfare Department, 67, Dale Street, Liverpool, 2.

HOME COUNTIES BRANCH AND FEVER HOSPITAL MEDICAL SERVICE GROUP.

A joint meeting of the Branch and the Group will be held at the house of the Society on Friday, June 26th, at 4.30 p.m., with Dr. A. W. Forrest, President of the Branch, in the chair, and Dr. E. H. R. Harries, President of the Group, as vice-chairman.

Dr. Forrest will deliver an address on "**Some Aspects of Scarlet Fever and Current Methods of Control,**" to be followed by a discussion.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, May 15th, 1936, at 2 p.m. The President (Dr. W. G. Savage) was in the chair, and there were also present: Sir Henry Brackenbury, Drs. H. Stanley Banks, T. W. N. Barlow, G. F. Buchan, J. J. Buchan, Captain G. S. Elliston, M.P., Drs. James Fenton, A. W. Forrest, R. P. Garrow, W. W. Jameson, Alex. Joe, R. H. H. Jolly, Catherine Morris Jones, James Mair, H. J. Milligan, Agnes Nicoll, W. Paterson, G. H. Pearce, R. M. F. Picken, Charles Porter, T. N. V. Potts, T. P. Puddicombe, E. H. Snell, V. F. Soothill, P. H. Stirk, J. A. Stirling, E. W. Caryl Thomas, D. J. Thomas, A. G. G. Thompson, H. G. Trayer, A. A. Turner, E. Ward, H. Gibbons Ward and F. T. H. Wood.

Apologies for absence were received from Sir Francis Fremantle, Drs. Vynne Borland, R. Veitch Clark, W. M. Frazer, G. W. N. Joseph, A. S. M. Macgregor and G. C. M. M'Gonigle.

Group Representatives.—It was reported that Dr. Ethel Cassie (representing the Maternity and Child Welfare Group) and Mr. Grantley Smith (representing the Dental Officers' Group) having resigned their places on the Council, the following had been nominated under Article 20 to fill the vacancies: Dr. E. Catherine Morris Jones (by the Maternity and Child Welfare Group) and Mr. J. Rhys-Herbert, L.D.S. (by the Dental Officers' Group). The President extended the welcome of the Council to Dr. Morris Jones, who was present at the meeting.

Minutes.—The minutes of the last meeting held on February 21st, printed in PUBLIC HEALTH, pp. 224-230, were confirmed and signed.

Appointment of M.O.H. Accepted by a Fellow Contrary to the Askwith Memorandum (see PUBLIC HEALTH, March, p. 225).—It was reported that the Fellow referred to at the last Council meeting had been asked in a letter dated February 25th, to resign his membership, but that no reply had been received. It being resolved that the Council should exert their powers to terminate the

membership of this Fellow by expulsion, the necessary vote was taken and resulted in 29 votes to 1, of those present and voting, in favour of his expulsion.

National Baby Week Council.—It was reported that Drs. Ethel Cassie and James Fenton, nominated by the Society as its representatives on the National Baby Week Council, had also been elected members of the Executive Committee of that body.

Life Members.—The Council unanimously adopted the following recommendations made on March 20th for nominations as fully-paid Life Fellows of the Society: by the Metropolitan Branch, Dr. W. D. Betenson (formerly A.M.O., Port of London: joined Society 1906), Dr. G. F. McCleary (formerly M.O., Ministry of Health: joined Society 1901); by the East Midland Branch, Dr. C. Killick Millard (President 1931-32, formerly M.O.H., City of Leicester, joined Society 1893).

Representation of the Society.—The Council made the following decisions in regard to invitations to nominate representatives: National Association of Cemetery and Crematorium Superintendents and The Federation of the Cremation Authorities in Great Britain (Fifth Joint Conference), Blackpool, June 22nd to 25th, Dr. E. W. Rees-Jones; Third World Conference of Workers for Cripples, Budapest, June 29th to July 3rd, no action; National Association for the Prevention of Tuberculosis (Twenty-second Annual Conference), London, July 16th to 18th, Dr. E. Ward; Sanitary Inspectors' Association (Forty-ninth Annual Conference), Harrogate, August 31st to September 5th, Drs. J. J. Buchan, James Fenton, James Mair, G. H. Pearce and Charles Porter; Royal Sanitary Association of Scotland (Sixty-second Annual Congress), Montrose, September 8th to 12th, Dr. A. S. M. Macgregor; Annual Meeting of the General Council for the National Registration of Plumbers, Newcastle-on-Tyne, July 15th, Dr. J. A. Charles; Federation of Personal Health Associations (Annual Meeting, June 20th), no action.

Administration of a Public Health Department.—Dr. J. J. Buchan reported that he had attended a meeting of a special sub-committee of a large rural district council convened to consider differences between a medical officer of health and his sanitary inspectors in regard

to the administration of the health department, the sanitary inspectors having been represented by the Sanitary Inspectors' Association. Dr. Buchan, who had been asked to attend on behalf of the British Medical Association and the Society, said that after a long discussion he, in conference with the Sanitary Inspectors' Association's chief representative, had been able to reach a solution satisfactory to the council and the officers concerned.

The Council passed a hearty vote of thanks to Dr. J. J. Buchan for his services in this connection.

Public Health Service Representatives on the B.M.A.—The Executive Secretary reported that the nomination of one Public Health Service candidate having been received after the closing date, it had been reported in the *British Medical Journal* that only one nomination (that of Dr. F. T. H. Wood) had been received, and that the filling of the vacancy would be left to the Council of the B.M.A. Dr. G. H. Pearce had seen this report and had intimated that he was willing to serve, but on learning that Dr. H. J. Milligan's nomination had been sent in after the closing date he said that he wished to withdraw in favour of Dr. H. J. Milligan.

It was further reported that the nomination of Dr. E. H. T. Nash for the Representative Body had been received after the closing date, but his name was now before the chairman of the Representative Body in whose hands would be the filling of the fourth place.

Report of the General Purposes Committee.—Dr. James Fenton (chairman) presented the following report of the General Purposes Committee, arising from its meetings held on March 20th and May 1st.

Your General Purposes Committee beg to report as follows:—

1. The Committee held meetings on March 20th and May 1st last, when the following members attended:—

March 20th: Dr. F. T. H. Wood (acting chairman), the President (Dr. W. G. Savage), Drs. T. W. Naylor Barlow, J. J. Buchan, R. Veitch Clark, A. Joe, G. W. N. Joseph, James Mair, H. J. Milligan, G. H. Pearce, R. M. F. Picken, Charles Porter, Ernest Ward and H. Gibbons Ward.

May 1st: Dr. James Fenton (chairman), Drs. T. W. Naylor Barlow, G. F. Buchan, A. Joe, R. H. H. Jolly, H. J. Milligan, R. M. F. Picken, Ernest Ward and F. T. H. Wood.

At the May meeting the Committee welcomed Dr. Fenton on his return from Africa, and passed a hearty

vote of thanks to Dr. Wood for his chairmanship during the former's absence.

2. *County Borough Medical Officers of Health Group.*—(See Council minutes, PUBLIC HEALTH, March, 1936, p. 224.) The Committee considered a further letter dated March 16th from Dr. R. H. Parry in reply to the Executive Secretary's letter of February 28th reporting the view of the Council that a decision on this matter should be postponed for twelve months, and that Branches be asked to adapt their programme to meet the demands expressed by Dr. Parry.

In his letter of March 16th, Dr. Parry said that the movement for a County Borough M.O.H. Group had been growing steadily for some years, and that administrative problems of county boroughs could not conveniently be discussed at Branch meetings, and urged the Council to give further favourable consideration to the proposal for the immediate formation of a sub-group.

Recommendation.—That Dr. Parry be advised to satisfy himself as to the extent of the demand for the formation of such a group by convening a meeting of county borough medical officers of health at the Southport Congress of the R.S.I. and asked to report the views of that meeting for consideration by the Council in September.

3. *Child Guidance Service in Rural Areas.*—In accordance with the instructions of the Council (see PUBLIC HEALTH, March, pp. 229 and 230), the Committee discussed with Drs. William Moodie, R. G. Gordon and D. R. MacCalman, representing the Child Guidance Council, the need for and organisation of a child guidance service in rural areas, with special reference to the types of worker needed and the percentage of the school population requiring treatment.

Recommendation.—That the Council appoint a special committee to consist of the President, Drs. James Ferguson, R. M. F. Picken, T. P. Puddicombe and another representative of the School Medical Service Group, to consider and report upon the organisation of child guidance schemes generally; and inform the Child Guidance Council of the action proposed.

4. *Public Health Bill, 1936.*—(See PUBLIC HEALTH, March, pp. 227 and 228.) It was reported that a letter was sent to the Ministry of Health on February 29th in the form previously circulated to members of the Council, with the omission of the comment on Clause 138 (water supply). The Executive Secretary reported that he had subsequently forwarded to the Ministry some observations by Dr. J. J. Jervis on Clause 187. Dr. Jervis suggested that local authorities should be empowered to require registration of extensions to nursing homes; he pointed out that, as the law stands at present, the proprietor of a small nursing home may greatly extend it and alter its construction without prior reference to the local authority. The Committee approved the above action.

At their May meeting, the Committee considered Mr. Maude's reply dated March 23rd, a letter from the Society, dated April 1st, incorporating further comments by members of the special sub-committee,

and Mr. Maude's final reply, dated April 20th. The correspondence is as follows:—

February 29th, 1936.

E. J. Maude, Esq., C.B.,
Ministry of Health, S.W.1.

DEAR MR. MAUDE,

With reference to your letter of February 8th, I am now able to submit below the observations of the Society of Medical Officers of Health in regard to the draft Public Health Bill and the accompanying report of the Local Government and Public Health Consolidation Committee.

Firstly, I am directed by the Society to express their high appreciation of the value of the consolidation of public health law effected by the draft Bill, and of the work of the Departmental Committee.

While realising that the Bill is mainly a consolidating measure and that it will prepare the way for future amendments of public health law, the Society feel that there are certain points which might properly be dealt with in the present Bill. We beg, therefore, to set out these points for consideration by the Minister.

Part II—Sanitation and Buildings.

Clause 60 (ii) (g).—We are of opinion that provision regulating stoves and other fittings should be made in regard to existing as well as to new buildings. We recognise, however, that such powers might better be given otherwise than in the present Bill.

Part III—Nuisances and Offensive Trades.

Clauses 91 and 92—*Nuisances which can be Dealt with Summarily.*—We suggest that it would be convenient if authorised officers were empowered in emergency to serve notices under Clause 92, such notices to have effect from the date of service if subsequently confirmed by the local authority (see Local Acts, e.g., Bradford Corporation Act, 1925, Sec. 82). Such power would be extremely useful in dealing with urgent nuisances such as choked drains.

Part V—Prevention, Notification and Treatment of Disease.

In regard to this part of the Bill, we suggest that opportunity might be taken to remove the confusion arising from the difference of powers relating to control of diseases notifiable under the Infectious Disease (Notification) Act, 1889, on the one hand, and under regulations subsequently made by the Minister on the other. This might be effected by giving the Minister powers, independently of local authorities (see Clause 147), to declare diseases notifiable within the meaning of the Act, subject to such conditions as he sees fit.

Part VI—Hospitals, Nursing Homes, etc.

Clause 184 (a) (b)—*Cost of the Maintenance of the Institution.*—We suggest that it should be made clear whether or not this term includes loan charges on the capital cost of the institution.

Clause 196 (1)—*Provision of Laboratories.*—We beg to enquire whether it is clear that this clause covers the provision of a chemical laboratory for purposes of public health work, work under the Sale of Food and Drugs Acts, milk colour-tests, etc.

Part VII—Notification of Births; Maternity and Child Welfare and Child Life Protection.

Clause 200 (1).—In view of the wide meaning of the word "welfare," as applied to the activities of local authorities, we suggest that the new designation of "welfare authority" should be reconsidered.

Part IX—Common Lodging Houses.

Clause 234.—We suggest that the term "one common room" shall be so defined as not to exclude a room divided into cubicles which are not entirely separate structurally.

Part XI—Miscellaneous.

Clause 267—*Tents, Vans, etc.*—We wish strongly to support the Departmental Committee's suggestion, in the penultimate paragraph on page 119 of their report, that a more practicable form of clause than that contained in certain local Acts to control semi-permanent encampments should be devised and included in the Bill.

Part XII—General.

Clause 279 (c)—*Serving of Notices.*—We suggest that there should be an option to serve notices at a place of business as well as at the usual or last known residence.

Clause 280—*Power of Entry.*—We suggest that the necessity for 24 hours' notice to be given to the occupier before application to a justice, as required by this clause, constitutes a slow procedure in respect of certain types of urgent or acute nuisances, e.g., choked drains.

Clause 283 (3)—*Grounds of Appeal.*—We would oppose Sub-clause (e) as a ground of appeal. In Sub-clause (f), line 38, we suggest that the words "is liable to contribute" be substituted for the words "ought to contribute."

Lastly, with reference to the report of the Departmental Committee, paragraph 22, we support the view that it is undesirable that there should be savings for statutory undertakers in respect of property acquired for ancillary purposes, and that the Bill should provide accordingly.

I am,

Yours very truly,

(Signed) G. L. C. ELLISTON,
Executive Secretary.

Ministry of Health,
March 23rd, 1936.

DEAR MR. ELLISTON,

PUBLIC HEALTH BILL.

It is the intention of the Government to introduce this Bill into the House of Lords before the Easter recess, and you may like to know the conclusions which have been reached on the points mentioned in your letter of the 29th ultimo:—

Part II—Sanitation of Buildings.

Clause 60 (ii) (g).—The power to make bye-laws under this paragraph refers to "buildings" and is not confined to new buildings. The limitation to existing buildings in Clause 61 (1) applies only to bye-laws made under paras. (a), (b) and (c) of Clause 60 (1).

Part III—Nuisances and Offensive Trades.

Clauses 90 and 92.—Nuisances which can be

Dealt with Summarily.—The suggestion you make will be considered further, but we are inclined to doubt whether in fact alteration is needed. It is to be remembered that local authorities already have power under Section 277 of the Local Government Act, 1933, to authorise any officer, either generally or in respect of a particular case, to institute proceedings on their behalf.

Part V—Prevention, Notification and Treatment of Disease.

The Bill as drafted goes a good deal further than the existing law in the direction which your sub-committee desire. Under Sub-section (2) of Clause 143 it will be open to the Minister to make a regulation applying to some particular disease the whole of the provisions of Part V of the Bill relating to notifiable diseases, and doing no more. In that case the disease would in effect become a "notifiable disease" and the rights and obligations of the medical profession and the public at large in regard to it would be precisely the same as though it was one of the diseases named in Clause 332 (1) of the Bill. Moreover, it may not be desirable to apply all the provisions of Part V of the Bill to a number of diseases which the Minister has made, or may make, notifiable by regulations. Many of the provisions of Part V would be inapplicable to acute rheumatism, malaria, chicken-pox, pemphigus neonatorum, glanders and tuberculosis.

Part VI—Hospitals, Nursing Homes, etc.

Clause 184 (2) (a) (b).—The expression in Clause 184 (1) "expenses incurred by the council in providing for his maintenance in an institution" is taken directly from Section 16 of the Local Government Act, 1929, and it would be unwise in a Bill of this kind to attempt to alter the language of this recent Act in a matter which is not uncontroversial.

Clause 196 (1)—*Provision of Laboratories.*—The clause will be amended so as to make it clear that it covers the provision of a chemical laboratory for the purpose of public health work.

Part VII—Notification of Births, Maternity and Child Welfare, and Child Life Protection.

Clause 200 (1).—I think that there has been some misconception with regard to the term "welfare authority." Clause 201 of the Bill, following the existing law, provides for the appointment of a Maternity and Child Welfare Committee, and this is the statutory name of the committee. The last paragraph of Clause 200 (1), "any such council are in relation to their duties under this Part of this Act hereinafter referred to as 'welfare authority'" is inserted merely as a drafting convenience. It is not intended to and does not confer on the local authority the statutory title of "welfare authority." To do so would be quite out of accord with existing practice. An urban district council, to take a single example, acts as urban district council whether it is performing functions relating to maternity and child welfare, housing, town planning, or any other matters with which Parliament has entrusted it.

Part IX—Common Lodging Houses.

Clause 234.—It is thought that a definition on the lines suggested would probably create more difficulties than it would solve.

Part XI—Miscellaneous.

Clause 267—*Tents, Vans, etc.*—A clause on this subject is at present under consideration.

Part XII—General.

Clause 279 (c)—*Serving of Notices.*—It would be unusual, and would almost certainly be regarded as oppressive, to allow notices to be served at a place of business. Moreover, if the place of business is known, it should be possible to ascertain the usual place of residence.

Clause 280—*Power of Entry.*—The clause is being redrafted to meet this point.

Clause 283 (3)—*Grounds of Appeal.*—It is not clear on what ground objection is taken to Sub-clause (e). The object of the clause is explained in paragraphs 61 and 62 of the Departmental Committee's Report.

In connection with the drafting of savings for statutory undertakers, which is still under consideration, your Society's support of the view that such savings should not extend to property acquired for ancillary purposes has been noted.

Yours very truly,

(Signed) E. J. MAUDE.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

E. J. Maude, Esq., C.B.,
Ministry of Health.

April 1st, 1936.

DEAR MR. MAUDE,

I was asked by my sub-committee who have considered the draft Public Health Bill to thank you for the trouble to which you have gone in your letter of March 23rd in commenting on the points raised by the Society. While noting that the Bill has now been introduced into the House of Lords, we feel that on one or two of the points raised the position is not yet quite clear, and we venture to submit the following supplementary observations for consideration if possible when the Committee stage is reached.

Part III—Nuisances and Offensive Trades.

Clauses 90 and 92.—The Local Government Act of 1933, Section 277, does not meet the point raised by the Society, which is merely the service of the notice in urgent cases, under Clause 92 of the Bill, by an authorised officer before the local authority meet, so that, if the local authority confirm the service of notice, the notice is operative from the time it is served. Section 277 has reference to proceedings before a court, and it is not suggested by the Society that authorised officers should have power to institute proceedings of this description before the matter has been considered and determined by the local authority.

Part V—Prevention, Notification and Treatment of Disease.

Clause 143 (2) of the Bill is the most valuable clause, and gives the Minister power to deal with

the subject along the lines the Society desire, but the wording of this clause seems to indicate that its application is to be more particularly confined to seaports and airports. It would perhaps make the matter more clear if the sub-clause were subdivided into two sub-clauses, breaking the sub-clause up after the words "notifiable diseases."

Part VII—Notification of Births, Maternity and Child Welfare, and Child Life Protection.

Clause 200 (1).—We think that the term "welfare authority" should not be used in this Bill. Certainly the use of the term "welfare authority" in this Bill and of the term "welfare council" in the Midwives Bill of this year is likely to be confusing. In our view the term "welfare" has a very general meaning which should not of necessity be confined to maternity and child welfare work. It is used in the germanic countries of Europe in a very general sense, so general indeed that they themselves do not know what is included in it; and in this country also the term covers a multitude of activities.

Part XII—General.

Clause 279 (c).—The suggestion of the Society was not intended to be oppressive to the person receiving the notice. It would quite definitely have the opposite effect. Thus, an estate agent in a large way of business has offices in the centre of the town for the conduct of his business, and under this clause, the local authority is required to serve notices at his private residence, which may be miles away. The notices have nothing to do with him privately and would be dealt with in his office routine. It is like being required to send a letter on official business to the Minister of Health at his private address. Such a procedure would, of course, be ridiculous, but a similar action is required by this section.

Clause 283 (3).—This clause gives very general appeal powers to a court of summary jurisdiction, so general indeed are the powers that the court of summary jurisdiction might almost be held to be a court of judgment on the work of local authorities, as to whether what local authorities require is unreasonable in character or extent, or unnecessary, or that the time allowed is not sufficient, etc. It is felt by the Society that no particular difficulty will arise in a locality where a stipendiary magistrate acts, but great difficulty will be experienced where a court of summary jurisdiction is composed of one or more disgruntled persons who think that everything a local authority does is unreasonable and wrong, and it is submitted that it is unfair to make the action of local authorities subject to such kind of supervision. In point of fact, a court of summary jurisdiction as usually constituted is unfitted to deal with questions on appeal. The paragraphs in the Departmental Committee's Report had been noted.

Yours very truly,

(Signed) G. L. C. ELLISTON,
Executive Secretary.

Ministry of Health,
April 20th, 1936.

PUBLIC HEALTH BILL.

DEAR MR. ELLISTON,

I am much obliged to you for your letter of April 1st on this subject.

Clauses 91 and 92.—The point made in your earlier letter was put before and considered by the Departmental Committee who prepared the Bill. They reached the very definite conclusion that it would be highly dangerous to insert in these clauses any special reference to the officers of a local authority. The question in what circumstances and to what extent a local authority can authorise one of its officers to act on their behalf is undoubtedly a difficult one, but the effect of inserting in a long and comprehensive Bill of this character one or two references to officers acting on behalf of the authority is likely, if not certain, to lead to the inference being drawn that in the many passages in which such references are not inserted action cannot be taken except by way of an express resolution of the authority.

Clause 143 (2).—This, if I may say so, is a good point and when the Bill comes before a Joint Select Committee an amendment will be suggested the effect of which will be to transfer the power to apply the provisions of Part V of the Bill relating to notifiable diseases from Sub-section (2) to Sub-section (1) of the clause.

Clause 200.—The Departmental Committee did not succeed in finding any satisfactory alternative to the term "welfare authority" and I fear that I can only refer you to the comment in my letter of March 23rd.

Clause 279 (c) (280 [c]) in the Bill as introduced).—I agree that in the case where the person to be served is a professional agent who collects the rents (see definition of "owner" in Clause 336) it would be more convenient that he should be served at his business address. To meet this point it is proposed to invite the Joint Select Committee to accept an amendment to insert a new paragraph as follows:—

"(e) In the case of a document to be given to or served on a person as being the owner of any premises by virtue of the fact that he receives the rackrent thereof as agent for another, or would so receive it if the premises were let at a rackrent, by leaving it, or sending it in a prepaid letter addressed to him, at his place of business."

Clause 283 (3) (285 [3]) in the Bill as introduced).—As pointed out in the Report of the Departmental Committee, the change effected by the Bill is mainly to transfer jurisdiction from Quarter Sessions to a court of summary jurisdiction, though it is true that in some cases the jurisdiction under the existing law is vested not in Quarter Sessions but in the Minister of Health. It is to be observed that in two important matters of public health administration the Bill makes the Minister the appellate tribunal, *viz.*, the question whether a sewer or sewage disposal works ought to be adopted by a local authority (Clause 17) and the question whether an owner should be required to provide his premises with water at his own expense (Clause 139).

Yours sincerely,
(Signed) E. J. MAUDE.

Recommendation.—That no further useful action can be taken.

5. Midwives Bill, 1936.—(See "Salaried Service of Midwives," PUBLIC HEALTH, March, pp. 225 and 226). The committee considered a memorandum drawn up by the Maternity and Child Welfare Group on the Midwives Bill, which has had its second reading in Parliament. The committee prepared the following letter to be sent to the Ministry of Health and directed that it should be forwarded before the Council meeting if so necessitated by the Bill reaching the Committee stage earlier than May 15th.

The Secretary,
Ministry of Health,

May 8th, 1936.

SIR,

I am directed by my Council to refer to your letter of March 2nd, in which you acknowledged our previous communication of February 28th in regard to the proposed legislation on midwives, and said that the Minister would be willing to consider observations submitted by this Society on the Bill when it was in print.

My Council have now reviewed the Bill as presented to Parliament and wish me to make the following submissions for consideration by the Minister of Health.

Clause 1.

With reference to Clause 1 of the Bill, the Society of Medical Officers of Health are of opinion that it would be in the best interests of efficient administration if the responsibility for the employment of whole-time midwives were vested in maternity and child welfare authorities which have whole-time medical officers of health. It is felt that this would make for the best co-ordinated scheme insofar as the care of the mother and child during the ante-natal period, the puerperium and the post-natal period, would be under the supervision of the same authority throughout.

London calls for special attention, and we would point out that the adoption of the above proposal would continue the accepted principle whereby the London County Council is the "institutional authority" and the Metropolitan Borough Councils are the "domiciliary authorities." The Metropolitan Boroughs, if made the employing authorities under the Bill, would be responsible for all domiciliary duties relating to motherhood and the care of children up to school age, and the Society attach much importance to this point.

The Society hope that, if this clause remains unamended, the Minister will give favourable consideration whenever possible to applications from maternity and child welfare authorities wishing to become local supervising authorities under the Act.

Clause 2.

The Society beg to draw attention to the future possibility that the majority of midwives, having become local government officers, will be unwilling to retire, or, in the absence of definite medical evidence of ill-health, may be unable to retire, before the age of 65.

We recommend, therefore, that provision should be made for compulsory retirement with adequate pen-

sion at the age of 60 and for optional retirement at an earlier age. The Society made a similar recommendation in regard to health visitors and school nurses in their evidence submitted to the Departmental Committee on the Qualifications, etc., of Local Government Officers in 1931.

Clause 5.

(1) The Society would favour the provision in the Bill of a compensation-rate sufficiently attractive to ensure the withdrawal from practice of the "pin-money" midwife.

(2) Line 16. The Society beg to urge the removal of the words "given at any time before the expiration of three years from the commencement of this Act."

(9) The Society beg to suggest that a midwife who has surrendered her certificate should in special circumstances be entitled to have her certificate restored with the consent of the Minister.

Clause 6.

(1) The Society wish to point out that, as drafted, this sub-clause would permit a mental nurse, being registered under the Nurses Registration Act, to act as a maternity nurse. The sub-clause might therefore be amended so as to permit only general hospital trained nurses to act in this capacity, with exceptions to allow of fever nurses nursing cases of puerperal fever and mental nurses nursing cases of puerperal insanity.

Clause 9.

(2) The Society request that an opportunity may be afforded to them of commenting on these regulations so soon as they are in draft.

I am, Sir,

Your obedient servant,

(Signed) G. L. C. ELLISTON,
Executive Secretary.

The committee ask the Council to approve the above action.

6. Draft Milk (Special Designations) Order, 1936.—The committee considered letters dated March 11th and 17th from the National Federation of Dairymen's Associations, stating the opposition of retail dairymen to the inclusion of "Accredited Milk" in the Order.

It was also reported that the Minister of Health had decided, in view of the representations made, to make some modifications in the Order and to postpone the date of operation until June 1st.

The committee were reminded by the acting chairman that the Society had forwarded some minor observations on the original draft Order in June, 1935, but that the Order as subsequently printed had, amongst other changes, substituted the term "Accredited" for that of "Standard" milk.

Resolved—to ask the President and Professor Picken to draft a letter for early submission to the Minister of Health regretting the introduction of the term "Accredited" as a designation for a quality of milk, and that the Council be asked for their approval of this action at their next meeting.

The following letter was sent:—

The Secretary,
Ministry of Health.

March 31st, 1936.

DRAFT MILK (SPECIAL DESIGNATIONS) ORDER.

SIR,

The Society of Medical Officers of Health wish to

put before the Minister of Health certain points in the new Order which they respectfully suggest are not in the best interests of the public health.

The interests of the health of the community require that any forms of milk which are given the dignity of a special designation should be types of milk which are, so far as possible, free from the risks of conveying disease to the consumer. Such a criterion cannot possibly apply to "Accredited" milk and it is with great regret that the Society note that this type of milk is now included in the Order as one given the imprimatur of the Ministry of Health.

The Society suggest that this expression, if used at all, should be restricted to its earlier significance, *i.e.*, as one merely indicating a cleaner method of production, and therefore should find no place in the Order of the Ministry. This evidently was the intention in the first draft Order and the Society suggest that if it is wished to associate the new Order with the Accredited Milk Scheme of the Milk Marketing Board the procedure adopted in the first draft Order and the use of the word "Standard" for a type of milk restricted to production only is far preferable and not objectionable.

To include "Accredited," however, as an approved grade of milk to be sold with this label is in effect to revert to the old type of "Grade A" milk which has been so universally discredited and to lead the public to believe that this is a type of milk which can be consumed with safety and is recommended by the Ministry of Health. The Society regard the introduction of the new designation "Accredited" as a retrograde step, likely still further to retard progress towards the goal of a safe and reliable milk supply.

I am, Sir,

Your obedient servant,

(Signed) G. L. C. ELLISTON,
Executive Secretary.

7. Co-operation between the Society and the British Medical Association.—The committee considered the question raised by Sir Henry Brackenbury at the last meeting of the Council, in connection with the proposal for a salaried midwives service, as to whether there was need for a fresh interpretation of the above agreement reached in 1923.

At the same time a letter was received from the Deputy Medical Secretary of the B.M.A. stating that the Public Health Committee had considered this matter and had agreed that it would be wise to set up a small joint committee to consider the agreement and its applicability to present conditions. The Public Health Committee of the B.M.A. had appointed their chairman (Professor Picken) and the Association's representatives on the Council of the Society (Sir Henry Brackenbury and Dr. W. Paterson).

Resolved—to accept the suggestion of the B.M.A. for a joint discussion and to nominate Drs. G. F. Buchan, H. J. Milligan and F. T. H. Wood to represent the General Purposes Committee.

8. Methods of Appointment of Medical Officers of Health.—Professors W. W. Jameson and R. M. F. Picken presented their memorandum on the appointment of medical officers of health, drawn up as a result of the discussion on this subject by the Council in 1934.

The committee expressed sincere thanks to the authors of the memorandum.

Recommendation.—That the Council send this valuable memorandum to Branches and Groups of the Society for their observations and consider, when these observations have been received, the best method of achieving the aims expressed in the memorandum and of giving the matter due publicity.

9. **Advice on the Appointment of a M.O.H.**—The Executive Secretary reported receipt of a letter dated February 22nd from the Clerk to the Bexley Urban District Council, asking the Society to nominate a medical adviser for the purpose of giving the Bexley Council his specialised views on the candidates for the post of M.O.H. selected by them for interview, and offering to pay a fee for this service. He further reported that, with the approval of the acting chairman, he had approached Professor Jameson, who had kindly undertaken to act as honorary adviser to the Bexley U.D.C. in this matter. Professor Jameson, who was in attendance, said that he had attended a meeting of the Bexley Urban District Council and had given them his views on the merits of the short list of candidates. The Bexley Council had appointed a candidate who, in his view, was the most suitable, and had warmly thanked him for his services.

10. **Staffs of Public Health Departments.**—The Executive Secretary presented the following report on the information derived from the replies to a questionnaire sent out from the office in January last. Summaries of the replies have been circulated to the Council and to M.O.'sH. (in respect of their own type of authority).

Since the last meeting of the Council there have been circulated to members summaries of the questionnaire replies received from 73 County Boroughs, 36 County Councils, 24 Metropolitan Boroughs, 108 Municipal Boroughs and 62 County Districts. (Note: In order to make the information regarding County Council staffs more complete, details of eleven counties which replied to the 1934 questionnaire but not to the present one were also appended.)

I. **Medical Officers.**—The information set out relates to 1,530 whole-time Medical Officers, including municipal general hospital staffs where known, with the exception of appointments limited to one year. This total is made up of: 73 C.B.'s, 660; 47 C.C.'s, 546; 24 Met.B.'s, 74; 108 Mun.B.'s, 171; 62 U. and R.D.'s, 79.

Of these 1,530 Medical Officers, only twelve appear not to have received increments to accord with the recommendations of the Askwith Memorandum. There are, however, several instances where Departmental Medical Officers would appear to have a claim to be classed under Section III of the memorandum with salaries rising to £937 10s. or more. In this connection, it may be noted that the British Medical Association have recently decided to refuse advertisements of vacancies at Darlington, in view of the refusal of the borough council to submit the case of the A.M.O. and V.D.O. for arbitration by the Advisory Committee.

It is of interest to note that no less than 273

Departmental Medical Officers are now receiving salaries with maximum of £937 10s. or more. These are made up from: 73 C.B.'s, 119; 47 C.C.'s, 134; 24 Met.B.'s, 20. Classified according to their appointments, the numbers are:—

Deputy or Senior Asst. M.O.'sH. ...	69
(L.C.C. 32)	
Tuberculosis Officers ...	84
Med. Supts. of Sanatoria ...	21
M. and C.W. M.O.'s ...	14
School M.O.'s ...	13
School and M.C.W. M.O.'s (Lanes. C.C.) ...	19
Med. Supts. of Isol. Hospitals ...	12
Med. Supts. of Mun. Gen. Hospitals ...	24
V.D.M.O.'s, Bacteriologists, Pathologists ...	17

Four hundred and fifty-four whole-time Medical Officers were found to be non-members of the Society and have been invited to apply for election: it should be noted, however, that about a quarter of these are general hospital medical officers.

II. **Dental Officers.**—The information received relates to about 550 whole-time Dental Officers. It will be seen that, generally speaking, the minimum commencing figures at present acceptable to the British Medical Association (B.M.A. Handbook, 1935-6, p. 94: Single-handed D.O.'s, £500; Asst. D.O.'s, £450) are being paid.

III. **Superannuation.**—The information received shows that the following proportions of the various classes of local authorities have adopted superannuation schemes:—

58 C.B.'s out of 73 (one considering adoption).
42 C.C.'s out of 47 (no information in one instance).
23 Met.B.'s out of 24.
87 Mun.B.'s out of 108 (one considering adoption).
46 County Districts out of 62.

G. L. C. ELLISTON,
Executive Secretary.

11. **Dental Officers' Sub-Groups.**—It was reported that 15 Dental Officers had by March 20th been elected as Associates in connection with the new North-Western Sub-Group; and that the East Midland Branch had approved the formation of a similar Sub-Group in their area.

12. **Recruitment.**—The Executive Secretary reported that 128 new members (92 Fellows, 36 Associates) were elected during the period October 1st to March 20th last and that 35 applicants were awaiting election on May 15th. The net increase in membership during the session would therefore be about 100, allowing for deaths and resignations; and the total membership of the Society could now be reckoned at approximately 1,880, of whom about 1,700 were Fellows and 180 Associates.

13. **Enquiry regarding Election of the President.**—The committee considered an enquiry from the M. and C.W. Group whether, in the event of a Branch or Group deciding to support a particular candidate for election as President of the Society, its representatives on the Council have to vote for that candidate.

Resolved—to inform the Group that it was not within the power of the committee or the Council to lay down any precise ruling as to procedure in this matter.

14. **Administration of the Society: Editorship of PUBLIC HEALTH.**—(Arising from a minute of the committee meeting held in June last: see also report to the Council, PUBLIC HEALTH, December, 1935, p. 93.) The committee discussed the question of the future Editorship and control of the Society's journal.

Recommendations.—(i) That a Journal Committee consisting of the President (*ex officio*), the Chairman of the General Purposes Committee, the Hon. Treasurer, Professor R. M. F. Picken and Dr. F. T. H. Wood be appointed forthwith to consider the future arrangements and to undertake the future control of this journal; and

(ii) That subject to such conditions as the Council shall decide Mr. G. L. C. Elliston be appointed Editor of PUBLIC HEALTH as from October 1st next.

(iii) That a very hearty vote of thanks be accorded to Dr. Charles Porter for his long and distinguished service to the Society in the position of Hon. Editor and for his conduct of the journal during that time.

The Council added the words from "subject" to "decide" in (ii) above.

15. **International Hospital Association.**—The committee received a letter from the International Hospital Association stating that the constitution of the United Kingdom Branch had now been drawn up, and inviting the Society to nominate three official representatives and to accept membership of the association, which entails a minimum annual subscription of £5.

The Chairman conveyed the views on this proposal of Dr. Thomas Orr, who had attended preliminary meetings of the association on behalf of the Society.

Recommendation.—That the Council take no action in regard to the above invitation.

16. **Education and Notification of Feeble-minded Children.**—The committee considered a letter dated February 27th from the Hon. Secretary, Central Association for Mental Welfare, referring to a Special Committee on the Education and Notification of Feeble-minded Children and inviting the Society to nominate two representatives. It was reported that Dr. T. P. Puddicombe, the Society's representative on the Central Association's Executive, had consented to act for the Society at the first meeting of the Special Committee on March 11th.

Resolved—to confirm the nomination of Dr. T. P. Puddicombe as one representative; to nominate Dr. Herd as the Society's other representative; and to ask the Council to approve the above action at their next meeting.

17. **Smoke Abatement Exhibition.**—The committee received letters dated February 29th and March 10th from the National Smoke Abatement Society drawing attention to a Smoke Abatement Exhibition to be organised by the society at the Science Museum, South Kensington, during the month of October, 1936, and enquiring whether the Society of Medical Officers

of Health would co-operate in the preparation of an exhibit showing the effects of smoke upon health. The letter added that it was hoped to arrange meetings of interested bodies during the month of the exhibition and visits by them to the exhibition.

Resolved—to suggest that the National Smoke Abatement Society should apply in the first place to Regional Smoke Abatement Committees and to the Central Council for Health Education.

18. **Preliminary Educational Examination for Nursing Entrants.**—The committee considered a letter dated March 12th from Dr. A. Joe, drawing attention to the meeting of the General Nursing Council reported in the *Nursing Times*, March 7th, pp. 243 and 244, with reference to the proposed preliminary educational examination for entrants into the nursing profession. He suggested that the Society should consider the effect of this proposal on recruitment of nurses.

Recommendation.—That the Council should ask the Fever Hospital Group, the Tuberculosis Group and Medical Officers of Health concerned with the administration of municipal hospitals to report on the actual working of the scheme after it has been in operation for some months, with special reference to its effect on recruitment of nurses.

19. **Women's League of Health and Beauty.**—A letter was received from the Women's League of Health and Beauty saying that the league wished to form a permanent Advisory Committee consisting of representatives from the Ministry of Health, the Board of Education (Physical Training Department), the British Medical Association, the Society of Medical Officers of Health and the Central Council for Health Education, to advise the League on their system of physical training. It was proposed to arrange a preliminary lecture demonstration, and the League invited the Society to nominate a representative.

The committee discussed the standing of the League, and Dr. Veitch Clark said that the League was recognised by the Central Council for Physical and Recreative Training.

Resolved—that Dr. Charles Porter should be invited to attend the preliminary lecture demonstration on behalf of the Society and report his views.

20. **Askwith Memorandum.**—A letter was received from Dr. P. R. McNaught stating that he had recently applied unsuccessfully to the York Council for an increase in his salary in accordance with the recommendation under Section VI, paragraph 3 of the Askwith Memorandum that there should be given "suitable increases for capability and length of service." He said that he was bringing the non-success of his application to the notice of the York Division of the British Medical Association.

The Executive Secretary reported that other members of the Society had been unsuccessful in gaining increases under Section VI, paragraph 3, and it was hoped that the British Medical Association would consider action in connection with this part of the memorandum.

21. **Investigation of Population Problems.**—The President reported the receipt of an invitation from Lord Horder (President of the Eugenics Society) to

send a representative to the committee being set up by the Eugenics Society to investigate population problems on the lines indicated by Professor Carr-Saunders.

Resolved—at the March meeting to nominate Professor W. W. Jameson to represent the Society and to ask the Council at its next meeting to confirm this action; Professor Jameson being unable to accept the committee beg to recommend the nomination of Dr. James Fenton.

Dr. Fenton asked that the name of Dr. Stella Churchill be substituted for his, and this was agreed to.

22. *Purity of Bathing Pools*.—The committee considered a letter dated March 25th from Dr. T. Philips Cole, enclosing correspondence from the National Association of Baths Superintendents, and drawing attention to a "Certificate of Purity" which is being issued by the *Swimming and Bathing Pool Review* under "a system whereby the water of swimming pools will be tested and analysed by our (i.e., the *Swimming and Bathing Pool Review*) experts and a certificate granted if the water is found to be pure."

Resolved—to instruct the Executive Secretary to reply to Dr. Philips Cole that we recognise the responsibilities of the local authority in regard to the purity of private swimming pools, but there appears to be no action which can be taken to prevent a journal from issuing such a certificate as described above.

23. *Abortion Law Reform*.—The committee considered a letter dated April 3rd from the Hon. Secretary, Abortion Law Reform Association, inviting the Society to send one or more representatives to a conference to be held on Friday, May 15th, when the following resolution will be moved:—

"That this meeting advocates:—

The amendment of the Abortion Laws so that abortion shall be legal when performed by a medical practitioner, subject only to restrictions imposed by medical and humanitarian considerations."

Resolved—to inform the Law Abortion Reform Association that the committee could take no decision on this matter without reference to the Council of the Society, whose meeting unfortunately would be held on the same day as the meeting of the association.

24. *Medical Coroners*.—(See PUBLIC HEALTH, March, p. 230.) The committee considered a letter and enclosures from Dr. W. H. Davison, H.M. Coroner for Birmingham, arising from his request accepted by the last meeting of the Council, and referring to the recommendations of the Departmental Committee on Coroners.

Recommendation.—That the Council forward these documents to the British Medical Association with a request that they give them any publicity which they consider desirable.

25. *Air Raid Precautions*.—The Chairman reported that he had instructed the Executive Secretary to reply to an enquiry from a Fellow as to the obligation of a M.O.H. to undertake duties in connection with air raid precautions if so instructed by his local authority.

His reply had stated that if the M.O.H. himself had any doubt as to whether such duties might be "instructions of the local authority applicable to his office" (see Sanitary Officers' Regulations, 1935, Section 17 [2]), the question could only be decided by the Ministry of Health, but it was clear that it would be very difficult for a M.O.H. to decline to accept responsibilities on a matter which might become one of national importance. At the same time the reply informed the M.O.H. that one London borough had already appointed an outside medical man to be responsible for air raid precautions, and that another borough in London was considering a similar appointment.

26. *Training of Midwives*.—The committee had before them a letter from the Secretary of the Central Midwives Board enclosing the draft rules relating to the training of midwives which the Board will be submitting to the Ministry of Health, and an explanatory memorandum.

The committee also received a letter from Dr. G. C. M. McGonigle (President of the Maternity and Child Welfare Group) asking that the Group should be given an opportunity of submitting their views on the C.M.B.'s proposals.

Resolved—to refer this matter to the M. and C.W. Group and to ask for their observations at their earliest convenience.

It was decided to hold a special meeting of the Council to consider the above draft rules on a date to be fixed by the President, the chairman of the committee and Dr. J. J. Buchan.

27. *B.M.A. Physical Education Report*.—The committee received a letter from the Medical Secretary, British Medical Association, enclosing a copy of the report of the association's Committee on Physical Education, and conveying grateful thanks for the valuable services of Dr. Henry Herd, the Society's representative.

28. *L.C.C. Hospitals' Medical Officers*.—The committee considered a letter dated April 23rd from Dr. A. Joe, drawing attention to a circular and questionnaire on conditions of service addressed to medical officers in the L.C.C. Hospitals Service.

Resolved—to draw the attention of the British Medical Association to this circular and questionnaire and to report this action to the Council.

Professor Picken reported that action in this connection was being taken by the appropriate Branch of the British Medical Association.

29. *Accounts Sub-Committee*.—The Hon. Treasurer reported that the Accounts Sub-Committee had confirmed payment of the accounts incurred in the March quarter and up to the present date.

Staff Salaries.—The Hon. Treasurer reported that as originally authorised by the committee he had increased the salary of Miss McDowell by five shillings as from April 1st, and he proposed to recommend that the salaries of Miss Scotchford and Miss McDowell be increased by five shillings as from July 1st.

Society's Investments.—The Hon. Treasurer recommended that the Society invest a further £500 towards possible liabilities incurred after the removal from the present house, and that the existing loan of £1,000 which will fall due for repayment in June next be reinvested and transferred to some other security.

The Hon. Treasurer also reported that the committee had considered some correspondence with Dr. R. A. Lyster in regard to the alleged expenses incurred by Dr. Lyster at the time of his Hon. Editorship of PUBLIC HEALTH. The sub-committee recommended that no action be taken.

Lastly, the Hon. Treasurer reported that the sub-committee had approved that certain sections of the house be redecorated during the summer months at an estimated cost of £72.

Recommendation.—That the above recommendations of the Accounts Sub-Committee be approved.

30. *State Recognition of the Deaf and Dumb*.—The committee considered an enquiry from the Association of Municipal Corporations, arising from a recommendation made by the Hull City Council that state recognition be accorded to the deaf and dumb as to the blind, whether the Society could inform the association as to the number of persons likely to be involved by such recognition.

Resolved—to reply that the Society regretted it could not give the number, but that the information was in the possession of the local voluntary organisations interested in the deaf and dumb and could be collected through individual health departments.

The Council adopted the report of the committee with the amendments or additions referred to under the items 14, 21, 26, 28.

Neech Prize.—The President submitted as a matter of report the decisions of the Neech Prize assessors in regard to the postponed awards for the sessions 1932-33 and 1933-34. He said that the assessors, having been unable to agree upon the most meritorious papers for the sessions in question, had asked Dr. J. T. Neech's permission to obtain his (the President's) casting vote. Dr. J. T. Neech had agreed to this course, and in accordance he announced the awards as follows: Session 1932-33, to Dr. J. Greenwood Wilson, for his paper on "Infant Feeding and its Relation to the Health of the School Child," read before the Yorks. Maternity and Child Welfare Sub-Group and published in PUBLIC HEALTH, August, 1933; Session 1933-34, to Dr. J. D. Kershaw, for his paper on "The Value of Tonsillectomy in School Children," read before the Home Counties Branch and published in PUBLIC HEALTH, May, 1934.

Programme for the Session 1936-37.—The President presented the report of the Programme Sub-Committee, consisting of himself,

Drs. James Fenton and Charles Porter. He said that the sub-committee had fixed the dates of the meetings on lines similar to previous sessions; that they wished to recommend that in the ordinary course General meetings should be held at 5.30 p.m. instead of 5 p.m. as hitherto, in order to enable more junior and non-M.O.H. members to get to meetings; and that the President and chairman of the General Purposes Committee should be authorised in the case of any particular meeting to alter the time if they thought it likely to result in a better attendance.

The Council decided against the alteration of the time for General meetings and it was therefore decided to adhere to the hour of 5 p.m. as in former years, but it was agreed in particular cases that the President and chairman of the General Purposes Committee should be authorised to fix a different hour if they thought this would be advantageous.

The Council received a further report that the following subjects were recommended for discussion during the next session: "The Midwives Act, 1936," "Physical Education," "The Future Prospects of non-M.O.H. Appointments in the Public Health Service," and "Rules of the Central Midwives Board."

Nomination of President, Session 1936-37.—The Council proceeded to elect by ballot a name for submission to the Society for election as President for the session 1936-37, in accordance with article 17 (a). The following names had been received from the Branches: Dr. J. Johnstone Jervis (Yorkshire Branch), Dr. E. H. T. Nash (Home Counties Branch), Dr. Ernest Ward (West of England, Metropolitan, North-Western, Eastern, Welsh, and East Midland Branches).

The name of Dr. Ernest Ward was selected by ballot for submission to the General Meeting of the Society to be held at 5 p.m.

Election of Other Officers for the Session 1936-37.—The following elections were made for the session 1936-37: Vice-Presidents, Drs. W. G. Savage, R. Veitch Clark and Charles Porter; Hon. Treasurer, Dr. G. F. Buchan; Editor of PUBLIC HEALTH (see report of General Purposes Committee).

Hairdressers' Registration Bill.—The Executive Secretary reported receipt from the Hairdressers' Registration Council of a Bill which it was hoped to present in Parliament.

The Council referred this matter to the General Purposes Committee.

ORDINARY MEETING.

An Ordinary Meeting of the Society was held at the house of the Society on Friday, May 15th, 1936, at 5 p.m.

The President (Dr. W. G. Savage) was in the chair, and there was an attendance of more than 50 members and visitors. Several apologies for absence were received.

The minutes of the last meeting having been approved and signed, the President reported that the Council had, in accordance with Article 17 (a), selected from the names submitted by the Branches that of Dr. Ernest Ward for election as President of the Society for the session 1936-37. The election of Dr. Ward was thereupon made by a unanimous vote and greeted with acclamation.

The meeting then proceeded to the election of the following candidates, who had been duly proposed and seconded in writing, as members of the Society:—

As Fellows:—

Anderson, Leonard Graham, M.B., CH.B. (LIV.), D.P.H.; Bach, Lorna Goulden, M.R.C.S., L.R.C.P.; Butler, William Harold, M.B., CH.B. (LIV.), M.R.C.S., L.R.C.P., D.P.H.; Carless, Eleanor Mary, M.R.C.S., L.R.C.P., D.P.H.; Cox, Mrs. Alice, M.D., CH.B. (GLAS.); Devlin, Wilhelmina Louise, M.B. (BELF.), D.P.H.; Helliwell, Maj.-Genl. John Percival, C.B.E., M.R.C.S., L.R.C.P., L.D.S. (ENG.); Hughes, Trevor Lloyd, M.D. (LIV.), D.P.H.; MacDonald, Donald F., M.B., B.CH. (IRE.), B.Sc., D.M.R.E. (CANTAB.); McKinney, James William, M.B., CH.B. (EDIN.), D.P.H.; Malmberg, Greta, M.B., B.S. (LOND.), D.P.H.; Murray, William Anderson, M.D., CH.B. (GLAS.); Neill, George Albert William, M.B., CH.B. (BELF.); Rocyn-Jones, Gwyn, M.A., M.B. (CANTAB.), D.P.H.; Sinton, Dorothea Wardlaw, M.B., CH.B. (LIV.); Tannahill, Robert William, M.B., B.S. (SYD.), M.Sc., D.P.H. (ENG.); Walker, Elizabeth Shanks, M.B., CH.B. (EDIN.), D.P.H., M.M.S.A.; Williams-James, Anne E., M.R.C.P., L.R.C.P., D.P.H.

As Associates:—

Bakewell, Weeder, Jnr., L.D.S. (MAN.); Bradbury, Ronald, L.D.S. (MAN.); Caldwell, Margaret, L.D.S. (MAN.); Clarke, Stanley Evelyn, L.D.S. (BELF.); Cole-Morgan, William John R., L.D.S., R.C.S. (ENG.); Davies, Mary M. M., L.D.S., R.C.S. (ENG.); Evans, Frank G., L.D.S., R.C.S. (ENG.); Fenton, James, L.D.S., V.U. (MAN.); Gibson, Mary McKechnie, L.D.S., R.F.P.S. (GLAS.); Jones, E. Hevin, L.D.S. (LIV.); Joscelyn, Miss Eileen Mary, L.D.S., R.C.S. (ENG.); May, Bertram, L.D.S. (LEEDS); Moorhead, Aloysius Michael, L.D.S. (IRE.); Morgan, G. Edward, H.D.D., R.C.S. (EDIN.), L.D.S. (BIRM.); Park, Alfred E., L.D.S., R.C.S. (EDIN.); Wild, Norman, L.D.S. (MANCH.); Wilshaw, Charles Robert, H.D.D. (ED.), L.D.S.; Wilson, Frances Irene, L.D.S. (MANCH.).

Several nominations were received for the election to be held in October next.

There followed a discussion on "Post-Graduate Teaching in Public Health," opened by Professors W. W. Jameson (University of London) and R. M. F. Picken (Welsh National School of Medicine). Other speakers were Professor H. B. Maitland (Manchester), Dr. A. Joe (North-Western Hospital, L.C.C.), Dr. J. J. Paterson (East Berks.), Dr. N. M. Goodman (Ministry of Health), Dr. T. O. Garland (Carreras, Ltd.), Dr. Agnes B. Francklyn (L.C.C.), Professor J. Johnstone Jervis (Leeds), Dr. N. J. England (Oxfordshire), Dr. E. Ashworth Underwood (Shoreditch) and the President, who conveyed the thanks of the meeting to the opening speakers.

The meeting unanimously expressed the hope that the points raised in the discussion might be placed before the Society's Council, with a view to considering whether they should be brought to the attention of the General Medical Council.

A report of the discussion will appear in a later issue of PUBLIC HEALTH.

OBSERVATIONS OF THE BLUENESS OF THE SKY.—This is the title of No. 70 in the "Professional Notes" series (M.O. 336j) issued by the Meteorological Office (Air Ministry). Prepared by Mr. J. S. Farquharson, M.A., it contains a complete record of observations of the blueness of the sky made by means of a scale of standard tints—the Linke scale. The observations were carried out three times daily for two years at Cattewater (Plymouth) and Croydon and for four-and-a-half years at Cranwell. The greatest blueness of the sky was found at Cattewater, the least at Croydon, and this is attributed to the greater atmospheric pollution due to smoke at Croydon. The diurnal variation shows a maximum blueness at midday, especially in winter; at Croydon and Cranwell the sky is bluer in summer than in winter, but at Cattewater the greatest blueness occurs in spring. For the first six months during which Linke's scale was used, observations of visibility were made simultaneously with those of the blue of the sky but as the connection between ground horizontal visibility and blueness of the sky was found to be very slight, these were later discontinued. Copies of the publication may be obtained (price 2d. net, postage extra) from H.M. Stationery Office, or through any bookseller.

The Branches and the Groups.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.

Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of this Branch was held at the Civic Hall, Leeds, on March 27th, 1936. The President occupied the chair and was supported by twenty members.

Correspondence was submitted from the Executive Secretary (a) dealing with the foundation of a County Borough Medical Officers' Group; and (b) submitting a memorandum from Dr. Agnes Nicoll dealing with the facilities desirable in order to improve and maintain the efficiency of the medical personnel in a public health department, on which the Council of the Society wished to have the observations of the Branches. Consideration of Dr. Nicoll's memorandum was deferred to the next meeting. Letters were also read from Miss Jervis and Dr. J. J. Jervis thanking the Branch for their appreciation of Miss Jervis' action.

Dr. R. Sutherland (Medical Officer of Health, Brighouse) gave an address on "**Dietetic Deficiencies and Health**," in the course of which he said that the public health service was no longer content with an environment and diet which would merely prevent illness but now aimed at ensuring that every individual would display the positive signs of bounding health. Nutrition was affected by many factors but he proposed to consider only one—diet. He directed attention to the marked improvement in the general health of children of the lower working-classes which had followed the addition of a daily milk supplement to their diet. Recent dietary surveys had shown that a group of the population, estimated at one-fifth of the children in the country, lived on a diet which failed to satisfy a single one of the criteria of a satisfactory diet laid down by the Advisory Commission on Nutrition in 1932. Protein, especially protein from animal sources, must be present in optimum amount if the maximum possible development was to be obtained, and it had been shown that a partial deficiency of fat might unfavourably affect the organism because, in addition to its value as a container of the fat-soluble vitamins, fat was itself a valuable source of energy and appeared to have a favourable

effect on the utilisation of proteins by the body. A deficiency of vitamin A of a minor degree was probably not infrequent and led to metaplasia and keratinization of mucous epithelia with increased susceptibility to local infection. He was satisfied that dietetic deficiencies of varying degree occurred in this country, but these were almost universally partial and multiple. It was folly, therefore, to correct only one deficiency; an attempt should be made to make the diet in all respects complete. Permanent harm might result from deficiencies in infancy and childhood and the correction of the dietetic defects which existed was therefore urgently necessary. The ideal way was to provide the housewife either with an optimum amount of the recommended foodstuffs or with the means to obtain them and with the knowledge of cooking and of dietetics which would ensure their proper use. The "protective" foodstuffs—milk, fruit and vegetables—should immediately be made available to the public at prices that could be paid by everyone and an intensive campaign in their favour should begin at once.

Dr. Jervis congratulated Dr. Sutherland on his interesting and lucid exposition of a difficult subject. He said that, while Dr. Sutherland had dealt entirely with the poorer classes, he thought that malnutrition was also prevalent among the better off. Sterility and caries of the teeth existed to a remarkable extent among all classes, even those who had an advanced knowledge of dietetics, whereas among slum dwellers he had found children with perfect dentition so far as caries was concerned, and he felt that other factors besides malnutrition must be at work. He agreed that every effort should be made to secure a greater consumption of milk.

Dr. Allardyce said that as a result of a survey of nutrition which he had carried out he had concluded that it was the mother and not the pound which was of importance. He was not sure that the food intake was the most important factor, and thought that sufficiency of sleep played an important part.

The President (Dr. G. C. F. Roe) also was of opinion that sleep was a very big factor in malnutrition. He suggested that many others, outside of mere nutrition, accounted for the better physical state of the public school boy as compared with the employed boy, and

thought it probable that heredity played a not unimportant part.

Dr. Sutherland replied to the various points raised and was heartily thanked by the President on behalf of the Branch.

THE NORTH-WESTERN BRANCH.

President: Dr. W. M. Frazer, M.O.H., Liverpool.
Hon. Secretary: Dr. J. E. Spence, M.O.H., Eccles.

An ordinary meeting of this Branch was held on May 8th, 1936, at the East Lancashire Tuberculosis Colony, Barrowmore Hall, Great Barrow, Cheshire, when twenty-eight members and friends were present.

Dr. E. L. Sandiland (Medical Director) welcomed the party and conducted them over the colony and explained its working. In the colony there are 20 married men and their dependents and 16 single men; the married men with their families are accommodated in houses in the colony, while the single men live in a hostel, a charge of 22s. 6d. per week being made for their food and lodging. The colonists are selected from convalescent patients, and it is found that about 5 per cent. of the convalescents are suitable for colonisation. The industries carried on at Barrowmore are carpentry and joinery, upholstery, printing, boot repairing, poultry rearing and egg production, and gardening and fruit farming. The men are paid wages for their work, but they are not all able to produce an amount of work equivalent to the wages paid, the difference being regarded as a subsidy. It is hoped that an arrangement will be made with the local authority sending patients to the colony whereby for a period of five years the local authority will pay a sum equal to the amount by which the man's earning capacity falls short of the wages paid to him. If after five years in the colony the tuberculous condition remains quiescent, the man will be considered cured, and the responsibility of the local authority for his maintenance will cease.

After the inspection of the colony the members and visitors were entertained at tea by Dr. and Mrs. Sandiland. In conveying to Dr. Sandiland the thanks of the members the President expressed the opinion that the colony was an economic proposition for the local authorities sending patients there, as it was much better to subsidise their earnings

and retain them in the colony than to allow them to return to the towns to become a drain on the funds of the public assistance committee.

THE NORTHERN BRANCH.

President: Dr. A. F. G. Spinks, M.O., (M. & C.W.), Newcastle-upon-Tyne.
Hon. Secretary: Dr. J. A. Charles, M.O.H., Newcastle-upon-Tyne.

A meeting of this Branch was held at the Medical Institute, 7, Windsor Terrace, Jesmond, Newcastle-upon-Tyne, on February 28th, 1936, the President occupying the chair. Eleven members were present.

Dr. C. N. Armstrong gave an address on "Hereditary Diseases and the Outlook for the Future Fitness of our Race." Drs. Spinks, Dickinson, Hartston, Dawson-Walker, Charles and Morrison took part in the subsequent discussion, and, on the motion of the President, Dr. Armstrong was accorded a hearty vote of thanks for his extremely interesting and informative paper, which has been forwarded to the Editor of PUBLIC HEALTH with a view to publication.

THE EASTERN BRANCH.

President: Dr. L. Gibson, M.O.H., Oulton Broad U.D., Mutford, and Lothingland R.D.
Hon. Secretary: Dr. V. F. Soothill, M.O.H., Norwich.

The third meeting of the session of this Branch took place at the Royal Hotel, Lowestoft, on April 23rd, 1936. Nine members were present and Dr. S. F. Allison attended as a guest.

Various matters were under discussion, chief of which were the formation of Branch Bye-laws and the British Medical Association Divisions and binding resolutions.

Dr. A. Nicoll's memorandum on facilities to improve and maintain efficiency in the public health department was warmly approved in principle.

The representative of the Branch on the Council for the Preservation of Rural England (Norfolk Branch) was instructed to support any action of the Council for the prevention of the pollution of rivers.

The Branch heard with deep regret of the death, in his ninety-fourth year, of Dr. T. L. Lack, Medical Officer of Health for the Forehoe Rural District.

Dr. A. M. N. Pringle (Medical Officer of Health, Ipswich) read a most instructive paper on "Two Outbreaks of Paratyphoid B. Fever at Ipswich," and an interesting discussion took place.

Time did not permit of Dr. S. F. Allison reading his paper on the paratyphoid B. fever outbreak at Lowestoft, and he promised to submit it at the next meeting of the Branch, which will be held at Norwich on July 23rd, 1936.

THE EAST MIDLAND BRANCH.

President: Dr. W. S. H. Campbell, M.O.H., Lindsey (Lincs.) C.C.
Hon. Secretary: Dr. J. A. Stirling, M.O.H., Chesterfield.

A meeting of this Branch was held in the Guildhall, Nottingham, on April 16th, 1936, the President occupying the chair. Twenty members were present.

It was unanimously agreed to support the nomination of Dr. Ernest Ward for the office of President of the Society for the session 1936-37.

Short papers were submitted on the following subjects: (1) Meat Regulations: Appeal to High Court (Dr. Barker); (2) Oysters (Dr. Macdonald); (3) Tulip Fingers (Dr. Kennedy).

All the papers proved very interesting and at the end of a stimulating discussion a hearty vote of thanks was accorded to the openers.

THE DENTAL OFFICERS' GROUP.

President: Grantley Smith, Esq., L.M.S.S.A., H.D.D., L.D.S., Municipal Dental Officer, Bermondsey.
Hon. Secretary: J. F. Pilbeam, Esq., L.D.S., Dental Officer, Croydon.

At a meeting of this Group held on May 9th, 1936, Mr. S. B. Newton opened a discussion on "Orthodontics in the School Dental Service." Mr. Newton stressed the importance of avoiding bad habits, such as thumb or dummy sucking in early childhood, and was sure a great deal of preventive orthodontic work could be done in welfare centres.

Mr. Harold Chapman, L.D.S. (Dental Surgeon, The London Hospital), kindly demonstrated methods of orthodontic treatment suitable for public dentistry. He first of all gave a careful anatomical study of the normal jaw in childhood and showed the method of

growth of the jaws and the relationship of the lower to the upper. Mr. Chapman dealt very ably with the whole question of extraction to alleviate overcrowding and felt that a certain amount of irregularity in the lower jaw was preferable to extractions with possible collapse of the arch. He further demonstrated various types of removable apparatus of a simple nature.

Dr. E. H. T. Nash (Medical Officer of Health, Heston and Isleworth) described the orthodontic scheme in his area, and stated that, although it had started by referring patients to hospital for diagnosis, followed by the appointment of an orthodontic consultant he felt that for the future most of the school orthodontic work would be well done by school dental officers.

Mr. Jeffery Fletcher (Dental Officer, Devon County Council) dealt briefly with the vast difficulties in running an orthodontic scheme in a rural area.

Mr. J. F. Pilbeam (Senior Dental Officer, Croydon) gave details of the scheme in his district and showed how economically a scheme could be run when the whole of the diagnosis and treatment was under the direction of the school dental officer.

Mr. K. C. B. Webster (Dental Officer, Hendon) stressed the psychological importance of the correction of dental deformities and suggested that intending school orthodontists would do well to give a prolonged study to the normal jaw and its growth before attempting to treat the abnormal.

The President thanked Mr. Newton, Mr. Chapman and Dr. Nash for their valuable contributions and felt sure that the need of some sort of orthodontic scheme in every area could not be gainsaid.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.
Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

A very successful post-graduate week-end was held by the Group in London on May 15th, 16th and 17th, 1936, and was attended by no less than 77 members and friends. A full report of the meetings will appear in a later issue of the journal.

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

THE PREVENTION AND CURE OF DEAFNESS.

To the Editor of PUBLIC HEALTH.

SIR,—I am greatly interested in the discussion on "The Prevention and Cure of Deafness" arising out of Mr. Tumarkin's article in the March number of PUBLIC HEALTH.

Mr. Tumarkin asks for the opinion of colleagues working in public health upon certain points under discussion, and I, as a member of the public health school medical services with a particular interest in ear disease and deafness in children, feel that I must write and support his views, particularly those concerning the risk of swimming and bathing by persons in whom the membranæ tympani are not intact. I think that Mr. Tumarkin's point about the greater ease of access to the tympanum of foreign and infectious material through the *eustachian tube* in the case of a perforated as compared with an intact drum (which latter prevents the escape of air from the tympanum and therefore minimises the risk of material entering the middle ear from the tube), is not sufficiently appreciated: nor the fact that this physical condition can be temporarily remedied by careful plugging of the meatus externus in an *air-tight* as well as a water-tight manner.

I have seen sufficient "flare-ups" of acute otitis or oto-mastoiditis following swimming, in children (especially if unskilled or if the subject jumps into deep water feet first) who have previously been known to have had a perforation or a history of chronic otitis, to convince me that a relationship of cause and effect exists, and of the wisdom of prohibiting swimming and diving or bathing as distinct from playing about in water without immersing the whole body.

I make exceptions in the case of intelligent older children with conscientious parents who I think can be trusted to plug the external meatus in an efficient, air-tight manner. A method I recommend is a plug of dense cotton-wool thoroughly impregnated with vaseline that has been melted in the wool, one-third of the plug projecting into the meatus and two-thirds lying expanded out in the *cavum conchæ*, pressed on and retained in

position by a close-fitting rubber bathing-cap with flaps coming well down over the pinnae and firmly secured beneath the chin.

In those cases in which I think it wiser to prohibit swimming and bathing altogether the child seldom seems to feel any hardship and soon finds alternative activities, but I encourage naked sun-bathing in woods and gardens, which seems to satisfy much of the natural craving of children (and others) to expose their bodies to the action of sun and air, if not to water, in natural surroundings; especially if several children similarly restricted can meet and play together.

I am,

Yours faithfully,

JOHN LISHMAN.

Public Health Department,
County Borough of Oxford.
May 9th, 1936.

THE MILK (SPECIAL DESIGNATIONS) ORDER, 1936.

To the Editor of PUBLIC HEALTH.

SIR,—It was with a sense of disappointment that at least one of your readers noticed that the article in your last issue on the new Milk Designations Order was restricted to a mere record of the provisions of the Order. One of the outstanding advances in the science of nutrition has been the increased appreciation and understanding of the unique value of milk. It is, therefore, the more to be regretted that opportunity has not been seized to legislate, not for a restricted class of milk, but for the whole field of production.

It is an extraordinary circumstance that since the date of the first Order the official effort to improve the hygienic quality of milk has not merely been concentrated on, but has been limited to, a proportion which has never exceeded one-half of one per cent. of the country's total production. It is a conviction shared by many engaged in both the practical operation and in the scientific control of the milk industry that it is possible forthwith to raise the whole of the country's supply to a standard of decency and safety which would eliminate those occasions of criticism which are all too familiar.

The interests of public health and the extension of the milk industry are closely allied and rest on a basis of public, and especially of medical, confidence in the universal purity of the national supply. This will only be attained when the officially neglected 99½ per cent. of the supply is placed on a basis of decency of production and absolute safety. This measure of confidence is not to be attained by "accrediting" a supply which is not protected from tubercle, from abortus, nor from mastitis infections—to refer to only three of the infections which are rife in our herds. That a supply of milk which unquestionably must not infrequently carry each and all of these infections should be "accredited" and be sold, not permissively but compulsorily in its raw state—by Government order—passes comprehension.

It is incongruous that this 1936 Designations Order is to come into operation forthwith, and that another Order of supreme importance, and vastly wider influence, which has been in existence since 1926, and which would have revolutionised the quality of milk production, is permitted to remain inoperative. The fundamental requirement of milk production, quite irrespective of its ultimate utilisation or treatment—whether it is to be manufactured or disposed of as liquid milk—is that it shall be cleanly produced. No art of manufacture, no subsequent process of treatment can fully atone for faults in this respect. The conditions of such clean production rest on regard for common human decencies. They are summed up in three rules—clean hands to milk, a clean udder, and clean sterilised utensils and appliances. These three rules comprise the art and mystery of clean milk production and are fully provided for in the 1926 Order.

There has been no easy complacency as regards milk quality among distributive organisations. Many of these have energetically supported the unceasing efforts of medical and veterinary officials in various parts of the country. It is largely due to the efforts of such firms and to their development of efficient laboratory control that there has been a continual improvement in the character of the ordinary milk supply. The measure of such improvement can be gauged by the fact that in the course of a few months a substantial proportion of the supply has been accorded "accredited" grading. Such milk when

efficiently pasteurised possesses in full the attributes of safety and decency which in the course of weeks might equally well belong to every pint of milk produced in this country. It all depends on enforcing the decencies of production specified in clauses 21 and 23 of the 1926 Milk and Dairies Order.

I am,

Yours faithfully,

BEN DAVIES,
Director of Laboratories,
United Dairies, Limited.

34, Palace Court,
London, W.2.
May 20th, 1936.

THE Association of Port Sanitary Authorities of the British Isles, as already announced, will hold their annual meeting at Newport, Mon., on June 10th, 11th and 12th, 1936. The programme submitted is a very full one and is inaugurated by a reception by the Mayor of Newport on the evening of Wednesday, June 10th, at 8 o'clock. On Thursday at 10 a.m. there is the annual meeting at the Town Hall, the first session including a discussion on "Uniform Methods of Inspection for Deratisation of Ships in Bristol Channel Ports," to be opened by Dr. P. G. Stock, C.B., of the Ministry of Health. The afternoon will be devoted to visits of inspections to the Newport Docks and Port Sanitary District at the invitation of the Harbour Commissioners and the Great Western Railway, and in the evening, at the invitation of the Mayor and Corporation, a dinner will be held. On Friday in the morning the second session of the annual meeting takes place, Dr. J. Greenwood Wilson (Port Medical Officer, Cardiff) submitting a paper with the intriguing title "Slum Clearance at Sea." To follow there is a discussion on "The Incidence of Tuberculosis in Cardiff," to be opened by Dr. D. A. Powell of the Welsh National Memorial Association, and a paper on "Some Impressions of Port Sanitary Administration in Other Countries," by Dr. R. H. Parry, Port Medical Officer, Bristol. The afternoon will be devoted to visits, with, in the evening, a popular lecture by Dr. H. Catto (Port Medical Officer, Newport) entitled "Our Enemies." Further information with regard to the meeting may be obtained from Dr. A. B. McMaster (Honorary Secretary of the Association), Brook House, Dover.

The Literature of Preventive Medicine.

The Patient and the Weather. By WILLIAM F. PETERSEN, M.D. Vol. I, Part 1. Edwards Brothers, Inc., Ann Arbor, Michigan, 1935. pp. 127. Price \$3.75.

It is the opinion of the author of this work—which, though Vol. I of a series of three, actually has appeared after Vols. II and III—that we think too pathologically; that, as a matter of fact, medicine is taught as a science of death. His series of monographs was planned to deal with meteorological influences on the normal person and on the patient: to present “a rapid survey, a bird’s-eye view of the field, and though necessarily superficial . . . in it to project questions and suggest answers” and “to lead the physician back to Hippocrates and to the Golden Age of Greece.” It is a most beautiful and interesting example of the printer’s art, being litho printed from typescript. The reason for adopting this form was because the great amount of illustrated material in the shape of maps would have altogether prevented publication by the usual typeset method. It is a very unusual book and contains much information that must have involved a great amount of labour to collect.

Tomorrow’s Children. By ELLSWORTH HUNTINGTON. In conjunction with the Directors of the American Eugenics Society. London: Chapman & Hall, Ltd., 1935. pp. 139. Price 6s. net.

This book, which is written in the form of a catechism on eugenics, has apparently been compiled rather than written by the author. It appears to have had various sources and to have been influenced by varied suggestions. As a result it lacks any definite constructive ideas, and treats superficially the many aspects of the subject. The chief point on which, as the author states, all who have shared in the preparation of the book agree is that everything possible should be done to encourage large families in the right kind of homes and to discourage them in undesirable homes. The book sheds no new light on this difficult and important subject but there is much interest and food for thought in the 371 questions on eugenics and allied subjects set out in the volume.

The Sanitary Inspector’s Handbook. By HENRY H. CLAY, F.R.SAN.I., Assistant, Division of Public Health, and Lecturer in Sanitary Engineering, London School of Hygiene; etc. London: H. K. Lewis & Co., Ltd., 1936. pp. 432. Price 15s. net.

Claims made for books, that they fill a long-felt want and presumably will run rapidly into new and enlarged editions, that so very frequently fail to receive substantiation appear to have come true in the case of this volume. Actually the first edition appeared in April, 1933, and by December, 1935, Mr. Clay, in addition to having brought the matter up to date and amplified the technical portions to such an extent as to require some 46 extra pages, had found time to write a preface. In this he expresses belief that the book is fulfilling the purpose for which it was compiled. That belief he may be assured is justified, and unless a great mistake is made it will not be long before he finds further confirmation in a call for an even larger third edition.

INTERNATIONAL SOCIETY FOR MICROBIOLOGY. —The Second International Congress for Microbiology will meet in London from July 25th to August 1st, 1936, under the Presidency of Professor J. C. G. Ledingham of the Lister Institute. According to the preliminary programme arrangements are to be made for meetings in some eight sections dealing with, amongst other matters, the general biology of micro-organisms; viruses and virus diseases in animals and plants; bacteria and fungi in relation to disease in man, animals and plants; soil, dairying and industrial microbiology; medical, veterinary and agricultural zoology and parasitology; serology and immunochemistry; microbiological chemistry; and specific immunisation in the control of human and animal disease. The Hon. General Secretary is Dr. R. St. John-Brooks, Lister Institute of Preventive Medicine, Chelsea Bridge Road, London, S.W.1, from whom further particulars of the Congress may be obtained.

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Editorial.

National Baby Week, 1936.

THE younger generation of maternity and child welfare medical officers, who were not very far from their own cradle days twenty to thirty years ago when work first seriously began, cannot conceive of the early travails through which the movement passed before its emergence as a legally recognised entity of national policy through the Maternity and Child Welfare Act of 1918, and may be inclined to speculate as to how its present acceptance has come about.

It is held, however, that the great public health movement, maternity and child welfare, has been and is the result of a gap in the which, in this country, according to the circular, it is the duty of the medical officer to be systematic and periodic in the visiting of all children under the age

first National Baby Week was held and so stirred public and parliamentary interest in the need for legislative provision, that the Maternity and Child Welfare Act was passed the following year. While this measure gave joy to the far-sighted and enterprising local authorities, much stimulation of public opinion was required before the indifferent or recalcitrant bodies were ready to play their part in strengthening the foundations of national health. Moreover, the full potentiality of the Act was not realised at once. At first there was concentration upon the infant—with the National Baby Week Council’s slogan “Save the Babies.” As in course of experience the infant death-rate statistics showed that the task of saving infant lives was well under way, time for thought and

more penetrative study of the whole child life problem offered. The babies were being saved, but how far were the infants being preserved towards healthy childhood—and on the way to a healthy, efficient maturity? Further, there was that stubborn neo-natal death-rate: what was to be done about it? And the maternal death-rate: why was that not yielding to the preventive measures adopted under the Act? Many intricate problems disclosed themselves to specialist study and it became obvious that the public as well as the parents were concerned in the further promotion of health for mothers and children.

Thus the work of the National Baby Week Council has continued and developed since those early days of 1917 and 1918. Each year the health service and local authorities may count upon that organisation to arouse public interest in particular problems as yet unyielding to administrative or personal attack. For the present year's campaign, which reaches its peak in National Baby Week (July 1st-7th), attention is being concentrated at two points.

On the one hand, there is to be consideration of the whole question of maternal welfare; that is to say, what should be done to build up towards healthy motherhood; there are the constructive aspects of the problem to be viewed. The Council is directing attention to this side of the problem with the object of doing something towards combating the scare propaganda by which the public have become fully roused on the matter of mortality in childbirth. It is all to the good that through the press the public have thus been so stirred, but the propaganda has tended to go beyond bounds, and there is reason to think that it has now got to a stage when it is hardly to the real advantage of the maternity and child welfare movement.

The second subject on which the Council is concentrating attention this year is the question as to whether that all is being done that should be done, nationally and locally, for the welfare of the child from two to five years of age. The examination under the school medical service of the school entrant has disclosed the disadvantage of allowing the existence of a gap in the administrative service for child welfare. So far as the infant is concerned, a useful scheme of preventive care has been established, but much yet

remains to be done before a systematic service on a national basis for the maintenance of the welfare of the pre-school child has been established.

National Baby Week is the great occasion. This first week in July will see in Liverpool the National Conference on Maternity and Child Welfare, organised annually by the National Association for the Prevention of Infant Mortality to take place in National Baby Week. It will see National Baby Week film displays in Liverpool at the Picton Hall on July 1st, and in London at the Kingsway Hall on July 3rd. It will see a meeting for parents on July 2nd at the London School of Hygiene and Tropical Medicine, under the joint auspices of the Central Union of Fathers' Councils and the National Baby Week Council. There are many other publicity events of this National Baby Week, which is the acme of the year's campaign, not the sole event, for throughout the whole year the National Baby Week Council is engaged in promoting and assisting local Baby Weeks, Health Weeks and many other local propaganda activities. It is an extraordinary organisation, doing a vast amount of work on a very little income, which for the service it gives deserves support and assistance from every public health authority.

* * * * *

The Birthday Honours.

THE Birthday Honours List shows quite a reasonable degree of recognition for the medical profession, and members of the health service figure to a gratifying extent also. It is noteworthy, though not unusual, that medical officers in the local government service at home do not appear at all. To compensate for this, however, there are a sanitary inspector—Mr. Birtwisle of Castleford, and a former Chairman of Council of the Sanitary Inspectors' Association—and a health visitor—Miss Swanson, who occupies the senior post in Edinburgh. The honour conferred on each is the M.B.E., and congratulation is offered on account of a recognition, extremely well deserved. Amongst honou- n- m- b- r- s- of the health service there are im- m- u- n- i- t- a- b- l- e- and gratifying thar- and animal a- t- a- b- l- e- Chief Medical Secretary is Dr. p- a- l- t- y- Board of E- n- e- r- Institute of Prev- and the K.C. h- e- l- s- e- a- Bridge Road, Lo- r- e- d- in pl- e- s- s- may be obtained.

no one who knows the record of his attainments and achievements can doubt. At the same time, however, it must be taken that it is also as representative of the health service he has been singled out, and it is largely because of a feeling that no more fitting and appropriate selection could have been made that all his colleagues most warmly offer congratulation to Dr. MacNalty on this occasion. That he may be long spared to wear the honour is the wish of the public health service, all the more sincere because they know he will so carry it as to bring distinction to the body of which he is so notable a head. Another well-deserved honour is that conferred upon Dr. Masson, the Medical Officer of Health of Port of Spain, Trinidad. The announcement that he has received the O.B.E. will give great pleasure not only to friends and admirers of Dr. Masson in the island but in this country and elsewhere as well. Port of Spain owes very much to Dr. Masson, the hard work he has done and the keenness and enthusiasm he has shown during the many years he has held office having been responsible for much of the marked progress made and improvements brought about in relation to public health. To him, as to the others mentioned, it would be the desire of the Society of Medical Officers of Health that congratulations and best wishes should be offered, and it is on behalf of that body they are here tendered.

* * * * *

Care of Children Under School Age.

CIRCULAR 1550, addressed to maternity and child welfare authorities, dealing with this subject, was issued on May 29th. In it the Minister of Health points out that while arrangements for supervising the health of children up to the age of 18 months or two years are generally satisfactory—as is shown by the fall in the infant mortality rate to the low record of 57 per 1,000 births in 1935—not enough attention is being given in many areas to the health of young children between 18 months and five years. The steps proposed, it is held, mark a definite stage in the Government's declared policy of making provision for medical assistance at points where there is a gap in the existing service. According to the circular, it is essential for there to be systematic and periodical health visiting of all children under the age of five

who do not attend school. Health visitors should see them at regular intervals, and, when necessary, advise the mother to consult the family doctor or take the child to the appropriate clinic. In some places special "toddlers' clinics" are held at the infant welfare centres, and in many places the school clinic is available for treating minor ailments and special defects in young children. While commending both these arrangements, the Minister of Health points out that their general success depends to a large extent on regular and efficient health visiting to induce the mother to make use of the facilities at the clinics.

A view widely held in the health service that the success of the arrangements proposed will also be much assisted by effective co-operation between the maternity and child welfare and the school medical services, is stressed in the circular, where it is pointed out also that this is greatly simplified when the maternity and child welfare authority is also the local education authority and the same medical officer is responsible for both services. The Local Government Act, 1929, provides machinery for transferring maternity and child welfare services to local education authorities who are not already responsible for them, and in general the health interests of pre-school children will be best served if responsibility for attending to their health from birth to school leaving age is in the hands of the same authority.

Attention is also drawn to the value of day nurseries for looking after young children whose mothers go out to work or whose home conditions are such that they would be the better for the care and supervision these nurseries supply. It is suggested that where this problem exists local authorities should consider the question of establishing a day nursery.

The circular contains a request that each authority shall review its arrangements for supervising the health of young children. This in most areas is now proceeding, and in due course the results of the review made and of the consideration given to the suggestions contained in the circular will be conveyed to the Minister. That, in particular, action is to be taken, where necessary, on the suggestions of the Minister as to the salaries to be paid to health visitors, may be hoped.

Bacterial Nutrition.

GREATER knowledge of the conditions which govern the growth and multiplication of bacteria is a fundamental necessity for the better understanding and control of various infectious diseases and of morbid states involving sepsis. These conditions, either favouring or inhibiting bacterial growth, should be largely definable in chemical or physico-chemical terms, and the importance of the study of bacterial chemistry is therefore apparent. For this reason the Medical Research Council have at various times been ready to promote or assist work in the subject at different university or hospital centres, or in their own laboratories.

Two years ago the Council were enabled to take a more deliberate step to enlarge the opportunities for work in this field, with particular regard to securing close collaboration between chemists and bacteriologists. This consisted in the establishment of a special department for research in bacterial chemistry, situated at the Middlesex Hospital and placed under the direction of Dr. Paul Fildes, F.R.S. The scheme was made possible by the generous co-operation of the Middlesex Hospital Medical School, the Trustees of the late Viscount Leverhulme and the Sir Halley Stewart Trust. Laboratory accommodation and facilities for the work were provided at the Hospital in the Bland Sutton Institute of Pathology and the adjoining Courtauld Institute of Biochemistry. Dr. Fildes, who had previously been working on this subject at the London Hospital, became a member of the Council's scientific staff.

In the report* prepared by Mr. B. C. J. G. Knight, a Halley Stewart Research Fellow working in the special department at the Middlesex Hospital, an attempt is made to bring together in convenient form all the available information regarding bacterial nutrition. After an introductory section, the first and longest part of the report gives a systematic survey of the known facts. The second part deals with the data in the light of the hypothesis that the different types of nutritive requirement exhibited by bacterial species may be regarded as successive levels

in an evolutionary scale. At the bottom are those forms which can multiply and grow at the expense of relatively simple chemical substances and can thus satisfy their food requirements throughout a wide range of environmental conditions. The higher forms are those which either have more elaborate requirements or have lost some power of synthesising necessary compounds from simple sources: they have adapted themselves to the use of more complex food substances, but in becoming more exacting in their demands they have also become more dependent upon a specialised environment. According to this view, the emergence of parasitism as a characteristic of some bacteria may be supposed to have taken place along those lines. The third part of the report deals with the ways in which bacteria can adapt themselves to changes in nutritional conditions.

Publication of the report has been made by the Medical Research Council in the belief that it will be a useful aid to further research work.

Treatment of Venereal Diseases in Seamen.

THE Minister of Health has issued circulars (1536 and 1536a) to the responsible port and local authorities in England and Wales, enclosing a revised list of treatment centres* in the chief sea and river ports throughout the world, at which seamen can obtain gratuitous treatment for venereal diseases in accordance with the arrangements contemplated by the international agreement relating to this matter, which was signed at Brussels in December, 1924. The list is based, in the main, on the particulars contained in a corresponding list published by the Office International d'Hygiène publique in 1935, and arrangements have been made with the Board of Trade for a copy of the list to be supplied to every ship of the mercantile marine. The opportunity has also been taken to issue with this list a number of recommendations which have been formulated by the Office International as the result of their continued investigations into the operation of the agreement in different countries. It is anticipated that these findings, which have reference to such matters as the securing of a greater amount of

* BACTERIAL NUTRITION. Material for a Comparative Physiology of Bacteria. Medical Research Council Special Report Series, No. 210. 1936. H.M. Stationery Office: Price 3s. net.

* List 7a (revised), March, 1936. H.M. Stationery Office (code number 32-320). Price 6d. net.

publicity of the facilities available at ports for the treatment of seamen and particularly of more regular treatment of those suffering from syphilis, will facilitate the administration generally of the provisions of the agreement by the contracting parties.

Obituary.

ALBERT ERNEST COPE, M.D.

THE Society records with regret the death, on June 6th, of Dr. A. E. Cope, who had been in practice in Westminster for forty years and was Public Vaccinator of the city for nearly the whole of that time. He was born at Chesterfield in 1867, the son of the Rev. T. J. Cope. After schooldays at Mansfield and Hull Grammar School, he entered the Hull and East Riding College in 1884, and continued his medical studies at Newcastle-upon-Tyne, where he won a series of scholarships. He graduated M.B., B.S. with first-class honours at the University of Durham in 1889, and obtained the M.B. of the University of London in 1890, proceeding to the M.D. of Durham three years later. In 1896 he obtained the D.P.H. of the English Conjoint Board, and as late as 1925 passed the Final Bar Examination.

A recognised authority on vaccination, he was for many years teacher and examiner in vaccination under the Local Government Board and the Ministry of Health. There is no doubt that in his skilled hands justice was done to the importance of vaccination as an essential instrument of preventive medicine. He made himself a master of the subject by life-long study, and from time to time communicated the results of his work in articles to the medical press. That he was held in high esteem by his fellows is shown by the fact that he had for several years been President of the Association of Public Vaccinators, and at the time of his death was a member of the Council of that body and also Hon. Secretary. Dr. Cope joined the Society of Medical Officers of Health so long ago as 1910. He was also a Fellow of the Royal Sanitary Institute, and a Member of the British Medical Association.

The high respect and deep affection in which Dr. Cope was held was shown by the large number of mourners who crowded the chapel and surrounding streets of Vauxhall

Bridge Road. His patients thronged to honour his memory, and nothing could have been more fitting than the tributes of the presiding clergyman to the man and his work: they were the unspoken words of the entire congregation.

REHABILITATION OF PERSONS INJURED BY ACCIDENTS.—An Inter-Departmental Committee has been appointed by the Secretary of State for the Home Department, the Minister of Health and the Secretary of State for Scotland, to enquire into the arrangements made in this country for the restoration of the working capacity of persons injured by accidents. The decision to appoint this Committee has been taken after consideration of a report issued by the British Medical Association last year in which suggestions were made for improving the organisation of present arrangements for the treatment of fractures, and in which attention was drawn to the importance of the industrial aspects of this question. The terms of reference of the Committee are as follows: To inquire into the arrangements at present in operation with a view to the restoration of the working capacity of persons injured by accidents, and to report as to what improvements or developments are desirable, and what steps are expedient to give effect thereto, regard being had to the recommendations made in the report issued by the British Medical Association in 1935 on "Fractures." The Committee, which is a representative one, includes Sir Malcolm Delevingne, K.C.B., K.C.V.O. (Chairman), who was Deputy Permanent Under-Secretary of State at the Home Office; Miss Muriel C. Bywaters, M.D., B.S., a Medical Officer of the Board of Education; E. W. Hey Groves, Esq., M.D., D.Sc., M.S., F.R.C.S., who was a member of the "Fractures" Committee of the British Medical Association; and H. S. Souttar, Esq., C.B.E., M.D., M.CH., F.R.C.S., F.R.A.C.S., who was Chairman of that Committee. The Secretaries to the Committee are A. E. Quine, Esq., M.B., F.R.C.S., of the Ministry of Health, and J. A. Simes, Esq., O.B.E. All communications intended for the Committee should be addressed: "The Secretary, Inter-Departmental Committee on Rehabilitation of Persons Injured by Accidents, Ministry of Health, Whitehall, London, S.W.1."

Maternal Mortality and Public Opinion.

By ANDREW TOPPING, M.A., M.D., D.P.H., a Senior Medical Officer, London County Council.

In this paper, Dr. Topping brings under discussion a number of the chief factors operative in relation to maternal mortality, and assesses their influence and the possibility of making use of public opinion in combating them. The question of the extent to which public opinion can be employed in this connection is one of importance, and readers of Dr. Topping's paper, like those who had the privilege of hearing it when it was submitted at a meeting of the Maternity and Child Welfare Group, will find in his description of his experiences, and in the views expressed, many hints worthy of consideration for adoption.

THE death of a person long before the allotted span has been reached must always be a regrettable occurrence; where this death follows a process which we have always been taught should be physiological and not pathological, regret must be correspondingly greater. Conception, pregnancy and parturition are natural processes of the female of all species, and when a mother dies as the result of these natural functions it is understandable that all, and particularly those of our profession, should endeavour to find out the causes and apply remedies.

The passing on of life from mother to child is and always has been a thing of wonder. For the mother, the timorous pleasure of anticipation, the glory of fulfilment and the joy of holding her child in her arms are among the most compelling of human emotions. The poignancy of a mother's death at the moment which should bring her and her husband the greatest joy is greater than that of any other bereavement. To this is due the bitterness and sense of injustice with which the public have expressed their dissatisfaction with the persistently high level of the maternal mortality rate. No such general feelings are aroused at other death-rates which are even more inexcusable and could be more easily reduced. For example, the diphtheria death-rate is much higher than it ought to be. Apart altogether from the diminution in incidence and fatality that would follow general immunisation, we are all aware of the number of children who lose their lives by inexcusable delay in administration of antitoxin. Every health department in the country has endeavoured to inculcate the necessity for giving treatment to all cases where the throat condition is at all suspicious, and that it is inadvisable to wait for the result

of a swab. It is well known that the death-rate varies directly with the length of time allowed to elapse between the onset and administration of an adequate dose of anti-toxin; and still case after case is admitted to hospital on the fourth or fifth day of disease. It is further probable that if the practice at all infectious diseases hospitals were investigated and assessed by the latest accepted criteria, it would be found that many fall below standard. Further, we all know how many acute abdominal cases are lost either through delay in diagnosis or in dilatory ambulance or hospital arrangements.

That the maternal mortality rate alone should be singled out for criticism may appear illogical but it is understandable in view of the peculiarly poignant mental and psychical reactions involved.

There is one bright spot—it is questionable whether it is true to speak of a persistently high maternal mortality rate. The basis on which it is computed is intrinsically unsound and fallacious: it conforms to no recognised statistical standards. No cognisance is taken of the number at risk which is to all intents and purposes the number of women who become pregnant. Deaths occurring in any pregnant women attributable to pregnancy or childbirth are calculated against the number of live births, which is a very much smaller number than the total of pregnancies which should, in fairness, be the comparative figure. Comparisons drawn between the rate now and that obtaining 10, 20 or 50 years ago are valueless unless we can be sure that no new factors affecting the relation between the number of pregnancies and the number of women who go to full term have arisen. We know perfectly well that they have and that the very great increase of abortions at the

present time is a factor which seriously affects the rate. Similarly, comparisons between the rate in this country and in others are valueless unless they are computed on the same basis. We know that, with few exceptions, the practice in other countries is to ignore abortions, ectopic gestations, etc., and that our place in the international scale of obstetrical efficiency would be very near the top instead of the bottom were the same standards applied in the countries with which we are so often compared to our disadvantage.

Be this as it may, no one who has studied the question with an open mind can deny that the rate is too high and that no enlightened community should rest content until the number of mothers who die in childbirth is brought down to an irreducible minimum. The Ministry of Health Commission, the Scottish Board of Health and the American Committee have all stated very definitely that approximately 50 per cent. of maternal deaths could have been avoided. In each of these reports there is an understandable tendency to "be wise after the event." A frequent claim is, "had such and such a step been taken the death might not have occurred." "Might" is the correct word as there is, of course, no guarantee that a fatal termination could have been avoided. For example, the eclamptic who had not had sufficient ante-natal care is always counted as a case that should have been saved. In many cases this is, of course, so, but we all know of women who develop sudden unheralded eclampsia in spite of most regular control. I think too, it is a pity that the reports do not state that their saveable 50 per cent. were mostly to be found in areas where the rate was much in excess of normal. The impression has gained ground that one out of every two deaths anywhere is preventable. This is, of course, entirely wrong: there is undoubtedly an irreducible minimum; out of any 1,200—let me take this as an arbitrary estimate of the number at risk in arriving at the figure of 1,000 births—the probability is that anything up to two on an average and five in an unlucky year will succumb to some accident inherent in a process which involves physical and mental strain and considerable disturbance of the vascular and endocrine systems. It is probably safe to say that in areas where there has been an average rate of eight to ten over five years, five to six in every 1,000 were preventable, while in an area with an average rate of two to three, it is unlikely that many cases

could have been saved even by the most Utopian of systems.

Before discussing in detail the commoner factors in maternal mortality as I see them, I should like to deny all claim to be an expert and to explain the circumstances which have led to my gaining a certain amount of publicity as the originator of what has come to be known as the Rochdale Scheme. I also wish it to be understood that the views expressed are personal and not necessarily those of the authority which I have the honour to serve.

Apart from the somewhat perfunctory D.P.H. course in ante-natal work, I had done practically nothing even remotely connected with midwifery for about 10 years, when I had to take charge of several ante-natal clinics. By dint of native guile, I did my best to conceal my ignorance and endeavoured to learn something about the subject. I quickly discovered two facts; that my ignorance was shared by quite a number of the medical men of the district and that the mothers were intensely keen to be told the truth about conception, pregnancy and confinement in simple, straightforward language. Luckily, we had an excellent lot of health visitors and I found that they spent much time in giving the expectant mothers advice about the essential things to be observed in their pregnancy and in their arrangements for confinement to ensure a safe delivery. It was obvious that there was an almost universal ignorance of essential facts and an eagerness to get genuine information. In Lancashire I found much the same state of affairs, except that the level of knowledge amongst the mothers was considerably higher. There was an amazingly high standard of health visitor, and as each had been in her district for a considerable number of years the seeds of information planted by personal contact had already resulted in the dispelling of many misconceptions.

It may have been coincidence but the maternal mortality rate in these districts had been consistently lower than in the Borough of Rochdale with which they were contiguous. When I went to Rochdale in September, 1930, it had the very unenviable distinction of having the highest maternal mortality rate in the country over a period of years. From my having been in the district for some years I knew personally most of the doctors and certainly all those who were looked upon as leaders of the profession. I took every opportunity of discussing the maternal death-rate with them singly and as a

body. Various theories were advanced to account for the appalling death rate: some thought it was due to occult rickets; some to the fact of so many women working in mills; some to malnutrition. Careful examination of the individual case reports for the preceding years showed that none of these suggestions could hold water. Case after case showed that there had been no ante-natal care; case after case showed evidence of unnecessary and violent interference; shock and hæmorrhage following difficult labour was by far the commonest cause of death. When these facts were put frankly before the chairman and secretary of the British Medical Association division they were frankly surprised and agreed that steps should be taken to effect improvement. The health committee were equally keen and with their approval a meeting, representative of all medical, nursing, religious, social and educational bodies in the town was called. To them the true facts were frankly stated and they agreed to help in every way possible.

Meetings of women belonging to the various organisations were held thereafter almost twice weekly: the true causes of the high maternal mortality rate were put clearly before them and they were shown how they could help to remove the reproach from their town. There was no alarmist propaganda; quite the reverse. We aimed at telling them that pregnancy and childbirth were perfectly safe assuming that the expectant mother did her share. We stressed that far more than half the deaths in Rochdale were avoidable; that by attendance at ante-natal centres or by consulting their own doctors they could do much to ensure an uneventful confinement; that nature was by far the best accoucheur and that interference dictated solely by their own impatience added greatly to the risks.

In the Health Week booklet the chief causes of maternal mortality—unrecognised disproportion or malposition, puerperal fever, kidney complications and interference not dictated by medical considerations—were tabulated and described in simple language. Expectant mothers were told what they had to do and assured that they need have no dread of pregnancy and childbirth if they did as we advised and not as their grannies told them. An extract from the 1930 annual report reads as follows:—

"For the second year in succession, Rochdale occupies a very unenviable position, as will be seen from the summary of mortality rates. The finding of the Committee on Maternal Mortality, set up by the

Ministry of Health, is that approximately half the deaths during or consequent on childbirth are avoidable. That the mortality rate does not depend on poverty or bad housing conditions is proved by the very low rates achieved in some slum areas in London and in several industrial towns strictly comparable to Rochdale. Improvement has in every case followed increased attention paid to the care of the expectant mother and to the development of team work whereby the private practitioners, the midwives, and the staff of the ante-natal clinics work in harmonious co-operation instead of being, either actively or passively, mutually antagonistic. We have tried by increasing the number of sessions and improving the accommodation at the ante-natal clinic; by encouraging the midwives to bring their cases, and by compensating them when, for any reason, the expectant mother is advised to have her confinement in hospital; by notifying the doctors of the clinic doctor's findings in all cases who have a private doctor; by issuing, either free or at cost price, sterilised maternity outfits; by employing a consultant of high professional standing who is available either at the patient's home or at hospital; by giving lectures to women on the subject of ante-natal care and the problems of childbirth generally; lastly, every endeavour is being made to provide improved hospital accommodation at the municipal hospital.

"That all these measures will help to reduce the present appalling mortality is certain, but it is equally certain that unless every member of the medical profession and every midwife realises that it is essential that every expectant mother should be carefully examined several times during her pregnancy, we will not reach the standard attained in many other localities. An enlightened community should not be willing to allow their town to rest under the stigma of being the town with the very worst record in the country. Doctors and midwives cannot help in this work so much as the majority of them are keen to do, if the people themselves do not realise the importance of ante-natal supervision and insist on having it.

"There were four deaths from puerperal fever. Much recent research work on this subject has altered many old-established conceptions. It is realised now, that in the vast majority of cases the infection is of human origin—usually not from the patient herself. Scrupulous cleanliness—as scrupulous as that obtaining in surgical operations—is the first essential. The second is, that every case, either at home or in hospital, showing the slightest evidence of a febrile condition should be treated as suspect. The third is that accommodation remote and in every way distinct from the normal maternity accommodation should be available for established cases.

"Education of the public and improvement of the standard of midwifery practice, with the closest possible co-operation between a skilled and conscientious midwife and the doctor, should lower the incidence of the disease."

We were fortunate in having an excellent local newspaper, *The Rochdale Observer*, which, without any scare headlines or alarmist paragraphs, gave us the fullest and most encouraging publicity. We were equally lucky in the

personnel of the leaders of the British Medical Association division and of the Midwives Association. Without their very cordial help we should never have got the amazing co-operation of the public which was a feature of the campaign. The health committee did its share nobly; improvements were made in the ante-natal clinic accommodation; extra sessions were established, the number attending in 1932 being 710 (3,603 attendances), a very good figure out of some 1,100 births.

We endeavoured to disarm criticism of the ante-natal clinic system by encouraging co-operation with doctors and midwives. Reference to this in the annual report for 1931 is as follows:

"One of the most popular criticisms of ante-natal clinics is that the staff there take no actual part in the confinement, and that, therefore, much of their usefulness is more apparent than real. If every midwife and doctor carefully and systematically examined every case booked by them, there would be more point in the criticism. We know perfectly well that they do not—many of those most ready to criticise, have neither the time, experience, facilities or even instruments to do it. But although some of the critics are not, in their own cases, justified, it is obvious that there should be the fullest possible co-operation. We have tried to achieve this in two ways. First, one of the senior midwives and two pupil midwives from the Birch Hill Maternity Hospital attend the ante-natal clinic, thus ensuring that hospital cases, at least, have someone present at the confinement who took some part in ante-natal examinations and supervision. Secondly, in all cases where any abnormality is discovered, a notification is sent forthwith to the doctor and midwife concerned. Whether the examination shows abnormality or not, a full report of the ante-natal findings is sent to the maternity hospital, doctor or midwife. In the last case this is available for the doctor if necessity arises for him to be called in. On the reverse there is a tabulated form for report on the actual labour and the puerperium, which is returned to the ante-natal clinic by the medical officer of the hospital, doctor or midwife, as the case may be. This gives a most useful check on our ante-natal findings, and is filed at the clinic for reference on future occasions."

The midwives whom we considered most efficient were put on a select list as "municipal midwives." Their annual earnings were guaranteed up to an agreed sum, thus removing some of that chronic financial instability which so often makes one prostitute one's conscience to one's purse; telephones were installed in their homes free of charge. A Manchester consultant was appointed, available for ante-natal clinics and hospital or domiciliary confinement. A puerperal fever ward was opened in the infectious diseases hospital and plans were approved for a new maternity unit at the municipal hospital. Most boroughs have, I know, taken all the

measures outlined above, in some cases without getting the results we got. The only difference I can find is in the extent and intimacy of the propaganda that was carried out. The public conscience was aroused to the wholly unnecessary waste of life. The expectant mother was urged by her relatives and friends to attend the ante-natal clinic at an early stage in her pregnancy. They knew what a proper ante-natal examination connoted and any doctor or midwife who scamped it was very soon talked about, greatly to his or her prejudice. Mothers did not importune midwives, and midwives did not importune doctors to hurry up nature's natural processes: in short, all were on their toes and, as it was known that every maternal death in future would be very carefully investigated, everyone, be it the granny, the mother, the midwife or the doctor, was out to do his or her part conscientiously. The old idea that a high maternal mortality rate was inevitable in an industrial town and that it savoured of blasphemy to question it was exploded sky high.

When I left Rochdale in 1932 I did not rush in to claim any marvellous results: I was only too well aware of the possibility that the rate would go up again owing to circumstances over which no one had any control—many will appreciate how one or two real "snags" will push up the rate in a town with just over 1,000 births a year. We were greatly encouraged when, following a visit during which they investigated the position meticulously, three very distinguished obstetricians, Professors Young and Phillips and Dr. Oxley, gave their opinion that the results were definitely good and statistically sound. The figures for four full years are now available and I think it is safe to rule out coincidence and claim that it is largely to the campaign and its publicity that the improvement is due. The average for the four years 1928-1931 was a fraction less than 9 and this includes a rate of 7.81 in 1931 when the campaign was just beginning. The figures for the four subsequent years are as follows:—1932, 1.76; 1933, 2.87; 1934, 5.65; 1935, 1.75; an average of 3 per year. In the "bad" year, 1934, there were several cases not due to any sins of omission and, as a cold douche to our hopes for 1936, I have just learnt that there were two deaths in January: that these were due to an abdominal operation for an undiagnosed vesical mole and to criminal abortion respectively, does not invalidate our claims for success and strengthens our opinion that a change in the method of computing the rate is

overdue. I agree that publicity of the "yellow press" type or that inspired to gain kudos for any social or political organisation is fraught with danger, but I most strongly assert that propaganda based on telling people the truth, dissipating the cloud of surmise and ambiguity which has been allowed to cloak the true facts, can do nothing but good. In other public health activities, in infant welfare and school medical work, we have come out into the open and disabused people's minds of the old idea of inevitability.

It is never suggested that publication of the true causes of much of the infantile mortality of earlier years has had harmful results: the public is educated up to a point at which facts instead of fairy stories about health and sickness should be provided for their consumption. As long as the truth is put before them in simple language, without over much medical frill or phraseology, they not only welcome it but assimilate the salient points very much more readily and gratefully than we think. Why should it be different with the facts of pregnancy and childbirth? Why should not the expectant mother know that nature has so arranged things that nine out of ten babies lie in the mother's womb in the position which makes birth easiest and that varying degrees of difficulty ensue in the odd case where the position is unusual? Why should they not know that it is comparatively easy to correct the position if it is discovered early in pregnancy and that it is therefore in their interest to report as soon as possible to the clinic or their own midwife or doctor? They should know exactly what happens if their kidneys are unequal to the double strain thrown on them during pregnancy: they will be much readier to follow dietetic advice if they understand that there is a good reason for it and that it is not just another fad. They will appreciate the need for urine examination and blood-pressure testing if they are told that early recognition of kidney weakness will practically eliminate risk of any serious development. They should be told that even in the unlikely event of an unusual condition not being remediable, its early recognition will result in the necessary special precautions being taken calmly and deliberately instead of with the rush, excitement and panic occasioned when it is not recognised till labour has begun.

The secret of effective publicity is complete honesty: let the public know the reasons for our insistence on the value of ante-natal care, on timely and adequate preparation for the

confinement and on the inadvisability of trying to short circuit nature's perfect delivery technique, and we will get a far greater measure of co-operation from them than if we do not take them into our confidence. It is ignorance which is the root cause of pregnancy—and childbirth—phobias, and our health services have a bounden duty to dispel it. The choice of publicity methods depends on circumstances: the good health visitor can do a lot by direct approach to the mothers. Granted good relationships between the medical officer of health and the practitioners, free discussion of the problem at British Medical Association meetings, etc., will ensure the backing of the profession which is essential. In Rochdale we found that practitioners who had previously refrained from sending cases into hospital or getting another opinion until all sorts of heroic measures had been tried, were anxious to anticipate trouble by availing themselves of hospital and consultant facilities. The routine use of forceps just to hurry things up was largely discontinued and doctors were enormously strengthened in their resistance to importunities of the midwife, the patient or her relatives by the fact that every woman in the town knew that unnecessary interference was fraught with danger. Every provincial town has dozens of women's organisations, whether they be associated with church, co-operative, political, social or works movements. The seed of knowledge sowed by direct contact with these, very quickly grows into a well-informed public opinion. There is no need for alarmist methods: the key note should be that pregnancy and childbirth are safe and can be made even safer if every one associated with them, the expectant mother, her relatives—including the husband—midwife, doctor and local authority adequately perform their part of the business.

Causes of Maternal Mortality.—These are, of course, legion, and in running over some of the most important briefly, I realise that I am probably not telling anything new. My excuse for venturing to discuss them at all is that circumstances have been such that both in Rochdale and in London I have had an opportunity of investigating very many maternal deaths and of discussing causes and remedies with all varieties of expert.

The one very definite fact is that the fault, if fault there be, may lie with any one of the agencies concerned—the local authority, the hospital, the doctor, the midwife, and last, but certainly not least, the woman herself.

Before discussing causes of individual deaths, I would like to mention several general factors which apply in widely varying degrees to different boroughs or localities and which result in a high maternal mortality rate which is not necessarily indicative of any fault.

First, there is the question of fertility. We have been investigating the reason why the average rate in the east end of London is lower than in certain boroughs in the west end. There are several factors, one of the most important being that in the latter the percentage of primigravidae is very much higher and the age at which a woman has her first baby is considerably greater. Without a social upheaval and a complete change of outlook, which will not come in our time, this disparity will continue and critical comparison of the rates in the two types of borough will always be invalidated.

Secondly, the extent of illegitimacy is much higher in the west than in the east end, this being due to the much larger number of young unmarried women employed in these areas in various capacities. As the maternal mortality rate in unmarried mothers is much higher than in the married, this factor must always be taken into consideration.

Thirdly, the extent and quality of hospital provision is far from constant throughout the country. This factor is not entirely divorced from local control, but it is manifestly difficult to make any sudden or marked improvement in conditions which have obtained for many years and which are probably not looked upon as other than excellent by those responsible for them. It is freely admitted that some municipal hospitals are very much better than others, but it is rare to hear of any voluntary hospital, however poorly it is staffed or equipped, referred to as anything but a cross between, say, Guy's and Edinburgh Royal. It is *lèse-majesté* to even venture to criticise anything that has the magic word "voluntary" tagged on to it. The area with an inefficient hospital is obviously handicapped in its efforts to reduce maternal mortality.

Fourthly, the figures published by any hospital or organisation must be considered in relation to the type of case with which it deals. Where there is any selection of cases, for example where the unmarried, those in whom labour has commenced, those who have not satisfied the criteria of ante-natal supervision, cases of abortion and cases where a serious abnormality has been found during pregnancy, are not admitted or undertaken, the results are not

comparable with those of hospitals and organisations which have to accept all cases irrespective of type.

Onus of responsibility in individual cases.

(i) *The woman herself.*—There are several causes which are more or less outwith control—general ill-health, rickets, age (not due to birth control), long-standing malnutrition and ignorance. There are many more entirely within her own control. Concealment of pregnancy, either through a desire to "get without" or to that morbid sense of shame which is to be so strongly deprecated; her age, when due to over-long reluctance to have a baby; her refusal to avail herself of existing facilities for ante-natal supervision; her unwillingness to carry out the advice given her; her failure to make reasonable arrangements for her confinement; her insistence that the midwife should summon a doctor to accelerate natural processes; attempts at abortion. In a recent article in the *Journal of Obstetrics and Gynaecology*, Dr. T. N. Parrish gives details of 1,000 cases of abortion treated in a London County Council hospital. Almost half the cases were infected, the incidence of sepsis varying directly with the extent to which the abortion had progressed before admission. In 485 cases illegal induction was admitted, only nine being willing to state that a professional abortionist had been employed. Without very frank publicity as to the dangers of this practice, there is little likelihood of any diminution in the number who attempt it. The deaths from abortion in England and Wales in 1933 numbered 463, of which 257 were due to sepsis, this being 24.2 per cent. of the total deaths from puerperal fever. In my opinion the root cause of the prevalence of abortion is not poverty, although it is certainly economic in so far as it arises from the desire or the alleged necessity to keep up a certain standard of living; "without the sacrifice of some luxury or amenity—theatres or a motor car, for example—we cannot afford to have children."

(ii) *The midwife.*—While the average standard is good and is getting better, there are still many who are ignorant and inefficient. She may be at fault in many ways: failure to diagnose departures from normal; unwillingness to refer ante-natal cases to a clinic or doctor, either through undue faith in her own ability or to the fear of losing her fee; tardiness in obtaining assistance at the confinement from the above two reasons or from the knowledge that she has already made one mistake and hopes to cover

it up; reluctance to admit that she has been in contact with infection; timidity or overwork, either of which may impel her to advise unnecessarily that a doctor should be called in to expedite completion of a case. Apart from long overdue improvement in the training, status and financial security of the midwife, the remedy for most of the sins of omission or commission outlined above lies in a well-informed public opinion.

(iii) *The doctor.*—The position of the private practitioner is exceedingly difficult; his training is lamentably inadequate at most schools. This is not the place to discuss whether it is reasonable to scamp midwifery training in favour of an exhaustive study of obscure nervous disease or prolonged attendance at major surgical operations. The average man goes into practice with no real practical experience; his opportunities of gaining experience are limited and all are not equally conscientious. Many are extremely competent; many others realise their own limitations and have immediate recourse to those better qualified when the abnormal is met: many frankly admit that they do not wish to do midwifery. But it is idle to deny that many avoidable deaths are directly attributable to lack of knowledge, error of judgment (frequently arising from the foregoing), carelessness, hurry, or unwillingness to call in expert assistance, on the part of a general practitioner. The remedy, as in the case of the midwife, is not easy, although enlightened public opinion will again act as a deterrent of bad work. There is, and must be, an important place for general practitioners in any midwifery service, but, in their own, their profession's and the public interest, they must make sure that all who undertake this work are keen and competent. A possible system appears to be that whereby midwifery is voluntarily surrendered to a selected body of practitioners who have the experience and the desire to do it. It merely clouds the issue for the British Medical Association or any other representative body to pretend that all their geese are swans and that every practitioner is, by the fact of registration alone, a competent accoucheur.

(iv) *The consultant.*—Some are too prone to interfere unnecessarily; they feel that they have not justified their existence unless they display some *tour de force*: here again knowledge of the true facts will deter any woman, however wealthy or aristocratic, from feeling that the consultant has got his money for nothing if he adopts a policy of masterly inactivity while

nature does her job. Many of them have been remiss in not stressing the part played by bad midwifery in the causation of maternal deaths. At a British Medical Association meeting some years ago, not one of the consultants who spoke made any reference to the low standard of some general practitioner midwifery. This was much at variance with the privately expressed opinions of some of them.

(v) *The voluntary hospital.*—The hospital is at fault if it purports to deal with maternity cases and falls short of accepted standards of staff, equipment or accommodation. There should be arrangements for the segregation of the suspect pyrexia case and a completely separate unit for the interfered with and potentially septic.

(vi) *The local authority.*—There are very many respects in which a local authority may be held blameworthy. Many of them may fulfil the recommendations in the letter, but not in the spirit. Their hospitals may fail in just the same way as the voluntary hospitals—quality and number of staff, equipment and accommodation. Ante-natal clinic premises may not offer the requisite degree of comfort and privacy; the experience and qualifications of the medical officer in charge may not be such as to command the respect of the practitioners—it cannot be too strongly emphasised that the person appointed to do this work must be an expert. Too often it is looked on as a sideline in an overworked omnibus appointment. There should be continuity between the ante-natal and in-patient departments; there should be a self-contained pyrexia unit; the consultant should be an accepted authority and practitioners should not be openly or tacitly discouraged from making full use of his services by a niggling attitude on the expenditure involved. The medical officer of health is gravely at fault if he does not do his utmost to get his committee to do more than the minimum, and he is to be pitied, whether blameworthy or not, if his relations with practitioners are not cordial. When this state of affairs obtains, there are usually faults on both sides and the old tag about “a house divided against itself” has a very real significance. There are bad authorities, poor medical officers of health and unsuitable subordinate medical staff, just as there are the widest variations in the type and ability of our fellows in private practice.

This review is obviously very far from comprehensive and I have made little attempt to suggest remedies. My main contention is

that once the true facts are known, public opinion will be so strong that improvements will follow in all branches of the service whatever the cost. The time has come to tell the truth and shame the devil: let the blame go where it belongs, to a careless public, an inefficient midwife, an inept doctor or a badly-run health department.

DISCUSSION.

Dr. E. H. T. Nash expressed his appreciation of the paper and asked whether, during the period described, there was any unemployment causing variations in the state of nutrition of the mothers. Dr. Topping replied that Rochdale had been a depressed area for a long while, but that conditions had not varied appreciably during the period under discussion. He did not find that the maternal mortality was necessarily highest amongst poor class mothers and that these were often getting sound, regular food. He agreed, however, that the figures in the Rhondda Valley were at their best during the intensive campaign for the provision of extra nourishment for the unemployed.

Dr. Dunstan Brewer said he was extremely interested in the Rochdale results. He admitted that where the maternal mortality was high it was always possible to reduce it. There was undoubtedly an irreducible minimum of probably about one in a thousand, comprising, among others, certain cases of eclampsia and of sepsis; nevertheless, even where the mortality was low, it was nearly always possible on investigation to discover cases where death could have been prevented. He considered that the casting of maternal mortality was usually erroneous, and advocated the adoption of the New South Wales convention introduced by Dr. Dick, namely, that every death of a woman between the ages of 15 and 45 should be considered to be a maternal death until it was proved to be unconnected with pregnancy. The adoption of this standard in Dr. Brewer's area had not necessarily meant the investigation of more than about a dozen cases a year, as many deaths were obviously attributable to other causes; but it had resulted in the discovery of a number of unsuspected cases and in a figure for maternal mortality which was double that of the official death returns in the district! He cited, as an example, a case of a girl certified to have died of “myocarditis” who proved on *post-mortem* examination to have a knitting needle in her peritoneum. He referred to the assertion that the advancing age of primiparae contributed to the increase in maternal mortality; in Canada, however, the average age of primiparae had not increased although maternal mortality had. He considered that the increase in the practice of abortion was more apparent than real, but held that the “art” of obstetrics had deteriorated during the past forty years both amongst general practitioners and consultants. This was due to practitioners being unable to obtain the necessary experience for efficiency owing to the diminution in the numbers of private patients.

Dr. Nora Watlie said that in Glasgow the difficulty encountered was not so much the provision of adequate ante-natal as of intra-natal care.

Dr. Maitland Radford declared that a more important

paper had never been read in the Group and that it was worthy of “scare” headlines.

Dr. Stang of Perth, Western Australia, described some of the work which was being accomplished in her country. Their principal difficulty was getting into touch with expectant mothers, as these mostly booked with doctors, and the doctors did not send them to the centres. Dr. Topping, in his reply, suggested that compulsory notification of pregnancy might meet this difficulty.

Dr. Margaret Strathie asked questions about the practical administration of midwifery schemes, to which Dr. Topping replied that an improved service of midwives, probably a municipal one, was required. Unity of control was desirable and a voluntary panel of doctors might be the best arrangement.

Dr. M'Gonigle considered that one of the causes of bad midwifery was the liberal interpretation adopted by midwives of the rules of the Central Midwives Board. Some midwives sent for medical help unnecessarily, becoming thus responsible for the extra spending of public money, and also for a great deal of unnecessarily hurried interference by busy doctors.

Dr. Howie said that in her experience fatalities amongst multiparae frequently occurred in patients who had previously had difficult labours.

Dr. Topping, in a general reply, admitted that his paper had been given straight from the shoulder. He asserted that in many cases maternal deaths were nothing short of murder, and he described several glaring examples. It had even been suggested that a coroner's inquest should be held on every case of maternal death. He also believed that abortion was definitely on the increase, and mentioned the case of a large factory in which the girls were said to pay a retaining fee of 1d. a week each to an old crone who “helped” them when “in trouble.”

Dr. Bell of Liverpool, in moving a vote of thanks to Dr. Topping, said that his paper was probably the most interesting and illuminating which had been submitted to the Group, and that it showed the results that could be achieved when people were approached in the right spirit.

THE Society of Apothecaries of London announce that at the examination held on May 18th, 20th and 21st, 1936, for the Mastery of Midwifery (M.M.S.A.), the following candidates satisfied the examiners: Monica Madeline Mary Meynell Fisher, M.R.C.S. (ENG.), L.R.C.P. (LOND.), Fellow, Society of Medical Officers of Health; Arthur Lionel Gilbey, M.B., CH.B. (EDIN.); Geoffrey Pryce Goodwin, B.A. (CAMB.), M.R.C.S. (ENG.), L.R.C.P. (LOND.); Gwynedd Hugh-Jones, M.B., B.S. (LOND.), M.R.C.S. (ENG.), L.R.C.P. (LOND.); Margaret Jane Thorburn Leitch, M.B., CH.B. (GLAS.); Dorothy Makepeace, M.A. (CAMB.), M.D. (LOND.), D.P.H., Fellow, Society of Medical Officers of Health; Meyrick Yare Paget, M.R.C.S. (ENG.), L.R.C.P. (LOND.); James Henderson Spence, M.A., M.B., B.CH. (CAMB.), M.R.C.S. (ENG.), L.R.C.P. (LOND.).

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

Draft Rules of the Central Midwives Board.

Possibly it was the weather or perhaps it was the nature of the business, but quite definitely the special meeting of the Council on Friday, June 26th, was the most meagrely attended of any held for a very long time. Those who did attend, few though they were, certainly gave lengthy and serious consideration and discussion to the draft of the new Section B of the rules of the Central Midwives Board, which was what had brought them together. To assist the meeting and to help in arriving at decisions as to how best to advise the Board, there was a memorandum from the Maternity and Child Welfare Group. The members of this body had very obviously given a great deal of thought to the rules, and the Council was fortunate in that two of their number were present to explain the views of the Group and to assist in the deliberations. Actually, most of the suggestions offered were accepted, though in regard to several there was quite a volume of discussion. That the Central Midwives Board have been concerned to try to meet as many as possible of the interests involved may safely be taken.

The Special Council Meeting.

In the decisions arrived at by the Council it was clear that there was recognition of this and a real willingness on the part of health officers to support the Board and to help in the carrying out of the rules, more especially those aiming at securing that, as far as possible before entering upon a course of midwifery training, the woman should have had a nursing training. That there were some who would have preferred to have seen the rule made absolute at once or after a limited period, and that no provision at all should have been made for the admission to training—no matter its duration—for any but trained nurses, was shown. Finally, however, it was decided to offer no comment, the feeling being that, as a result of its operation and of the establishment of the midwifery service, the object aimed at eventually would be attained. In general there was approval of the provision made for dividing the training into two periods and setting up of two examinations, only one of which need be taken by those who, like health visitors, do not propose to practise. Some attention was

given to other provisions which might interfere with a woman who, having been appointed a health visitor, afterwards decides to undertake midwifery practice.

Pronouncements and Pronunciations.

Amendments of the rules to facilitate the carrying out of such a desire were suggested. Quite a good deal of discussion centred round proposals, emanating from the Maternity and Child Welfare Group, designed to ensure that during the course of her training the pupil should see and learn as much as possible of infant welfare work, the hygiene of infancy, feeding and such like. The necessity for instruction by a skilled pædiatrician and the bringing in of such a specialist, in addition to the obstetrician, was stressed. One of the difficulties associated with this proposal had connection with the expression "pædiatrics" and its meaning and, incidentally, its pronunciation, there being some who found the final syllable the more deserving of attention. In the discussion as a whole, indeed, words as such appeared to matter a great deal to many of the speakers. One of the few suggestions of the Maternity and Child Welfare Group that failed to secure acceptance had reference to the word "womb" which, in the opinion of the Group, should be replaced, in the rules, by "uterus." The general feeling, it was interesting if not, indeed, pleasant to find, was in favour of allowing "womb" to stand. Actually, as will be seen when in due course the report of the Council is published, the number of suggestions and criticisms it was decided to forward to the Board was comparatively few.

Dr. Jane Turnbull.

Something in the nature of a personal loss has been sustained by the retirement of Dr. Jane Turnbull from her post at the Ministry of Health. Since the resignation of Dame Janet Campbell, Dr. Turnbull had, perhaps, become known more prominently not only to members of the Maternity and Child Welfare Group but of the public health service generally, and, though they were not expressed, there were very high hopes that the association with her in her new position would be continued for a considerable time. The possibility that the date of her retirement was so comparatively near had not

been contemplated, and it came distinctly as a surprise to very many to learn that the end of her period of tenure of office had arrived. Into her retirement she may be assured that she carries the warmest of good wishes from all health officers, and that with them she has left memories, which it will be a delight to recall, of one with whom it was always a pleasure to make contact on any question, no matter how controversial it might be.

International Study of Methods of Teaching Preventive Medicine.

Particular interest attaches to the announcement that Dr. J. G. Fitzgerald, Dean of the Faculty of Medicine, Director of the School of Hygiene and of the Connaught Laboratories, University of Toronto, has been invited by the Rockefeller Foundation to make a study of the methods at present employed in the teaching of preventive medicine to undergraduates in medical schools. It is anticipated that the study will occupy a period of one year commencing September 15th, 1936. Dr. Charles Edward Smith of the Stanford University Medical School, San Francisco, will assist in the undertaking. University medical schools in the United States and Canada, the British Isles, and in European countries will be visited in the course of the survey. Dr. Fitzgerald, who has carried out a number of investigations and, incidentally, was one of the party, which included also Professor W. W. Jameson of the London School of Hygiene and Tropical Medicine, that visited India a year or two ago, resigned his position as Dean of the Faculty of Medicine, University of Toronto, on June 30th. He will be given leave of absence by the Governors of the University for the necessary period and will, it is expected, return to the University of Toronto in September, 1937, as Director of the School of Hygiene and of the Connaught Laboratories.

Vaccination in Baltimore.

Opportunity is taken to offer congratulations to Dr. Huntington Williams, Health Commissioner of Baltimore, on the excellent brochure on small-pox vaccination recently published, and to thank him for having sent a copy. His public spiritedness in offering copies to deans of medical schools in this country is also commended. The booklet is extremely well done, particularly noteworthy being the coloured plate showing the various forms of

reaction not only amongst white subjects but also in the coloured. It is believed that so far as the latter are concerned this is the first time that a pictorial record has been published. To teachers in medical schools the plate should prove very useful. For propaganda purposes the other contributions to this vaccination number of the Baltimore Department monthly bulletin—*Health News*—should be of great value. The note on the Early History of Vaccination in Maryland is very attractively written, as is also that of Dr. Williams on Vaccination—1798 to 1936. The contribution of the Director of the Bureau of Laboratories (Dr. Leroy Ewing) on the Preparation and Care of Vaccine Virus, and of Dr. Adolph Weinzirl (the Director of the Bureau of Communicable Diseases) on the Technique of Vaccination, should prove interesting and informative to medical practitioners as well as the general public in the City of Baltimore. As accompaniments to the plate, all of these have value; at the same time, however, it is the plate that stands out and that will probably prove the most valuable of the items shown.

What about Moses?

Opposing counsel very often fall far short of success in their efforts to discover scoring points in slum clearance inquiries. There was, for example, the one the other day who tried to create doubt as to the propriety of condemning a house on the ground that a child who had won a prize in a baby show had come from it. The witness, under examination, however, had no surprise to show and refused to be shaken. After all, why should he be? History, more especially biblical history, has record of even more wonderful babies having been found in much more unlikely places than a slum dwelling.

The Way the Money Goes.

They know all about this at Woodhall Spa, where a member of the local authority, a gallant colonel, has shown himself desirous of making his colleagues believe that any expenditure on the salary of the medical officer of health is a scandalous waste of public money. At the moment this expenditure is no less than £36 per annum, a terrible increase in the scandalousness of the waste being threatened to the extent of £14 if a proposal of the Lindsey County Council, involving the appointment of eight full-time medical officers of health for the county, was carried out.

Bacteriology in Relation to Public Dentistry.

By ARTHUR BULLEID, M.R.C.S., L.R.C.P., L.D.S., Hon. Dental Surgeon, Guy's Hospital.

Mr. Bulleid, who has lately been chosen to deliver a Hunterian oration on this subject, is well-known throughout the dental profession for his study of dental bacteriology both clinically and in the laboratory. This summary of a paper he read before the Dental Officers' Group was found most instructive by members of the Group and of the greatest importance in considering the rôle of dental sepsis in relation to, amongst other matters, the maternal mortality rate.

BACTERIOLOGY can and does play quite an important part in modern dental treatment, whether in private practice or in the public service, but, like other specialities of a like nature, should only be considered an adjunct to clinical observation.

Practically all well-known diseases are the result of the activities of micro-organisms and their toxins, or in some cases to ultra-microscopic viruses, about which our knowledge is limited. Infection of tissues, whether in the mouth or elsewhere, means an invasion of these tissues by such organisms. A definition of infection is an association of parasite and host in which the reaction involves damage, however slight, to the host's tissues.

In dividing infections into "local" and "general," it must be remembered that the difference is only relative. We speak of local infection when the actual invasion is confined to a small area of the body and the reaction localised to its immediate surroundings, whereas in general infection such reaction pervades the whole body. The division, therefore, is merely one of degree, and only useful as a clinical guide to severity. Many local infections, of course, proceed to general, such as anthrax or septicaemia consequent upon carbuncles or boils, the distribution of the causal organism varying in penetration of the body. In a real case of general infection, the local manifestations at the site of inoculation may be so slight as to baffle detection, yet the general disturbance is very severe.

It should be duly noted that certain micro-organisms show a tendency to invade the blood-stream, an example being the streptococci. In others, such as the staphylococci, there is a much lessened tendency to do so. Most dental infections are streptococcal with, consequently, a marked tendency to invade the blood-stream. This invasion does not usually result in septicaemia, as dental streptococci are of low

virulence, and only occasionally does a grave reaction occur. In the case of dental streptococci, being mostly of the viridans or indifferent types, subsequent infections are usually either a toxæmia or bacteraemia, but I have personally seen several fatal results of tooth extraction which shows there are often exceptions. True hæmolytic streptococci are uncommon in dental diseases, a fortunate matter as the general effects of their infections are very grave. A bacteriological point I would emphasise is the importance of the finding in dental lesions of the streptococcus viridans in symbiosis with the yellow staphylococcus. This combination should be carefully considered, particularly when occurring in those young patients who suffer from boils or carbuncles. The opening up of the alveolus by tooth extraction in such cases may be attended by the definite risk of the staphylococci gaining entry into the blood-stream. I bring to your notice two deaths following extractions in boys who suffered from boils. It is similarly possible for osteomyelitis to occur with no signs of general septicaemia.

Clinically, our work as dental surgeons leads us to deal mainly with local conditions such as caries, gingivitis and pyorrhœa, and efficient treatment is directed towards the prevention of micro-organisms entering the blood. With the possible exception of Vincent's angina, this is not difficult and the question of systemic disease rarely arises.

It is the custom, clinically, to divide dental sepsis into two groups, "open" and "closed," the former signifying an infection where free drainage into the buccal cavity is possible and the latter where no such drainage is apparent. In dealing with open sepsis, I would like to stress the value of simple bacteriological investigation of smears, a measure any dental surgeon with a modicum of knowledge can undertake in a short space of time. Little can be seen on a slide prepared from a smear taken from a

normal gingival trough; a few epithelial cells, a few cocci and bacilli, a few mononuclear leucocytes and a few strands of leptothrix buccalis mycelium. The importance of the last-named organism must be stressed as its presence shows a tendency to tartar formation and most people will recognise the close association of tartar with gum diseases.

A smear from a case of early catarrhal gingivitis shows an increase in the guso-spirochætal flora, and possibly the presence of *B. influenzae*, pneumococci or streptococci, according to whichever is responsible for the catarrh. In influenza epidemics, for example, it is common to find *B. influenzae* as the causal organism, but the spirochætal increase is usually constant in every case.

Most of us are familiar with acute ulcerative stomatitis and are aware that the combination of enormous numbers of the fusiform bacillus with *T. vincenti* is taken as proof positive of the condition when combined with the absence of other oral organisms.

In well-established pyorrhœa, the amount of material present in a smear is somewhat bewildering. Polymorphonuclear leucocytes are usually present and are of importance. If they stain well with nuclei well defined, an active condition is denoted, whereas if their envelope is lost and the nuclei stain badly, chronicity is adjudged. If, in the course of treatment, the polymorphonuclears lessen in number and are replaced by mononuclears, then the case is responding to treatment. Clinical observation supports this statement.

In dealing with oral spirochætes or treponemata, there is no evidence, either clinical or experimental, to prove that these organisms can produce disease by themselves. Their exact importance is doubtful, and my own view is that they create a favourable pabulum on which pyogenic micro-organisms can flourish.

A part of public health dentistry of importance is the treatment of tuberculosis. Oral lesions of this disease are infrequent, and only in late cases of phthisis can tubercle bacilli be demonstrated in the mouth.

There is no unanimity of opinion as to the probable entry of Koch's bacillus into the body but, at any rate, primary lesions in or about the mouth are exceedingly rare, and ordinary oral hygiene should reduce any such risk to a negligible minimum. Most authorities are doubtful whether tubercular or cervical adenitis is due to extension from the teeth or the tonsils, and my own opinion is that the latter effect is

more probable. Whatever our idea as to the initial entry of the tubercle organisms, however, it is obvious that a healthy mouth minimises to some extent the risk of secondary infection supervening in the lungs.

In dealing with the association of dental sepsis and systemic disease, I am averse to speculative extractions in the hope that removal of teeth will cure or alleviate some general condition. It is becoming more and more obvious that dental sepsis *per se* is the sole cause of few general diseases. My own opinion is that as dental sepsis is primarily streptococcal of low pathogenicity, the general damage is due to such sepsis being an overload rather than a causal factor. Medical and surgical opinion requires the eradication of any focus of infection where practicable, but many a patient has suffered wholesale dental mutilation with no benefit. Wise conservative treatment can bring about the greatest improvement, especially in cases of "open" sepsis. In "closed" sepsis, I must confess a strong suspicion in the presence of pulpless teeth, as they cannot be rendered sterile. Extraction of such teeth is probably the safest procedure. This fact shows conservation of the dental pulp to be of paramount importance and, to work back still further, how much better are preventive measures along lines to ensure the preservation of the teeth.

My own method for ascertaining the effect of existing oral sepsis in systemic disease is as follows:—

(1) Obtain from the doctor concerned a report as to the existence of any other possible septic focus, removal of which will not mutilate the patient. If none can be found, proceed to (2).

(2) Examine the mouth and carefully chart the findings.

(3) Radiograph the whole mouth and chart pulpless teeth, alveolar changes such as rarefaction or sclerosis, and note the extent of alveolar absorption.

(4) Extract a tooth, pulpless for preference, which shows most clinical signs of infection, and make aerobic and anaerobic cultures from the apex.

(5) Take a specimen of blood from a vein in the bend of the elbow, allow it to clot and pipette off the serum.

(6) Carry out agglutination experiments with dental streptococcal antigen and the patient's serum. Positive agglutination in a high dilution of the serum strongly supports the significance of the dental focus of infection. A negative result is inconclusive.

(7) Do a complete blood count if possible, and certainly a differential leucocyte count. A slight degree of secondary anæmia coupled with absolute lymphocytosis is corroborative evidence of chronic infection.

Should all these tests be positive, then it is at least not hasty judgment to advise extraction of all teeth which show clinical and radiological evidence of infection.

I refer to the bacteriology of puerperal sepsis with some diffidence. The frequency of streptococci in the vagina of healthy pregnant women while the uterus is sterile can be explained by the presence of a protecting plug of cervical secretion preventing the upward passage of the micro-organisms. Most vaginal streptococci in pregnant women are non-hæmolytic but occasionally hæmolytic varieties may be found. It is fairly obvious that the former are non-pathogenic, otherwise every case of childbirth would be followed by puerperal sepsis.

In cases of sepsis, the uterus must undoubtedly become infected from the first day of normal puerperium. There are probably two sources of infection, one extrinsic and the other intrinsic. The former results from contagion without the body, and the possible risk from nurses, etc., with infected tonsils, teeth and air-passages is an important matter. The causal organism is usually hæmolytic, but in intrinsic or auto-genous infections, the streptococcus is mostly non-hæmolytic, though numerous exceptions can be quoted. Such organisms may invade the uterus from the vagina during the puerperium, and if, in addition, there is difficult labour and consequent trauma in a patient with lowered body immunity or resistance to infection, then puerperal sepsis may well be the result. Dental infection is important, therefore, as a possible overload in causing impaired immunity of the tissues to infection. No mother should be required to face a confinement with extensive dental sepsis as the risk of subsequent grave results is far greater than in systematic operative interference. I would emphasise, however, that multiple extractions should never be carried out at one operation owing to the possibility of a resultant streptococcal bacteræmia.

DISCUSSION.

Mr. F. Breese (Dental Surgeon, London County Council) asked Mr. Bulleid if there was an explanation of the origin of "infective" ulcers in the mouth.

Mr. Jeffrey Fletcher (D.O., Devonshire C.C.) wondered whether neck glands could become infected by deciduous teeth in which the pulps were vital.

Mr. Gordon Taylor (D.O., London County Council) observed that in the London County Council hospitals many conditions were met with that would not arise in school dentistry. Deaths from oral sepsis did arise from time to time from what appeared fairly trivial causes, such as extraction of a loose tooth in an aged person. With regard to multiple extractions, Mr. Taylor was in agreement with the speaker but felt that such operations were not so severe upon the nursing mother as upon the expectant mother.

Mr. J. F. Pilbeam (Chief D.O., Croydon C.B.) asked Mr. Bulleid for an explanation regarding large swellings, often seen about the jaws in young children, of no apparent origin which spontaneously disappeared. Regarding sanatorium work, Mr. Pilbeam was not completely satisfied that dental sepsis was wholly responsible for the tuberculous patient's sudden rises in temperature when teeth were extracted. Might not those fluctuations in temperature merely be coincident with dental treatment?

Mr. McClelland (D.O., Hants. C.C.) was interested in Mr. Bulleid's remarks regarding multiple extractions in expectant mothers. Unfortunately, many of these patients were only sent when wholesale dental sepsis was present.

Miss Radcliffe (S.D.O., West Riding C.C.) also felt a deal of misgiving when performing multiple extractions in expectant mothers.

Mr. Bulleid in reply, said that Mr. Breese's question regarding small ulcers in the mouth was very difficult, as their cause was hard to determine. He felt that they were not gastric in origin. With regard to deciduous teeth causing infection when vital, that was certainly possible. For those public dental officers working in municipal hospitals it was better, where severe sepsis or great age existed, to take a smear for bacteriological evidence, otherwise serious consequences were inevitable. The speaker most emphatically disagreed with multiple extractions in any patient and refused ever to carry out clearances of the mouth. Such radical measures were fraught with danger. Dental infection was a potent factor in the temperature of tuberculous people, and he could name a great number of cases in which he had seen the temperature drop after extraction of an infected tooth.

The President (Mr. Grantley Smith) thanked Mr. Bulleid for his very interesting paper and was glad to hear stressed the importance of the co-operation between the dental officer and the pathological department. He was also pleased to note that reference had been made to the importance of dental sepsis in preparing the soil for other diseased conditions. He himself had brought the point before the Group on many occasions in discussing puerperal sepsis. He congratulated Mr. Bulleid on so clearly explaining the principle of bacterial overload.

AIR RAID PRECAUTIONS.—Nearly 14,000 detachment members of the British Red Cross Society are now qualified in air raid precautions. This subject is now included in the regular training of all the Society's voluntary aid detachments.

The Society.

Reports, Proceedings and Announcements.

NOTICES.

ANNUAL SUBSCRIPTIONS.

Members who have not yet paid their subscriptions for the current session (notices were sent out in this connection recently) are asked to make early payment and thus to save the staff at headquarters further labour in collecting these amounts before the annual audit.

THE ANNUAL DINNER.

As announced in the last issue, the Annual Dinner will be held on Friday, November 20th next, at the Piccadilly Hotel, London, with Dr. Ernest Ward (President, 1936-7) in the chair. Sir Kingsley Wood, the Minister of Health, and Lord Dawson of Penn, P.R.C.P., have accepted the invitation of the Society to be present.

NOMINATIONS.

Members who wish to nominate candidates for election at the beginning of the new session commencing in October are asked to do so before the end of August, so that the names of prospective members can be included in the new Roll of Members.

The following nominations have already been received:—

Fellows:—Michael John Bastible, M.D. (GLASG.), D.P.H.; James Brooks, M.R.C.S., L.R.C.P., D.P.H.; Gordon Stewart Clouston, M.D. (LIV.); John Shaw Drummond, M.B., CH.B. (GLASG.), D.P.H.; Robert Evans, M.D., D.L.O., F.R.C.S. (EDIN.); Robert Charles Gubbins, M.B., CH.B. (LIV.), D.P.H.; Edward Hughes, M.D. (LIV.), D.P.H.; Margaret Allan Mackenzie M.B., CH.B. (EDIN.), D.P.H.; Sydney Smith Proctor, M.D. (ABERD.), D.P.H.; Doris Marguerite Pullen, M.B., CH.B. (BRIST.); John Reid, M.D., D.P.H. (GLASG.); Jean Carmichael Watson, M.B., CH.B., B.A.O. (BELF.), D.P.H.

Associates:—Frederick Brabington - Perry, L.D.S., R.C.S. (ENG.), D.E.C.D.S. (PARIS); Reg. V. Clarke, L.R.C.P. & S., L.D.S.; Claude Colenso, L.D.S.; Percival Donald Gausden, L.D.S.; Edward A. Jennings, L.D.S.; C. F. Peacock, L.D.S.

DENTAL OFFICERS' GROUP.

The Group has been invited to take part in a joint exhibit with the Public Dental Officers' Group of the British Dental Association at the first Empire meeting to be held in London from July 27th to 30th, 1936.

It is proposed that the Group exhibit should include the following:—

- (1) A history of the Group.
- (2) An orthodontic section.
- (3) A clinical section.
- (4) A propaganda section—charts of the School Dentists' Society, and leaflets which have been approved by the Council of the Society of Medical Officers of Health.
- (5) Literature on public dentistry.
- (6) A rural dental clinic equipped with readily obtainable furniture adapted for the purpose.
- (7) Photographs of clinics and men eminent in the public dental service.
- (8) A map of England and Wales showing the distribution of public dental officers and population.
- (9) A section prepared by the Yorkshire Sub-Group of the Dental Officers' Group.

The Group is trying to organise a successful exhibit and will appreciate any assistance that members are able to give. It is particularly asked that members will send clinical cases of interest and any details of their own schemes which it is felt will be of help to the exhibit. Information should be sent to the Hon. Secretary not later than July 20th.

Members are reminded that the British Dental Association received a communication from the Board of Education intimating that the Board would be prepared to recognise, for the purposes of a grant, reasonable expenses incurred by a school dental officer through attendance at the annual general meeting of the Association.

The Group is deeply indebted to the British Dental Association for the invitation to take an active part in the Public Dental Services Section of the Empire meeting, and it is hoped that members will respond in the heartiest manner possible by ensuring that there is a good representation of members at this meeting.

J. F. PILBEAM,
Group Hon. Secretary.

Dental Clinic,
Lodge Road,
Croydon.

COUNCIL MEETING.

A special meeting of the Council was held at the house of the Society on Friday, June 26th, 1936, at 2 p.m.

The President (Dr. W. G. Savage) was in the chair and there were also present Sir Henry Brackenbury, Drs. G. F. Buchan, J. J. Buchan, A. W. Forrest, Catherine Morris Jones, Agnes Nicoll, Charles Porter, T. N. V. Potts, P. H. Stirk, J. A. Stirling, E. W. Caryl Thomas, Ernest Ward, H. Gibbons Ward and F. T. H. Wood. There were several apologies for absence.

Training of Midwives.—The main business of the meeting was to discuss the draft of the new Section B of the Central Midwives Board's rules, and an explanatory memorandum drawn up by the Board.

In addition to receiving the new draft Section B and memorandum of the C.M.B., the Council considered observations submitted by the Association of Maternity and Child Welfare Centres and the National Association for the Prevention of Infant Mortality.

The Council decided to forward to the Central Midwives Board certain observations (which will be reported in a later issue) on the draft new Section B.

Notification of Measles.—It was reported that the Joint Select Committee now considering the Public Health Bill, 1936, proposed to include measles in the list of "notifiable diseases," and that the Ministry of Health wished to ascertain the views of the Society as to the desirability or otherwise of this proposal being carried into effect.

There was some discussion, but it was felt that the meeting was not sufficiently representative to give an authoritative reply on behalf of the Society on a question of this importance without previous notice and opportunity of proper consideration. The Executive Secretary was instructed to inform the Ministry accordingly and to express the hope that the Society's considered opinion might be submitted after the next meeting.

Inadequate Superannuation Allowance.—The Council approved a request by the Yorkshire Branch that they take appropriate action on behalf of a Fellow, recently retired, whose superannuation allowance calculated strictly in accordance with the Act, was felt to be inadequate.

THE YORKSHIRE BRANCH.

President: Dr. G. C. F. Roe, M.O.H., Halifax.

Hon. Secretary: Dr. James Mair, M.O.H., Harrogate.

An ordinary meeting of the Branch was held at Seacroft Hospital, Leeds, on April 24th, 1936. The President occupied the chair and was supported by sixteen members.

Dr. Agnes Nicoll's memorandum on the facilities desirable to improve the efficiency of the medical personnel of a public health department was considered, and after full discussion it was resolved that, while the Branch was in sympathy with the objects of the memorandum, it was felt that it would be a mistake to put it forward as a claim for special study leave, and that the most that could be asked for was that facilities be given by local authorities to their officers to keep themselves abreast of recent advances in medicine and public health.

The President mentioned that Dr. T. Gibson, Medical Officer of Health, of Wakefield, was retiring. Upon the suggestion of Dr. J. J. Jervis, supported by practically every member present, the Branch tendered to Dr. Gibson their best wishes for a long and happy period of well-earned ease. Dr. Gibson suitably replied.

Mr. H. Gartside of Evans Biological Institute exhibited and explained a film showing the method of production of various antitoxins, prophylactics and vaccine lymph, and was warmly thanked for his interesting and useful demonstration.

Tea was provided by the kindness of the Corporation of the City of Leeds, who were cordially thanked by the President for their hospitality.

THE WEST OF ENGLAND BRANCH.

President: Dr. L. Meredith Davies, M.O.H., Devon C.C.

Hon. Secretary: Dr. P. H. Stirk, Exeter.

A meeting of this Branch was held in Exeter on June 5th, 1936, the President occupying the chair. Twelve members were present.

The following officers were elected for the session 1936-37:—

President.—Dr. T. Peirson (Plymouth).

Vice-President.—Dr. G. B. Page (Exeter).

Hon. Treasurer.—Dr. J. F. Blackett.

Hon. Secretary and Representative on the Council of the Society.—Dr. P. H. Stirk.

The report of the Branch Representative on the last Council meeting was received, and much satisfaction was expressed at the election of Dr. Ernest Ward to the presidential chair of the Society, this being the first time that the position had been held by a departmental medical officer. The Hon. Secretary was instructed to send a letter of congratulation to Dr. Ward conveying to him the best wishes of the Branch for a very happy year of office.

Dr. T. Lawson McEwan (Bacteriologist, Devon County Council) read a paper on "Abortus Fever," which was listened to with great interest. Many questions were afterwards asked, and, in addition to the President (Dr. Meredith Davies), Dr. Page, Dr. Peirson, and Dr. Midgley of Hawkmoor Sanatorium took part in the discussion. At the conclusion Dr. McEwan was heartily thanked for his paper on the proposition of Dr. W. Horton Date.

A vote of thanks was also accorded the Mayor of Exeter for allowing the use of the Guildhall for the meeting.

It was decided to hold the next meeting of the Branch at Plymouth in October (on a date to be fixed) when Dr. Peirson would deliver his presidential address.

THE EAST MIDLAND BRANCH.

President: Dr. W. S. H. Campbell, M.O.H., Lindsey (Lincs.) C.C.

Hon. Secretary: Dr. J. A. Stirling, M.O.H., Chesterfield.

A meeting of this Branch was held in the Guildhall, Nottingham, on May 14th, 1936, Dr. Fairer occupying the chair. Fifteen members were present.

Mr. H. Gartside, B.Sc., of the Evans' Biological Institute, showed a film and also lantern slides on the subject of the production of antitoxins, prophylactics and vaccine lymph, and provided a running commentary. The film proved of great interest, and at the conclusion a hearty vote of thanks was accorded to Mr. Gartside and, through him, to the Evans' Biological Institute for the trouble they had taken in arranging for its presentation.

The annual meeting of the Branch was held at Harmston Hall Colony, near Lincoln, on June 11th, 1936, Dr. W. M. Ash occupying the chair. Thirteen members were present.

The annual report of the Hon. Secretary

was submitted and approved, and he was thanked for his services during the session.

The following office bearers were elected for the session, 1936-37.

President: Dr. H. L. Barker.

President-Elect: Dr. A. C. Tibbits.

Vice-President: Dr. W. S. H. Campbell.

Hon. Secretary and Treasurer and Representative on the Council of the Society: Dr. J. A. Stirling.

Branch Council: Drs. Banks, Booth, Buchanan, Ferguson, Fairer, Macdonald, McKenzie, Morrison, Newth and Ramage. Co-opted dental member, Mr. V. C. Carrington.

Dr. Graham and Mr. Littler were re-elected Auditors.

Drs. Banks and Fairer were re-elected the representatives of the Branch on the Midland Branch Council of the British Medical Association.

At the conclusion of the formal business the members spent a very interesting and instructive time inspecting the Colony under the able guidance of Dr. Laverly, the Medical Superintendent. Tea was taken, and on its conclusion Dr. Banks proposed and Dr. Tibbits seconded a hearty vote of thanks to Dr. Laverly for his kindness in arranging so interesting a meeting and for his hospitality.

THE SOUTHERN BRANCH.

President: Dr. A. B. Williamson, M.O.H., Portsmouth.
Hon. Secretary: Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

A meeting of this Branch was held at the Royal National Hospital for Consumption, Ventnor, on May 1st, 1936, the President occupying the chair. There was a good attendance of members, some of whom crossed the Solent by air.

Dr. G. Oliver Hempson (Medical Superintendent of the Hospital) gave a most interesting address, illustrated by excellent X-ray films, on "Modern Methods in the Treatment of Tuberculosis." This was followed by a demonstration of cases in the X-ray room.

On the proposition of Dr. C. F. Pedley (Tuberculosis Officer, Bournemouth), seconded by Dr. R. H. Wilshaw (Medical Officer of Health, Worthing) a hearty vote of thanks was accorded to Dr. Hempson, and it was resolved that the manuscript of his address be forwarded to the Editor of PUBLIC HEALTH with a view to publication.

A further meeting of the Branch was held at Aldershot, on June 5th, 1936, the President occupying the chair. There was a good attendance, including representatives from the Southern Command—the Deputy Director of Medical Services, Major-General T. S. Coates, O.B.E.; Colonel A. C. Hammond-Searle, Commandant of the School of Hygiene, and other medical officers from the Aldershot Command.

Dr. J. Craig Lindsay (Medical Officer of Health, Aldershot) gave a comprehensive and absorbing address on "**House Disinfestation**," illustrated by many excellent photographs. Some interesting exhibits were also on view. Dr. Lindsay commented on the re-awakening of the public conscience regarding this subject, and mentioned the necessity for raising the standard of cleanliness by educating the public. Many members took part in the discussion which followed. Colonel Hammond-Searle made some interesting observations on the problem of disinfestation as practised in the Army.

A cordial vote of thanks was accorded to Dr. Craig Lindsay on the proposition of the Deputy Director of Medical Services, seconded by Dr. Croft Watts. It was unanimously agreed to send the paper to the Editor of PUBLIC HEALTH with a view to publication.

After the meeting, tea was kindly provided by Mrs. Craig Lindsay, and members later visited the new maternity wing attached to the Aldershot Hospital.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

The recent post-graduate meetings held by the Group in London, as already announced, proved extremely popular and successful, no fewer than seventy-seven members and friends attending.

The meetings opened on Friday morning, May 15th, 1936, at the Nursery School Welfare Centre, Low Hall Lane, Walthamstow. In the absence of the President, the chair was taken by Dr. Nora Wattie, who expressed her interest in the nursery school movement and her thanks to Miss Lillian de Lissa (Principal of Gipsy Hill Training College and Chairman of the Nursery School Association of Great Britain) who is one of its leading exponents, for coming to address the Group.

Miss de Lissa gave an interesting address entitled "**Some Aspects of Education in the Nursery School**," in which she said that the nursery school was designed to continue the work of the baby clinic by attending to the physical and mental health of children during their second, third and fourth years. It formed an extension of the work with mothers and children. As regards the mothers, meetings were held for them which were at first rather of a social nature and included informal talks. Later, lectures were given on such subjects as diet, food values, clothing, and on the psychology of children. The mother and teacher were of mutual help, and the mothers were encouraged to visit the school and see the work. Thus the schools were of educational value to mothers and were particularly important in new areas. Also the extra freedom for carrying out the home tasks left the mothers more time for playing with their children in their spare time. All this led to a new kind of home life which carried on the maternity and child welfare work in a way which could not be done merely by toddlers' inspection clinics. As regards the children, in thinking of a child of two it would be realised that its physical needs included its general growth. It required to obtain control of the body and its mechanism, and it needed to learn co-ordination and physical control. That was frequently impossible in working-class homes owing to lack of space and freedom, and the streets were dangerous as playgrounds. She cited cases of children who were never out of a pram, and said there was such a thing as a physically illiterate child. At the nursery school the children enjoyed the feeling of spaciousness, and timid children became active and free. Wherever possible such activity took place in the open air and there was always a maximum of light, sun, and air. Also attention was drawn to the seasonal changes in nature, and living close to nature engendered a philosophical attitude towards life. The character needs of the children were also considered. Purposeful occupation was encouraged and the children allowed to find real things to do, thus enabling them to learn about the world in which they lived. Towards four years of age the child became a potential philosopher and was constantly asking "Why?"—a question to which he did not necessarily hope for, or expect an answer. He was taught to use his senses by being provided with a variety of worth-while toys, including Montessori bricks which taught him to judge size, texture, weight and colour.

The desire to manipulate was encouraged, and the child passed from primitive activity to planning and the stage of creation. The child was allowed to choose what to do, and to work without interruption in a way which developed concentration and was valuable in character training. Lastly, a child became socially adjusted at the nursery school where it began to make social contacts and to play with other children. A child of two was aggressive, but a child of three should grow out of that and show signs of social interest.

In reply to questions by Dr. Wattie and Dr. Kidd, Miss de Lissa agreed that the acquisition of a good vocabulary was a great help to a child, and she cited cases of the interest children took in the meaning of words. No organised games were undertaken; children were not taught to read, and there was no attempt at formal education at the nursery schools.

Alderman Mrs. McEntee, J.P. (Essex County Council and Chairman of the Public Health Committee) welcomed the Group to Walthamstow.

Dr. Powell (Medical Officer of Health) referred to the excellent medical results obtained among children attending the nursery school.

Mr. Burnell, B.Sc. (Director of Education) gave some details of the attendances, and said that in a follow-up of the children after they were admitted to the elementary schools it was found that the average number of attendances and the physical condition were higher among children who had previously attended the nursery schools.

Dr. Wattie moved a vote of thanks to Miss de Lissa for giving the Group an insight into an aspect of the work which some of the members might not previously have appreciated, and for having covered so much ground.

Dr. Muriel Radford thanked Alderman Mrs. McEntee, Dr. Powell and Mr. Burnell for their kindness in throwing open the facilities of the school and for themselves attending the meeting.

After coffee, the school was inspected and the children were watched eating their dinners at little tables set in the gardens. All the arrangements were very much admired.

On Friday afternoon a visit was paid to St. Thomas's Hospital, where an instructive lecture was given in the massage department by Dr. Doyné Bell (Chief Assistant in the Children's Department) entitled "**Respiratory Affections in the Pre-School Child**." He drew attention to certain features of the respiratory mechanism in infants: it took on its job suddenly, there

being a direct transition at birth from complete inactivity to activity; it was very liable to infection, and infections had a high virulence for small children, partly owing to the instability of the child's heat regulating mechanism; and there was a relatively large bronchial tree in the child. The protective mechanism in the child consisted of the lymphatic system; thus the spleen and the tonsils of the child were both easily enlarged. A child had naturally large tonsils which were not necessarily unhealthy or obstructive, and should therefore be left alone. He then discussed causative factors predisposing to respiratory affections. These are:—

Prematurity.—Even without debility, prematurity caused increased susceptibility to infections. But also when nursing a healthy baby the mother should wear a veil if she had a cold.

Cleft Palate and Hare Lip.—It was important in the technique of feeding such children to prevent the infection of their respiratory tracts, especially when they were being prepared for operation.

Congenital Laryngeal Stridor.—This condition was very worrying to the onlooker, but was not in the least distressing to the child. Time cured the condition usually by about eighteen months of age, but the child needed special protection to prevent respiratory infection meanwhile.

Atelectasis with either the whole or part of a lung expanded. Some cases were due to blocking of a bronchus, and in such cases blowing into the baby might prove fatal because the block was more firmly wedged. Carbon dioxide should be given and would produce a good income of air in a couple of hours.

Septic Tonsils and Adenoids.—Operation was futile unless the child was re-educated to breathe correctly. Clinically infected children should be taught to blow their noses.

Septic Teeth.—These were probably the result of a nutritional defect, but were not always due to defective vitamins. The lecturer maintained that more harm resulted from the wholesale extraction of milk teeth than in leaving them when septic, and that a little caries if brushed did little harm.

Discussing the relationship of diet to infections of the respiratory tract, Dr. Bell held that direct infection was not caused by the ingestion of infected food; thus tuberculous milk did not produce pulmonary tuberculosis. But *lack of vitamins* had a direct connection with respiratory infections. Lack of vitamin A led to catarrh of the respiratory tract. Inadequacy

of fat-soluble vitamin D resulted in rickets with a badly-formed thorax leading to atelectasis of the bases of the lungs. The remedy seemed easy, namely, the giving of vitamins to the infant. But the condition was probably also due to lack of vitamins in the expectant mother, and where 2s. 6d. a head was the maximum amount for food in the family it was impossible to prescribe a suitable diet for such a mother. The lecturer advised the giving of cod-liver oil to breast-fed infants; not to the nursing mother. Vitamin D was often absent in breast milk and therefore rickets was common in breast-fed infants. Vitamins were best given in the form of suitable foods, but where this was not possible they should be given in cod-liver oil. As regards clothing, the medical officer at the infant welfare centre should inspect the babies' clothes, because the wearing of cotton or cotton mixtures next to the skin gave rise to respiratory diseases in infants under five years. Dr. Bell then dealt with specific respiratory diseases. As regards tuberculosis, the chronic pulmonary variety was not common in young children. Tuberculous adenitis was due to droplet infection or from dust, and did not result from tuberculous milk. He said that as to the hereditary factor a strong tubercular family history connoted a tubercular tendency. A positive tuberculin skin test in a child meant that the child might at one time have been infected; its significance was when it was negative. Bronchiectasis was, he said, secondary to fibrosis. The cause in the lungs of children was a chronic infection of the respiratory tract, for instance by measles or whooping cough, going on to unresolved broncho-pneumonia, followed by fibrosis, which ultimately gave rise to bronchiectasis. The most important point in prophylaxis was to insist on several weeks convalescence at the seaside after an attack of such an infection. For measles in a child under five years of age it was a good thing to inject a serum within the first six days and thus ensure an attenuated attack, but for whooping cough serum was not much use.

In reply to a question as to the value of sunlight treatment, the lecturer considered that it was not of any value following acute respiratory infections, as the negative phase after the peak was too severe. As regards sunlight treatment generally to children in this country, it was of most value given in the later winter months when the natural heat and sun of the summer would follow. But given in the months before Christmas the child was subsequently exposed

to the severe cold and fogs of January and February.

This lecture was followed by a fascinating demonstration of ante-natal and post-natal exercises, and exercises for children up to five years of age, by the Margaret Morris Movement.

The Group then adjourned to attend the Ordinary Meeting of the Society at the house of the Society, and took part in the discussion on "Post-Graduate Teaching in Public Health."

On Saturday morning, May 16th, two lectures were given at Guy's Hospital Medical School, at which there was an attendance of fifty-two members.

Dr. Bishop delivered a lecture entitled "**Endocrine Therapy with Special Reference to Pregnancy and Children.**" He discussed the effects on pregnancy of the reproductive hormones, particularly of oestrin. He described, among others, experiments in which abortion was produced by injections of oestrin; and the treatment of uterine inertia by large doses of oestrin. He discussed the treatment of vulvovaginitis by injections of oestrin, founded on the fact that the vaginal epithelium alters during the oestrus cycle. He mentioned the work on this subject done by Dr. David Nabarro, who gave 3,000 units by mouth or 1,000 units by injection daily, the time taken in curing the condition depending upon the dosage. He also described the treatment of undescended testicle by injection of Pregnyl. One hundred rat units of Pregnyl were given three times a week until the testicles descended, and for some time subsequently. Successful results were being obtained at Guy's Hospital within five weeks of the beginning of the treatment. The material was purified before use and seldom gave serious reactions. Some authorities maintained that treatment in this condition was unnecessary, as if left alone the testicles would ultimately descend between 14 and 15 years of age; but against this view was the fact that there was undoubtedly a tendency for testicles to atrophy if left in the inguinal canal. Cases of undescended testicle might be divided into three groups: in the first the general condition of the child and of its testicles was normal; in the second the general condition of the child and of its testicles was sub-normal; and in the third the child was normal but the testes were sub-normal. The two last-named groups yielded to treatment, but the first did not as the lack of descent was due to some mechanical factor. It was, however, not always easy to determine whether the testicle was of normal size, and as

there were no contra-indications to endocrine therapy, it was always well to try it for two or three months before resorting to surgery, the results of operation being uniformly poor. The injections produced considerable improvement in a boy's development, especially as Fröhlich's syndrome was frequently associated with the condition.

After an interval for coffee an interesting lecture by Dr. Osman followed, entitled "**The Renal Complications of Toxæmias in Pregnancy.**" Dr. Osman stressed the importance of early diagnosis of kidney damage, and drew attention to the fact that the blood pressure often rose before albumen appeared in the urine; also that œdema might not be demonstrable until considerable fluid was present in the tissues. As regards treatment, he gave alkalies by mouth throughout pregnancy in sufficient quantity to keep the urine alkaline. It was possible to give a higher protein diet if the urine was alkaline than if it was acid. He did not give sodium salts, but found potassium far less dangerous and more effective as potassium assisted the body in getting rid of water. He thus gave potassium citrate only and did not combine it with sodium bicarbonate. The urine should attain a pH of 7.6 thus becoming more alkaline than blood (an early morning specimen could be tested by adding one drop of brom-thymol blue to 2 c.c. of urine in a test tube—an alkaline solution producing an intense blue). If symptoms of toxæmia appeared the patient should be put to bed, alkalies and a fruit diet given, and no proteins or salt taken. The salt-free diet should be strict, no bread or milk being allowed for a week or 10 days; after this a little salt might be added. The patient should be kept strictly in bed until all signs of toxæmia disappeared.

On Saturday afternoon a party of fifty-four paid a visit to the **Metropolitan Borough of Woolwich**. The journey was made by launch down the Thames to Greenwich, where a pause was made to admire the Naval College; a motor tour of Eltham, Plumstead and Woolwich followed. A number of outstanding places of interest in connection with the Council's health services were visited, including the Eltham Welfare Centre, the housing estate, and the Maxey Road Tuberculosis Dispensary; other features of historical or architectural interest were observed on the way, including St. Saviour's Church and the War Memorial Hospital, and extensive views across London and the Thames Valley were enjoyed from the

top of Shooters Hill. Tea was taken at the Town Hall by invitation of the Mayor of Woolwich, who extended a cordial welcome to the party. His worship was supported by the Mayoress and the Chairman and Vice-Chairman of the Maternity and Child Welfare Committee. Votes of thanks to the Mayor and to the Chairman of the Maternity and Child Welfare Committee for their hospitality, and to Dr. Saunders-Jacobs for organising the party, were moved by Dr. Agnes Nicoll and seconded by Dr. Radford. After a tour of inspection of the Town Hall a very enjoyable afternoon was completed by a return trip up the river. The success of the expedition was undoubtedly enhanced by the glorious sunny weather.

The final session on Sunday morning, May 17th, took place at the **Marie Curie Hospital, Hampstead**, and was attended by thirty-five members.

The Director (Miss Hardon, M.D., C.M.) first gave an account of the history of the hospital and of the aims and achievements of its founders and staff. The original intention was to investigate the value of radium in the treatment of cancer of the cervix, and to co-ordinate research in this subject among the surgeons of the large women's hospitals, namely the Royal Free Hospital, the Garrett Anderson Hospital, the South London Hospital and the Brighton Hospital. An important feature was to be a careful follow-up of the after-histories of all cases so treated. At first, in 1925, the British Empire Cancer Campaign lent sufficient radium for the treatment of one patient at a time, and this was used in the above Hospitals. Ultimately it was decided to centralise the work and the present Hospital was opened in October, 1929.

Considerable quantities of radium are now available at this Hospital and an up-to-date X-ray apparatus for diagnosis and treatment was installed three years ago. Other forms of cancer are treated as well, particularly cancer of the breast and of the body of the uterus. It is now the custom at the Hospital to treat with radium all cases of cancer of the cervix (unless the patient is moribund or there are distant metastases) and also cases of cancer of the breast and of the body of the uterus which are clinically or technically inoperable. So far over a thousand cases of cancer of the cervix have been treated by radium at the Hospital, and the five-year survival rates are better than any of those given by surgeons as following operation. Miss Hardon then discussed the question of propaganda, and suggested that emphasis

should be laid on the possibility of cure, and that patients should be encouraged to seek advice as soon as they noticed a lump or any irregular hæmorrhage. It was unwise to broadcast an account of symptoms. As regards the use of radium for irregular hæmorrhage; in the menopausal type (with patients over 40 years of age) a cure was obtained in 90 per cent. of cases; between 20 and 40 years of age 85 per cent. were relieved. If it was used in adolescents very small doses must be employed. Miss Hardon said that patients could attend the Marie Curie Hospital for diagnosis, and cases were accepted from all over the country, admissions being arranged for as quickly as possible. The cost of each patient was £6 6s. 0d. a week or more in a private or semi-private ward, but poor patients were accepted without payment, county councils contributing to the cost in their cases.

Drs. Nicoll, Muriel Radford, Maitland Radford, Roberts, Mart and Laird took part in the subsequent discussion.

The Hospital was then thrown open for inspection, and demonstrations were given in radiological technique by Dr. Jean S. Riach, the Radiologist of the Hospital; and on the technique of radium administration by Dr. M. P. C. Greene, the Clinical Registrar.

Dr. Agnes Nicoll voiced the thanks of the Group to Miss Hardon and the staff of the Hospital for the interesting morning and the generous way in which they had given their time.

Thus closed a memorable and profitable week-end.

THE FEVER HOSPITAL MEDICAL SERVICE GROUP.

President: Dr. E. H. R. Harries, Med. Supt., North-Eastern Hospital, London County Council.

Hon. Secretary: Dr. Alexander Joe, D.S.C., North-Western Hospital, London County Council.

An ordinary meeting of the Group was held at the house of the Society on May 22nd, 1936, seventeen members being present.

The main business before the meeting was a paper by Dr. Robert Forbes of the Medical Defence Union on "**Medico-Legal Problems in Hospital Practice.**" This was received with great interest, and observations were made and questions asked by Drs. Goodall, Forrest, Mitman, McGarrity, James, Armstrong, and Joe. The proceedings terminated after votes of thanks to the speaker.

At the Group Council meeting held prior to

the ordinary meeting it was resolved that the present President, Officers, and Council of the Group should be nominated for re-election for the session 1936-37.

THE TUBERCULOSIS GROUP.

President: Dr. H. G. Trayer, Med. Supt., Baguley Sanatorium, Altrincham.

Hon. Secretary: Dr. Ernest Ward, T.O., South Devon.

A meeting of the Group Committee was held at the house of the Society on May 15th, 1936, the President occupying the chair. Eleven members were present.

The Council Representative narrated:—

(a) As the house had not been let, the Society would remain in its present premises until the expiration of the lease.

(b) The North-Western, West of England, Northern, Eastern, East-Midland, Welsh, and Metropolitan Branches were all supporting the Group Secretary's candidature for the Presidency of the Society. The Yorkshire Branch had nominated Dr. Jervis, and the Home Counties, Dr. Nash.

(c) The appointment of a committee to advise local authorities concerning candidates for medical appointments, and the formation of a County Boroughs' Group had been discussed.

(d) Lord Nuffield had donated £125,000 for the improvement of the treatment of cripples; £86,000 of this was allotted to the Central Council for the Care of Cripples, to be spent during five years in bringing backward areas into line. It had been ascertained that there were four cripples per 1,000 of the population.

(e) The Central Council for Health Education was now incorporated and was devoting a good deal of effort to the distribution of posters to be displayed by local authorities.

(f) The Bill to control the advertising of patent remedies had been counted out, but the Group Secretary had continued, through the kindly co-operation of colleagues, to investigate the condition of patients who had written to Captain Elliston and was also in touch with the committee enquiring into the value of Stevens Cure.

The memorandum on facilities for radiography was discussed and passed after amendment, for presentation to the Council of the Society after the final draft had been approved by Dr. Trayer.

The Hon. Secretary reported progress with the enquiry concerning holiday facilities.

A memorandum by the Hon. Secretary on co-operation with general practitioners was considered and referred for further consideration, after amendment, to the next meeting.

Dr. Tattersall was nominated President for

the next session; Drs. H. G. Trayer and T. R. Elliott, Vice-Presidents; and Dr. Ernest Ward, Hon. Secretary and Council Representative.

Dr. Blackmore raised the question of the payment of expenses for members attending the provincial meetings of the Tuberculosis Association. The following resolution was passed: "In the opinion of this Group it is desirable that tuberculosis officers and medical superintendents should be afforded facilities for attending the provincial meeting of the Tuberculosis Association and that the Ministry of Health should be pressed to agree to the provision of travelling and subsistence allowances." The Hon. Secretary was directed to present this resolution to the General Purposes Committee.

Friday, November 20th, 1936, at 10.30 a.m., were the day and time fixed for the next meeting of the Committee, to be followed at 11.30 a.m. by the annual general meeting.

THE JOINT TUBERCULOSIS COUNCIL.

A meeting of the Joint Tuberculosis Council was held at the house of the Society of Medical Officers of Health on May 16th, 1936, Dr. G. Lissant Cox occupying the chair. Twenty-four members were present.

The Hon. Secretary announced that he had not yet heard the decision of the Association of Thoracic Surgeons.

Dr. Burton Wood was elected Assistant Secretary.

The following Committees were elected:—

Pneumothorax.—Drs. R. R. Trail (convener), S. Vere Pearson, G. Jessel, W. Brand, D. P. Sutherland, James Watt, C. O. Hawthorne, Peter W. Edwards and D. A. Powell.

Employment.—Drs. J. B. McDougall (convener), D. P. Sutherland, Jane Walker, G. Jessel, Peter W. Edwards and C. O. Hawthorne.

Entertainment.—The officers of the Society.

Milk.—Drs. C. O. Hawthorne (convener), James Watt, W. H. Tytler, G. Lissant Cox, Jane H. Walker, Esther Carling, A. Neville Cox, D. P. Sutherland and Professor W. W. Jameson.

Sedimentation.—Drs. F. Heaf (convener), R. R. Trail, W. H. Dickinson and Professor S. Lyle Cummins.

Infection.—Drs. Esther Carling (convener), Jane H. Walker, James Watt, Peter Edwards and H. G. Trayer.

A resolution was passed heartily congratulating the Hon. Secretary on his election as President of the Society of Medical Officers of Health.

The report of the Pneumothorax Committee

THE WELSH BRANCH.

ASSISTANT MEDICAL OFFICERS' AND SCHOOL DENTISTS' SUB-GROUP.

President: Dr. Amy L. Jagger, Assistant School Medical Inspector, Glamorgan County Council.

Hon. Secretary: Mr. Quentin A. Davies, L.D.S., Assistant Dental Officer, Glamorgan County Council.

A meeting of this Sub-Group was held at the new Welsh National Memorial Association hospital at Sully, on May 1st, 1936.

Twenty-four members and friends were present, and the party was conducted over the institution by Dr. William Davies (Medical Superintendent) and Miss Gould (Matron). Great interest was shown in the modern design of the building and in the up-to-date fittings, and Dr. Davies and Miss Gould were warmly thanked for the trouble they had taken in making the visit so instructive and interesting.

was discussed with the assistance of Mr. Stockman, who attended by invitation. With minor amendments the report was adopted by Council for presentation to the Medical Research Council. Sincere thanks were expressed to the Committee concerned and especially to Dr. R. R. Trail for all the painstaking and arduous work entailed in the compilation. The Committee consented to remain in being and to report again with slightly extended terms of reference: "To investigate and report upon the results of artificial pneumothorax and how these may be improved."

The report of the Infection Committee was considered. The Committee were thanked for their labours and asked to report again in the light of points raised during the debate. Dr. Peter Edwards and Dr. H. G. Trayer were added to the Committee.

The Sedimentation Committee was not yet ready to report.

Dr. Hawthorne gave a verbal report on behalf of the Milk Committee. He criticised the use of the term "accredited" as conveying a false sense of security to the consumer.

The People's League of Health had continued their investigations into the safety of milk. Of samples examined it had been found that 5 per cent. of grade A milk and 7 per cent. of raw milk contained living tubercle bacilli. The majority of school children receiving extra milk

were receiving pasteurised milk; in England 2 per cent. were receiving milk from tuberculin-tested cows, and in Scotland, 10 per cent. It was necessary to continue and intensify efforts to educate the public to demand safe milk.

Dr. Brand, who was unable to be present, had written that seven had followed the last post-graduate course at the Cheshire Joint Sanatorium, and 25 attended the course at the City Road Chest Hospital. Other courses were being arranged. Dr. Brand was thanked and he was asked to continue this useful work on the lines indicated.

Dr. Tytler promised, in collaboration with Drs. Peter Edwards and H. G. Trayer, to present later in the year a memorandum on the cultural examination of sputum.

Dr. Blackmore gave notice of a motion to modify the constitution of the Council by an addition to article 4: "The Chairman shall be elected for two years and may be re-elected for another year, after which he shall not be eligible for a further period."

Saturday, November 21st, 1936, at 10 a.m., were the date and time fixed for the next meeting of the Council.

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

PARENTAL VACCINATION AND TRANSMISSIBLE IMMUNITY.

To the Editor of PUBLIC HEALTH.

SIR,—In connection with the point raised by Dr. James Bennett in your issue for March, 1936, as to the probable transmission to the offspring of immunity to smallpox acquired by the parent through attacks of the disease or from vaccination, it may be of interest to record the experiences of the health department in New Zealand when in 1913-1914 the type of disease now known as variola minor was epidemic among the Maoris.

The source was traced to a missionary from the United States who was sent from there to work among the natives. He contracted the disease from a mild unrecognised case on board the ship on which he arrived, and developed the illness also in a mild form a few days after his arrival at the mission station. As this station was located in an isolated part of the country, the disease acquired a good hold among the Maoris before it came to the notice of the health department. The earlier cases must have been comparatively mild, but it very soon worked up in virulence and, after a month or two, cases of typical confluent smallpox were found and 56 deaths were known to have occurred, all among unvaccinated natives. Accurate statistics as to its prevalence cannot be given, as cases living in isolated parts must have escaped notice, but it is estimated that about 1,700 cases must have occurred among natives and 111 among Europeans. Any doubt as to its nature was removed when it was found that any natives who chanced to have undergone vaccination

were immune to the disease. Incidentally it may be mentioned that attention to this immunity was first drawn by a letter to the department from the chief of a native tribe, living in a remote part of the country, who reported that there was a new "white man's" disease among his people, so since they did not understand its treatment he would be obliged if we sent a "white man" doctor to deal with it, and he concluded: "Please let him bring plenty of the stuff that 'white man' doctors put in people's arms because it is only those of us who have had this stuff who escape the new disease"—an unbiassed and unsolicited testimonial to the efficacy of vaccination which is, I think, worthy of record!

By the time the disease was recognised and steps taken to check it, it had spread over a wide area in the back country and a certain number of Europeans had been affected. With them, however, the disease was never severe, but generally of the mildest type which, had they been seen in isolated cases, would almost certainly have escaped recognition. This comparative immunity was certainly not the result of vaccination among the European population since for many years vaccination in New Zealand had been compulsory only in name. One saw many cases among unvaccinated Europeans showing only a few spots on wrists and forehead, while among the neighbouring Maoris the disease was frequently of a severe type. The few vaccinated natives, being immune, acquired a great reputation with their fellows, and we never found the least difficulty in getting the natives in areas still free from the epidemic to accept vaccination. It is interesting

to note that even among the susceptible natives the minor character of the disease persisted throughout the epidemic, except in isolated cases, for in family and tribal groups, while one or two cases might be of major type and even fatal, the majority were not seriously ill, even if the rash covered the body and was quite typical. In many such cases there was no pitting.

There was nothing in the conditions of life in the back country districts to account for the marked degree of immunity enjoyed by the unvaccinated Europeans as compared with the natives. One could only conclude that the European parents had transmitted to the children the immunity acquired by the disease in former generations or by vaccination in later ones.

I am,

Yours faithfully,

R. H. MAKGILL,

Consulting Medical Officer.

Department of Health,
Auckland, New Zealand.

April 21st, 1936.

THE PREVENTION AND CURE OF DEAFNESS.

To the Editor of PUBLIC HEALTH.

SIR,—I have read with interest Dr. Lishman's letter in the June issue of PUBLIC HEALTH on the importance of protecting the ear during bathing. I agree with him that air-tight plugging will go far to protect a perforated drum. Unfortunately, it must be very rare to have patients who can really be trusted to apply their plugs in the excellent manner described by Dr. Lishman. I am very gratified indeed to have his confirmation of the fact that alternative outlets to swimming can be found in sun-bathing in gardens or woods.

May I take the opportunity of drawing attention to the recent report of the London County Council on the measles epidemic of 1933-34? Out of 400 cases of measles, practically 300 had some form or other of otitis. Over 100 ears actually suppurated. When we remember that, in many areas, cases of measles are not admitted to fever hospitals unless seriously ill, we can understand how it is that the incidence of chronic otorrhœa remains so appallingly high. I maintain that the notification of the otitis media would be a more valuable principle than the notification of the measles itself.

Your readers should note the statistics given regarding nasal infection. Dr. Linford, who is responsible for the article, actually states that cleaning the nose was one of the two chief problems. Practically one-third of these children are described as having purulent rhinitis, and in 18 per cent. the rhinitis was primary and marked. Unfortunately, no investigations were made to decide whether this condition was due to sinusitis. I have no doubt that in many cases it was. Treatment given was not, in my opinion, the best available. Of course, we all have our own opinions on that point, but I believe that the inadequacy of the treatment is reflected in the figures given for the duration of the otorrhœa. A large proportion of these cases persisted for over a month.

In my opinion, intense treatment, as I have described elsewhere, should produce a dry ear within three weeks in the majority of cases.

I am,

Yours faithfully,

A. TUMARKIN.

13, Rodney Street,
Liverpool, 1.
June 13th, 1936.

BRITISH HEALTH RESORTS.—This is the title of the official handbook of the British Health Resorts Association, the 1936 edition of which has recently been issued. Edited, as usual, by Dr. R. Fortescue Fox, the handbook has been revised by the Association's Medical Advisory Committee, on which are represented many important medical organisations. The matter has been re-arranged in alphabetical order for greater convenience of reference; there is a foreword by the Minister of Health (The Rt. Hon. Sir H. Kingsley Wood, M.P.); a new chapter on "hotels," and reference to the arrangement which has been made between the friendly societies and the spas for treatment at a reduced scale of fees. Greater attention is given in the new edition to resorts in the British Empire in the hope that those who must winter abroad may make more use of them. The Association, which has no financial interest in any of the health resorts, is to be congratulated on producing so very valuable a guide, which is unique inasmuch as it is the only publication dealing with the health aspects of British resorts. Copies may be obtained from Messrs. J. & A. Churchill, Ltd., 104, Gloucester Place, London, W.1, price 1s. net.

The Literature of Preventive Medicine.

An Introduction to Hygiene. By W. ROBERTSON, M.D., D.P.H., F.R.C.P.(E.), formerly Medical Officer of Health, Edinburgh and Leith; Lecturer in Public Health, School of Medicine, Royal Colleges, Edinburgh, etc. Edinburgh: E. & S. Livingstone, 1936. pp. 314. Price 8s. 6d. net.

This book of Dr. Robertson's looks like becoming the standard text-book on hygiene for medical undergraduates. From his long experience as a teacher and examiner the author has learned more or less exactly the amount of information required by the student. Having been a medical officer of health he possesses the knowledge necessary to impart and is in a position to offer it authoritatively. Considerable revision has been carried out and additions made in this new—second—edition. The book, however, remains still of the right size and the chapters the right length. In certain parts there is a certain vagueness about some of the statements made, and here and there there is used a "must" where absolute accuracy, if not indeed the law of the land, demands a "may." Such defects as these will disappear in the process of revision which will be carried out for the various future editions certain to be called for.

Chronic Streptococcal Toxaemia and Rheumatism. By J. D. HINDLEY-SMITH, M.A. (CAMB.), M.R.C.S., L.R.C.P., late Clinical Assistant, St. George's Hospital and Victoria Hospital for Children. London: H. K. Lewis & Co., Ltd., 1935. pp. 275. Price 7s. 6d. net.

Chronic rheumatism, in the view of the author of this book, is not a disease, but a symptom which occurs in the course of various chronic toxic diseases, of which by far the most prominent in this and similar climates is chronic streptococcal toxæmia. His object has been, therefore, to reduce to some semblance of order the immense accumulation of facts which are, in an undigested state, common knowledge to the observant clinician, and out of that attempted order to construct a framework of this condition as a whole. The book is written with conviction and for this reason and because it contains so much useful information with regard to the streptococcus and streptococcal infections, it is warmly recommended.

Reminiscences. By AGNES HUNT, D.B.E., R.R.C. Shrewsbury: Wilding & Son, Ltd., 33, Castle Street. 1935. pp. 137. Price 5s. net.

The proceeds of the sale of this book are to be given to the Agnes Hunt Appeal for £100,000 to rebuild the Robert Jones and Agnes Hunt Orthopaedic Hospital and to complete the Derwen Cripples Training College. It is so delightfully written and so very much what an autobiography should be that it deserves to be a best seller, and as such to bring in a large part of the monies required. Both because of what is to be done with the profits and because if the reader has not met Dame Agnes Hunt he should wish to and will feel that he has, and has in his circle at least one real heroine after he has read it, the book is enthusiastically recommended for purchase.

Principles of Hygiene. By THOMAS A. STOREY, PH.D., M.D., Director, School of Physical Education and Hygiene, Stanford University, California. London: Humphrey Milford, Oxford University Press. 1935. pp. 524. Price 16s. net.

In this edition Dr. Storey has re-written a great part of his book, which first appeared in 1924, and has very fully revised a number of the chapters, bringing up to date all statistical matter. The original intention was to provide a book for the college student that would provide a basis for, amongst other things, "the formulation of rational, discriminating health judgments which will help exceptional youth condition itself for vigorous enduring maturity." The book is divided into two parts; one dealing with the principles of constructive hygiene and the other with the principles of defensive hygiene. The writing has been very well and conscientiously done and no effort appears to have been spared to ensure that college students shall be provided with a full supply of facts regarding public health and hygiene and the aims and methods of preventive medicine. At the moment the author has in preparation another volume on the practice of hygiene, which is to be a sequel to this present book. In it there will be discussed individual hygiene; group hygiene and inter-group hygiene, i.e., societal or public hygiene.

Health Propaganda. By T. CREW, F.C.I.I., F.F.I., Clerk to the Leicestershire Health Insurance Committee; ex-Organising Secretary, Central Council for Health Education. Published by the author at 144, London Road, Leicester. 1935. pp. 247. Price 5s. 6d.

The aim of the compiler of this book was to assist those engaged in the work of health education and propaganda by providing them with information as to the various organisations, voluntary and other, and the service they are prepared to render. The work of compilation appears to have been well and carefully done and the information given reliable. In addition to providing a directory, the book contains examples of the type of material available from various of the organisations which should prove interesting and useful.

School Course in Hygiene. By ROBERT A. LYSTER, M.D., CH.B., B.SC., D.P.H., Lecturer in Public Health, St. Bartholomew's Hospital; formerly Medical Officer of Health, Hampshire. London: University Tutorial Press, Ltd. 1935. pp. 266. Price 3s. 6d.

This is the second edition of this popular text-book, which, as is well known, is an adaptation for school use of Dr. Lyster's widely read "First Course in Hygiene." There are several new features in this present edition, and it is noted that the type has been re-set, various alterations and additions have been made and some new diagrams introduced. These should increase the value and utility of the book, as should also the guide to pronunciation of scientific terms introduced for the first time. The book may safely be recommended to those for whom it is intended.

In the Annual Reports.

THE END OF TUBERCULOSIS.—Progress must necessarily be slow and I do not quite anticipate the fulfilment of the repeatedly expressed prophecy that tuberculosis will be extirpated in the next ten years. Even if much more of the revenue of the country were to be diverted for this purpose it is doubtful if the end in view would be achieved so soon. As tuberculosis is not the only curse of humanity, it behoves us to hasten with caution and to maintain observation posts on every other front. It is essential to appreciate the importance of close liaison and intimate mutual co-operation of all arms in the battle throughout every stage of the action. Some proposals already mooted are drastic enough, convey a suggestion of isolated action, and involve an expenditure that does not seem to be commensurate with the results likely to be attained. The scheme which has been followed in Fife in the past has not been any less successful than others that are more ambitious. A little impetus might be given to the campaign if cases of pleurisy were invariably attributed to tuberculosis when no other satisfactory cause could be assigned. The interval between an attack of pleurisy and tuberculosis of the lungs varies from a few months to a few years. But it is to the bacteriological laboratory that I look most confidently for any great advance. It was there that Koch came upon his epoch-making discovery after arduous research. New discoveries are constantly being made in the course of mere spade work, and unless the finder has the vision of Koch and, like him, a clear goal in view, he may fail to appreciate the significance of what he has found. Work now being done in the University of Strasbourg gives promise of improvements in both the prophylaxis and the treatment of tuberculosis, and may even, in the words of Livy, convert the rout into total extermination.—*Dr. Alex. Lundie, Executive Tuberculosis Officer, County Council of Fife (Dr. G. Pratt Yule, M.O.H.).*

NOTIFICATION OF PREGNANCY.—During 1934, 1,665 births were notified in the county borough. Of these, 1,284 had been ante-natally notified, giving a percentage of 77.1. This is again a record number, and 7.3 per cent. higher than in the previous year. . . . The increase in the pregnancy notifications recorded above is due to some extent no doubt to more intimate co-operation with the midwives in their work. Where possible, some at least of the examinations made by the assistant medical officers are carried out in the presence of the midwives engaged for the confinements, and in all cases, whether any abnormality is detected or not, a report on the patient's condition and the assistant medical officer's findings is forwarded to the midwife concerned a few days before the confinement is expected. In this way the midwives are given every assistance possible, for all the information available is placed at their disposal.—*Dr. John M. Gibson, Huddersfield.*

SOMETHING IN A NAME.—Let us look upon school medicine from a new angle and instead of medical inspection and treatment of children, substitute the expression "biological rearing of citizens." Then shall we see that we must face the great problems of school medicine seriously. . . . Since children possess neither money, nor power, nor votes (and most of our children, though in course of time they will get the last, will never command the first and second) the work of the school medical officer is not attractive to those who worship the common God. A lot has to be put into the work and little is to be got out of it, so school doctors come at the tail end of the medical hierarchy. There is consequently a tendency to get away from the work and to leave its problems to settle themselves, for there is nothing sensational about them. The solution of some of our greatest difficulties, which

would materially alter the whole future of mankind, would scarcely receive so much notice as an operation on a club-footed bishop to enable him to wear his gaiters with becoming elegance. Nor can we conceive any inducement that can be offered, or any rewards which could be bestowed on those who seek to improve the health and well-being of the generation which is about to supplant us, which would make school medicine generally attractive. "Interesting cases" are few, fortunately, and the points of real interest and importance can only be appreciated by those with some knowledge and enthusiasm for biology and sociology; consequently school medicine is apt to become patchy and to miss its main theme. The supply of spectacles for children with defective sight, the supply of facilities for throat and ear operations are part, but only a small part, of school medicine, and the sum of these and allied amenities does not constitute the whole.—*Dr. Dunston Brewer, S.M.O., Swindon.*

MOSQUITOES FROM SEWERS.—During the late summer, complaints began to arrive relative to serious infestation of houses by mosquitoes. These complaints increased rapidly in number until some considerable alarm became apparent. In an effort to trace the origin of the mosquitoes, the position of the house occupied by each complainant was marked on a map of the borough, when it soon became apparent that the mosquitoes infested a belt about half a mile wide, extending from Manor Road to the East Ham boundary, and following the course of the London County Council northern outfall sewer. Inspections were made at sunset, and it was then found that the mosquitoes were, in fact, emanating from the ventilator openings from the sewer at various points. One of the conduits of the sewer was at the time under repair and out of service, with the result that the channel contained a thin, nearly stagnant, deposit of liquid sewage, and this, in a dark, warm space, evidently provided an ideal breeding ground for the mosquitoes.—*Dr. F. Garland Collins, West Ham.*

MEDDLESOME MATERNITY.—In a paper read recently at a sessional meeting of the Royal Sanitary Institute, the absence of any fall in maternal mortality was attributed to the great increase of interference in the last 20 years. Analgesics and anæsthetics now in general use delay some labours and increase the use of forceps; normal labours are shortened at the urgent request of the patient or her friends; needless operations (Cæsarean sections) are performed. These point to the urgent need of the treatment of complications being dealt with by "obstetric practitioners" of high skill and good judgment who would interfere only when necessary and whose obstetric conscience would be proof against any temptation to hurry. Whilst it is the duty of the medical profession to provide a sufficiency of "obstetric practitioners" it should be widely known to mothers that any interference with normal labour is accompanied by an increase of the risk of immediate septic infection and later of chronic invalidism. With more patience on the part of mothers and no interference on the part of the doctor in any but the exceptional case where such interference is certainly called for, we may hope for a fall in maternal mortality. I am told that "women won't stand so

much nowadays," but shown good reason I am sure this is not so.—*Dr. Dunstan Forbes, Brighton.*

VERMINOUS CONDITIONS 'UNCHANGED.'—By some it had been thought that bad housing conditions, including overcrowding and lack of proper washing facilities, were mainly responsible for the spread of verminous infection, and it was anticipated that when better housing accommodation in the new housing areas became available, verminous conditions amongst the families who had moved into these new houses would be much less prevalent. Unfortunately, no marked change for the better has been evidenced so far as verminous infection is concerned, although a definite improvement has resulted in such uncleanness as can be remedied by soap and water alone. The condition of many of the children in the new areas leaves much to be desired, thus indicating that it is not so much environment, as ignorance or indifference, which is responsible for the continuation of verminous conditions. Verminous infection, which is nearly always a head infection, is an entirely preventable condition, and there is no reason why, if every member of the public co-operated, the condition could not be forthwith practically eliminated.—*Dr. W. M. Frazer, Medical Officer to the Education Authority, Liverpool.*

RA—RA—RATS!

CITY OF PORTSMOUTH.

RATS and their Extermination.

Rats and mice are carriers of disease and filth. Rats cause damage to the nation's property and food supplies to the extent of about £50,000,000 annually. Rats should be immediately destroyed. Responsibility for their destruction is YOURS under the Rats and Mice (Destruction) Act, 1919, which lays a statutory obligation upon OCCUPIERS of all lands or buildings to take such steps as may from time to time be necessary and reasonably applicable to exterminate rats. In default you are liable to a £20 fine.

Appreciate the fact that rats will not remain or increase in places where food is not easily procured; therefore Avoid throwing food scraps on the yard or street, and Always burn garbage and waste food in kitchen fire. Attention should be given to any holes in floors, walls and/or roofs, to ensure that all buildings are rendered as rat-proof as possible.

Tenants of allotments and keepers of poultry, pigs and horses should make a combined effort with their neighbours for the destruction of rats and mice. Trapping, poisoning by barium carbonate, red squills, etc. (obtainable from any chemist), and hunting by animals are the most effective methods of extermination. Take precautions, when using poisons, to avoid injury to other animals or human beings.

Starring out the rats is a sure preventative against infestation. Store all food in rat-proof receptacles. Stop and call at the Public Health Department, The Guildhall, Portsmouth, for further information and advice regarding your particular difficulty. Ask for Leaflet No. 244, issued by the Ministry of Agriculture and Fisheries.

PUBLIC HEALTH DEPARTMENT,
GUILDHALL.

—*Dr. A. B. Williamson, Portsmouth.*

Dr. Edward S. Godfrey, Assistant Commissioner of Health for New York State, has been appointed to succeed Dr. Thomas Parran as State Commissioner of Health.

PUBLIC HEALTH

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"Public Health" is the Official Organ of the Society of Medical Officers of Health and a suitable medium for the advertisement of official appointments vacant in the health service. Space is available also for a certain number of approved commercial advertisements. Application should be made to the Executive Secretary of the Society, at 1, Thornhaugh Street, Russell Square, London, W.C.1.

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Editorial.

The Problem of Nutrition.

THAT there is a "problem" associated with the question of nutrition, and that in connection with its solution there is need for education of the public, is generally accepted. Because of this, there should be accorded a particularly warm welcome to the book produced by Dr. M'Gonigle and Mr. Kirby, and they should be congratulated on having chosen for it such a title as "Poverty and Public Health."* This, it may be hoped, will be so striking and attractive that it will lead to the book being widely read. Having regard to its contents it should be; not merely because of the picture it provides of the effects of mal-nourishment but because of the indica-

tions it gives as to where defect lies. To an extent, in making the book the authors have expanded and added to the observations upon which Dr. M'Gonigle based the paper he read some time ago before the Epidemiological Section of the Royal Society of Medicine, which attracted so much attention and gave rise to so much discussion. All the additional observations made leave the conclusions reached in this paper largely unchanged—that actually nutrition is more important than housing, and in the nutrition of families the economic factor is the important one. In the volume Part II is particularly noteworthy because it is there that the economics of the situation are discussed. The analyses made of family budgets are terribly pathetic and moving, convincing that there are wonderful

*London: Victor Gollancz, Ltd. Price 6s. net.

managers amongst British housewives. They convince also that these women and those for whom they scheme and plan and skimp and scrape deserve help. In this part, as throughout the book, there is evidence of need and advantage and claim for something to be done, although Dr. M'Gonigle and his joint author make no attempt in their valuable book to set out formally what this should be.

Actually, so far as suggestions are concerned, the publication that comes nearer to offering them is the report issued by the International Labour Office on "Workers' Nutrition and Social Policy."* This, curiously and interestingly enough, appeared almost simultaneously with M'Gonigle and Kirby's "Poverty and Public Health." In the report there are given the results of the investigations and the views and findings of a special committee set up by the International Labour Office. This body included a number of experts on nutrition questions, amongst them Professor Cathcart of Glasgow, and Professor Durig of Vienna. Subjects discussed in the report include: nutrition and occupation; the problem of food rations; energy requirements of the worker; workers' diets; agricultural production and food consumption; social-economic aspects of nutrition; prices and incomes; nutrition standards and consumption habits; social legislation and nutrition; wages; social insurance and assistance; agencies and methods to improve nutrition; activities of employers; the co-operative movement and problems of policy. The detail given is extremely full and there is a ranging of practically all the nations of the world to secure information. For this reason it is difficult to provide an adequate review of the contents of the report. In a general and summary way, however, the main findings appear to support conclusions already widely adopted.

Large numbers of the working population not only in impoverished or depressed areas but even in the most advanced industrial countries, it is shown, are inadequately nourished. Such mal-nourishment and under-nourishment are not the result merely of temporary dislocation due to an industrial depression, though a depression usually has an aggravating influence. It is a condition

found among many employed workers in times of normal business activity. This inadequate and insufficient nourishment is due in some measure to an ineffective use of available income owing to ignorance of nutritive values, inability of the poor housewife to make the best use of her money, etc. Its primary and most important cause, however, is inability to buy the right kinds of food, especially protective foods, in the necessary quantities. Low income or lack of purchasing power is thus the root cause of the inadequate nutrition of large numbers of workers and their families. The conclusion reached that the potential productive capacity of agriculture is such as to enable producers to supply the foodstuffs necessary to improve the dietaries of the working population in most countries is very noteworthy, as is also the view expressed that the non-use of potential capacity and the misuse of some of the existing capacity have undoubtedly been aggravated by recent economic trends, but they are due essentially to deeper maladjustments created by changes in agriculture and in world economy. The realisation of standards of rational nutrition laid down by medical and dietetical experts depends, it is declared, on social-economic factors which affect the supply of and demand for food materials. The most important factors are those which determine prices and incomes. Relatively low prices for foodstuffs which would not reduce producers' incomes involve measures for the reduction of costs of production and marketing, for the removal of trade barriers, for the elimination of undesirable forms of taxation, etc. On the other hand, an active demand for better foodstuffs is conditioned by the size of the national income and by its distribution and can be influenced by various measures for redistributing income such as relief, social insurance, direct distribution of food to school children, etc. That there have been improvements and attempts made to do something the report admits. Protective labour and social legislation, it is agreed, have affected workers' nutrition indirectly to the extent to which it has helped to increase or maintain workers' income. But, except in a few cases, such legislation makes no attempt to improve workers' nutrition directly and in a systematic way. Further, especially since the recent depression, there has been an increasing interest on the part of public, semi-public

*Studies and Reports Series B (Social and Economic Conditions). No. 23. London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Price 5s. 6d.

and private agencies in improving the nutrition levels of the working people. Much has been done to safeguard the health of the people, especially of children, mothers and unemployed workers through relief measures, social insurance, milk for school children and otherwise. Much has also been done to spread information about rational nutrition and to reshape consumers' habits through education. But many effective ways for improving popular nutrition which are open to the modern State as well as to voluntary organisations are still to be fully explored. Some of these the report discusses, and because it has a source so important it may be believed that it will receive serious attention and lead to the taking of definite action.

The Health Congress at Southport.

THE number of delegates to the "annual health parliament" convened by the Royal Sanitary Institute becomes year by year more overwhelming. At Southport, from July 6th to 11th, some 1,200 delegates of 700 local authorities, and representatives of 45 overseas countries, were in attendance for the Institute's diamond jubilee year; one result being that, in the medical meetings at least, the audiences were of proportions so alarming that only the most distinguished debaters or boldest local councillors joined in the discussions, whereas another was that opportunities for the intimate thrashing out of problems with colleagues from normally distant areas were more readily available than ever.

The Royal Sanitary Institute Congress represents so well the achievements of local government which particularly affect the ordinary citizen that the interest with which the delegates listened to the Minister of Health's opening presidential address, delivered in his enforced absence by Mr. Geoffrey Shakespeare, was understandable. The address in its review of public health progress over 60 years, and particularly during the last decade, gave real cause for pride, and the great advance in housing was justifiably ascribed by Mr. Shakespeare to "the brilliant co-operation between local authorities and the Ministry of Health." The Minister's address indicated also the line of attack on current problems, such as the maternity services, the care of the "toddler," and nutrition.

Another outstanding address was that of Professor E. P. Cathcart to the Section of

Preventive Medicine, in which he discussed certain aspects of the report of the Scottish Health Services Committee over which he presided. The points with which he dealt, notably the inevitable change in the proportions of age-groups in the population and the evolution of a general medical service, were of great importance and were heard with the deepest interest. The future was again under discussion when that of the isolation hospital came up for review in the same section; Sir Weldon Dalrymple-Champneys, in a provocative paper, questioning whether it had a future at all, replies more or less convincingly in the affirmative being provided by Dr. E. H. R. Harries and Mr. W. H. Hobday.

At the conference of Medical Officers of Health, the President, Dr. Savage, gave an interesting lead as to what can be done towards providing rural areas with pure water supply and sewage schemes. Following another interesting discussion, in which Dr. A. C. Tibbits of Nottinghamshire, Dr. E. A. Underwood of Shoreditch and Mr. Grantley Smith, L.M.S.S.A., L.D.S., of Bermondsey (and President of the Dental Officers' Group) took part, the meeting adopted a resolution in favour of greater expansion of the public dental services.

Other sections of the Congress which looked to the future were those of Maternity and Child Welfare and of the Health Visitors. In the former, Dr. John Buchan, the Society's representative on the Central Midwives Board and the Joint Council of Midwifery, opened a discussion on the future of the midwife, which was especially useful in so far as it coincided with the third reading of the Midwives Bill; and in the latter, Dr. George Buchan expressed his considered views as to the training of the health visitor. Amongst these were that she should invariably be a trained nurse and should have refresher courses arranged for her. Elsewhere, at the Sanitary Inspectors' Conference, for example, there were useful discussions on current questions of housing and sanitation, and in the Food Section, matters relating to the packaging of food came under review. The social and excursion side of the Congress, as usual, proved most attractive.

Altogether the Institute, and not least Dr. James Fenton, who, as Chairman of the Council of the Institute, was indefatigable in carrying out his arduous duties, and proved

an inspiring speaker on official occasions, notably at the Congress dinner, deserve warm congratulations on a remarkably successful meeting.

Health Works of the London County Council.

THE subjects dealt with in Volume II of the Annual Report of the London County Council for 1934* have reference to Public Health. In it there are discussed, in addition to public health generally, such matters as main drainage, housing, etc. Under the heading "Public Health, Transferred Services" it is noted that there were in December, 1934, more than 40,000 beds in 75 hospitals (including some institutions in process of conversion into hospitals for the chronic sick). These are under the control of the Council's Hospitals and Medical Services Committee, which administers the services transferred to the Council from the late poor law authorities on April 1st, 1930, so far as they relate to the care of the sick in hospitals and domiciliary medical services. In this connection it is interesting to learn that the arrangements, begun in 1933, for giving instruction to medical students at the Council's hospitals, in association with the voluntary teaching hospitals, are being continued. That opportunities for special research work have also been afforded to medical practitioners in the Council's hospitals, from which, it has been shown more than once in this journal, contributions of value to medical knowledge are coming in increasing numbers, may be noted too. The modernisation and improvement of hospital accommodation was continued during 1934, amongst other additions made being extra isolation blocks at certain of the infectious hospitals.

The section of the report upon the London Ambulance Service contains a note showing that the vehicles of the general section of this service, which conveys patients to and from the Council's hospitals and mental hospitals, ran nearly 2,000,000 miles during the year, while the mileage of the accident section was more than 208,000.

In the chapter on the non-transferred services the subjects reported upon include the special schemes for maternity and child welfare and for combating tuberculosis and

venereal disease. In addition, there is reference to food protection works, the operation of the Midwives Acts, drainage bye-laws, etc. The remaining sections contain a volume of information with regard to main drainage and housing. Describing the London main drainage system, the report shows that this covered an area of nearly 160 square miles and served a population of more than 5½ millions, including 1,161,000 outside the county boundary. Further, in 1934 there were about 400 miles of main, intercepting and storm relief sewers, and in that year more than 88,000 million gallons of sewage was pumped into the outfall sewers at the five main stations. Reference is made to experiments in devising new methods of dealing with sewage, including a process "of causing the sludge, by digestion, to decompose and give off a gas which could be used for heating, lighting and power."

A very important section of the report is that dealing with housing. Here reference is made to the negotiations between representatives of the Council and the Minister of Health which preceded the introduction of the measure which became the Housing Act of 1935. In January of 1934 the Council gave evidence before a Departmental Committee, set up by the Minister of Health, on Garden Cities and Satellite Towns, to the effect that owing to financial and industrial considerations the Council did not regard the setting up of satellite towns as a practicable or desirable contribution to London's housing problem.

Statistics are given showing that by the end of 1934 more than 67,000 houses and flats had been erected by the Council, of which over 57,000 were erected in the post-war period. More than 5,800 people were displaced and rehoused during the year. In July, 1934, the Council reviewed the slum clearance question and adopted a programme for the three years from June, 1934, to June, 1937, which contemplated the commencement of operations on all the larger unhealthy areas (132 in number) capable of redevelopment by the erection of block dwellings. A number of the smaller unhealthy areas, not suitable for housing development, will be cleared at the same time as the larger areas and the remainder will be dealt with as and when additional housing accommodation is provided. Active co-operation, it is noted, is

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being given by the metropolitan borough councils. During the year new types of flats with improved internal planning were approved, and new elevations designed on modern lines were adopted.

During 1934, it is interesting to learn, the Council reviewed the rents charged on its estates, taking into account a new factor not previously considered, *viz.*, that the income of the displaced slum dweller is lower than the average for a working-class family. As a result, reductions ranging from 6d. to 4s. 6d. a week were made in the rents of a number of block dwellings.

A memorandum by the Comptroller of the Council (Mr. F. G. Bowers, C.B., C.B.E.) on the Council's housing accounts for the year ended March 31st, 1935, and one by the Council's Valuer (Mr. Frank Hunt, C.V.O.) on housing statistics and the management of the Council's housing estates during the same period, contain information likely to be of value to authorities and organisations concerned in and operating housing schemes.

The Maternity and Child Welfare Conference.

THIS Conference, held at Liverpool on July 1st, 2nd and 3rd, was attended by a large number of official representatives from all parts of the country. In his presidential address, Mr. Geoffrey Shakespeare, M.P., Parliamentary Secretary to the Ministry of Health, referred to the marked decline in infant mortality and the need for co-operation between the maternity and child welfare and school medical services in the extended care of the pre-school child. He also made brief reference to the Midwives Bill.

The subject discussed at the opening session was "The Promotion of Maternal Welfare in relation to Child Health," when papers were read by Professor Leyland Robinson, Dr. Barbara Hirst and Miss Alden. Dame Janet Campbell was, unfortunately, prevented from being present but, in the paper on domiciliary midwifery which she had prepared, she held that a well-trained midwife, working under reasonable conditions and able to give proper time and attention to each patient, and not harassed by financial worries, was the first essential for sound domiciliary treatment whether or not the mother was attended by a doctor. Dr. Leyland Robinson dealt more especially with the influences of pre-natal work

upon foetal and neo-natal mortality, pointing out that the first month of life was the most dangerous period of youth and maturity and that the first half-hour of existence was probably the most critical part of a life-time. In his opinion the failure to effect any improvement in the neo-natal death-rate in the main was the fact that many of the causes of foetal disease and death were either unknown or were not amenable to the pre-natal methods which were at present available, and that as yet ante-natal care had not been applied in adequate fashion to those cases which were amenable to preventive treatment. Dr. Hirst discussed the question of the provision of rest and convalescence as factors in maternal welfare. In her view, in many towns there existed a definite need for some home or hospital to which infants and young children could be admitted without delay, the criterion for admission being solely the illness or the incapacity of the mother, and that any scheme which aimed at assistance for the mother would fall short of complete success unless, side by side with it, provision was also made for the care of the young children. In her paper on maternal welfare and the public, Dr. Charlotte Douglas, of the Department of Health for Scotland, expressed the opinion that efforts to care for the mother should start with the proper rearing of the girl infant: she said that at the present time it was an undoubted fact that, whilst as regards the future of the race it was the girls who were the most valuable members, the average mother lavished much more care on her sons than she did on her daughters.

Mr. Edward Fuller, in dealing with the public health services and public opinion, stated that it was sometimes said by the cynics that the modern girl would rather have a car than a baby: he felt that a car was sometimes safer for the community, as a book of instructions was given with a new car, and the Minister of Transport required a driving test, but no licence was required before undertaking the responsibilities of parenthood.

On the second day of the Conference, sessions were organised by the National Association of Day Nurseries, the Nursery School Association, the Invalid Children's Aid Association, and the Central Council for the Care of Cripples. At the last-named session the chair was taken by Dr. W. M. Frazer, Medical Officer of Health for Liverpool.

*London: P. S. King & Son, Ltd., 14, Great Smith Street, S.W.1. Publication No. 3176. Price 1s.

Papers were read on "The Education of Parents through Day Nurseries and Nursery Schools," on "Co-operation between Home and Nursery Schools," and on "Parents' Clubs in Nursery Schools," by Dr. Björkegren, Miss Grace Owen, O.B.E., and Miss Nancy J. Quayle, respectively. At the session arranged by the Invalid Children's Aid Association and the Central Council for the Care of Cripples, Dr. Norman Capon opened the discussion on "The Importance of Co-operation between Maternity and Child Welfare Services and the Specialist Health Services." Dr. Bryan McFarland, who also spoke, dealt with the subject from the point of view of the orthopaedic surgeon. At the session organised by the National Council for the Unmarried Mother and her Child, the Child Guidance Council, and the State Children's Association, the subject for debate was "Parents and Substitute Parents," the speakers being Mrs. A. Potts, Mr. J. Kelly of the Middlesex County Council, and Dr. C. L. C. Burns, Director of the Birmingham Child Guidance Council. Dr. Burns referred more especially to the question of the adopted child and child guidance clinics.

The final session of the Conference was organised by the Maternity and Child Welfare Group of the Society, when the subject for debate was "Ante-natal Nutrition" on papers by Professor Louise McIlroy and Professor Cowell. The chair was occupied by Dr. G. C. M. McGonigle. Dame Louise said that the nutrition of the expectant mother was a most important factor in the prevention of many of the complications of pregnancy. The foetus drew upon the mother for its physiological needs and tended to deplete her of those substances which were essential for its nutrition and growth. If the mother's diet was deficient the foetus became a parasite which drained her of her natural reserves. The results might be seen in the toxæmias and anæmias of pregnancy and in various conditions such as nervous disturbances, sleeplessness and muscular cramps. Professor Cowell dealt more particularly with the requirements which influenced the choice of food during pregnancy and said that the available data suggested that the protein taken in ordinary diets (70 to 100 grammes) should not be reduced during the normal pregnancy. It was likely that the quality of the protein supply was very important, and that was one

reason why the use of liberal quantities of milk was of particular value. Professor Cowell believed that the inclusion of liver once a week would aid hæmoglobin formation, and the use of sea fish provided iodine. It was his belief that an adequate diet would secure freedom from many of the common disturbances which arose during pregnancy and would promote free lactation subsequently.

In addition to the sessions of the Conference, many of the Liverpool institutions and clinics were thrown open for the inspection of the visitors. The delegates were most handsomely entertained at various functions by the Lord Mayor and many others, and the whole arrangements for the Conference were most admirably carried out.

The Late Sir William Hamer.

THOUGH he had been President of the Metropolitan Branch, actually Sir William Hamer, whose death on July 7th, 1936, and unexpected by many who knew him, is here recorded with sincere regret, never played a part of any prominence in the Society. This was unfortunate since, both as an officer of the greatest and most important authority in the country and as one of the most distinguished physicians engaged in preventive medicine, his advice and guidance would have proved of the utmost practical value. Of the medical officers of health of his period—he entered the service of the London County Council in 1892 and retired at the end of 1925, having occupied, in addition to other positions, that of Medical Officer of Health for 13 years—many of whom were deserving of recognition as scientists, there were few, if any, with stronger claims to the distinction than he. As a matter of fact, if there is or ever has been such a thing as a typical medical officer of health, there could not be imagined anyone who less conformed to it than Sir William Hamer. Rather the impression he always gave was that he was exclusively one devoted to science and to scientific research, and though quite capable as an administrator and of carrying out all the routine duties of a health officer, devising and working out schemes of public health, advising and guiding the local authority and committees, these things were not exactly his *metier*, and if he had shown or expressed something of impatience in being called upon to deal with

them no one would have been surprised or blamed him for it. That, of course, he never did in any way indicate unwillingness or unreadiness to play his part as a health officer, need hardly be said. The fact that he was chosen so unanimously by the London County Council to succeed the late Sir Shirley Murphy as Medical Officer of Health and School Medical Officer indicates how very highly his services were valued by, and how high he stood in the esteem of, that body. By those engaged with him in public health work in the metropolis, his colleagues in the service of the County Council and of the Metropolitan City and Borough Councils, the esteem in which he was held also was of the highest. As a colleague, indeed, he was most completely acceptable and there was none who did not have for him the warmest personal regard and the greatest respect. He was always ready and willing to help and was always loyal. It was a pleasure to work with him, was indeed something of a privilege, because of the distinction he had earned and maintained as an investigator, in the realms of epidemiology particularly, a distinction in which the service he so adorned inevitably had a share. To any work that he did he imparted distinction also. All the epidemiological studies he made and the communications he offered in regard to them had this quality. It was present also in the Milroy Lectures that he delivered in 1906 and in the many papers he wrote or read, at the Epidemiological Society for example. Of distinctions conferred upon him there were very many; professionally he was very highly qualified, being amongst other things a Fellow of the Royal College of Physicians, his election to the Fellowship coming in less than ten years after he took his first qualification in medicine. Various lectureships he received and various medals were conferred upon him from time to time, and nearly every society to which he belonged honoured him by inviting him to occupy a presidential chair. The most modest of men, all these distinctions and honours made not the slightest difference to him; even the knighthood conferred in January, 1923, was without effect upon the modesty of his bearing. Throughout he remained gentle and unassuming, showing a most attractive and kindly geniality. His opinions, strongly as he held them and definitely, and sometimes not without a bite as

he expressed them, he never attempted to force on anyone, and it was this, perhaps, as much as his other qualities, that helped to endear him to those in intimate contact with him and to strengthen the great affection that all the many who were his friends had for him. When he died he was 74 years of age. All who knew him recognise that all of these years that were working years were given to work that he believed would make for the future healthiness of the human race and the extermination of disease, and regret his passing as much because he can work no more as because they have lost one whose friendship was something so very pleasant and enjoyable.

A REVISED list of treatment centres approved under the Public Health (Venereal Diseases) Regulations, 1916, has recently been issued by the Ministry of Health, from whom copies may be obtained.

DR. H. A. BULMAN, Deputy Medical Officer of Health and Public Vaccinator for St. Marylebone, has been appointed Honorary Secretary of the Association of Public Vaccinators of England and Wales, in succession to the late Dr. A. E. Cope of Westminster.

THE Forty-ninth Annual Conference of the Sanitary Inspectors' Association will be held in Harrogate from August 31st to September 5th, 1936. The Presidential Address will be delivered by Sir Leonard Hill, and, as usual, an extensive programme of discussions on public health and housing matters has been arranged. Particulars of the Conference may be obtained from the Secretary of the Association at 27a, Moreton Street, London, S.W.1.

DR. N. D. BARDSWELL, M.V.O., who will retire from the position of Principal Assistant Medical Officer in the Public Health Department of the London County Council on December 20th, 1936, has been granted additional leave of absence by the Council in order that he may accept an invitation of the National Association for the Prevention of Tuberculosis to undertake important work in connection with the formulation of a scheme, under Government auspices, for the development of an anti-tuberculosis campaign in the Island of Cyprus.

Nutritional Factors in the Prevention of Disease.

By S. J. COWELL, M.A., M.B., F.R.C.P., Professor of Dietetics, University of London; and G. C. M. M'GONIGLE, M.D., D.H.Y., B.S., D.P.H., Medical Officer of Health, Stockton-on-Tees; President of the Maternity and Child Welfare Group of the Society of Medical Officers of Health.

The ordinary meeting in London on March 20th, 1936, at which the following papers were submitted, was one of the best attended of the session, and the discussion one of the fullest and most interesting held. For both of these facts the readers of the papers (Professor Cowell and Dr. M'Gonigle) and the contributions they provided were entirely responsible.

PROFESSOR COWELL.

THE trend of modern studies in the field of "nutrition"—using the term in its broad sense to denote the physiological processes concerned with the healthy development and maintenance of an organism, which must depend to a considerable extent on its food supply—is to teach that a perfect state of nutrition not only means optimum physical development, but also means a lessened predisposition to many of the diseases which attack mankind. A perfect state of nutrition can only be achieved by an individual whose diet is in every physiological respect adequate, though it is recognised that even an entirely adequate diet cannot secure a perfect state of nutrition in every individual, owing to such factors as hereditary defects, pre-existing diseases and so on. It is my aim in opening this discussion to consider very briefly some of the evidence at present available to show that diets which are not adequate to support a perfect state of nutrition do, in fact, encourage the development of a variety of diseases and disorders in man.

This general problem has been dealt with in three publications during the past year which you will agree are worthy of serious consideration by all those engaged in public health work. I refer to the report by Burnet and Aykroyd on "Nutrition and Public Health," published in 1935 in the Quarterly Bulletin of the Health Organisation of the League of Nations; the Cantor Lectures of the Royal Society of Arts, 1936, by Sir Robert McCarrison, and the report by Sir John Orr on "Food, Health and Income," recently published by Macmillan and Co., Ltd. The evidence presented in these publications cannot be lightly disregarded and suggests not only that faulty diets predispose to disease, but that

faulty diets capable of predisposing to disease are common enough in western countries as well as among other races in various parts of the world.

There is no time for me to consider in detail all the proved and suggested relations between dietary faults and susceptibility to disease, but it is pertinent to this discussion to consider in outline the types of disorder or disease which recent investigations have shown may be related to defects in the food habitually consumed.

First of all, there are the diseases specifically associated with a deficient supply of essential food factors—as far as present knowledge goes these are largely confined to the vitamins and mineral elements. Frank vitamin A deficiency leading to xerophthalmia is not common in this country but cases do occur, and it is not improbable that the symptoms of acquired night-blindness, which in its early stages is liable to be overlooked, might be found more often if they were more carefully looked for. Many of you will, no doubt, be aware of the test for incipient night-blindness which has lately been introduced to determine latent deficiency in vitamin A. This test depends on the capacity of a dark-adapted individual to perceive dim lights in a darkened room. Using this test, Jeans and Zenmire examined the vision of some 200 children in New York and found 45 of them with defective vision in dim light. Of these, 21 were persuaded to take cod liver oil and return for further tests. All of them recovered normal vision in the dark within a week or two. It would be interesting to know whether any similar tests have been undertaken in this country.

I do not intend to go fully into the much-debated question of the relation between vitamin A deficiency and susceptibility to infections. It is clear that a liberal supply

of this vitamin does not guarantee freedom from the common types of infection, but there is a good deal of evidence that it increases the resistance of the body to certain forms of infection, lessening the tendency to prolonged illness and the development of complications, as in the tests carried out on cases of measles in one of the London fever hospitals.

Deficiencies of the various vitamin B factors of a serious enough degree to cause the diseases respectively associated with them are again not commonly met with in our country. But here, again, there is some evidence that deficiencies do occur. For example, it has been suggested that lack of these factors causes a syndrome of malnutrition—fretfulness and irritability in infants—which can be remedied by adding the deficient factors in some form such as yeast.

Scurvy, the expression of a deficient intake of ascorbic acid, is happily not very common at the present time, largely because of the precautions that are now so widely taken for its prevention, for example, in connection with the advice given to mothers regarding methods of infant feeding. It still remains to be proved, however, how much truth there is in the opinion frequently expressed that slighter degrees of this deficiency are responsible for a good deal of vague ill-health and increased susceptibility to infections. Experimental evidence is not lacking that minor degrees of the deficiency render animals more susceptible to bacterial invasion and attack by such poisons as diphtheria toxin. But similar evidence in the case of human beings is not yet forthcoming. The test recently introduced for detecting minor degrees of vitamin C deficiency, based on the principle that this substance is excreted in the urine more readily when the body contains large stores of it, may be of considerable help in furthering this type of inquiry.

Deficiency of vitamin D is, of course, widely recognised as a cause of disease in children, and we are all alive to the importance of preventing its occurrence as far as possible by recommending strongly its provision in one of the many forms now available. Calcium, phosphorus and vitamin D are all intimately concerned in the metabolic processes which govern the calcification of the bones and teeth, and a liberal supply of all of them, combined with a limitation in the cereal intake, are the guiding principles in ensuring, as far as possible, perfect calcification. Obvious manifestations

of vitamin D deficiency are not common in adults in this country, but more and more attention is now being paid to the possibility that some of the metabolic disturbances during pregnancy are bound up with a disordered calcium metabolism due perhaps to a combined deficiency of calcium and vitamin D.

Recognisable disturbances in human beings as the result of deficient intake of mineral elements are most commonly due in this country to lack of calcium, iodine or iron. Calcium has already been mentioned in connection with vitamin D. Iodine deficiency is widely recognised as one of the important causes of simple goitre. I may perhaps be allowed to remind you of the fairly well-established principle that successful goitre prophylaxis depends on the adequate supply of iodine during pregnancy and infancy.

On the subject of iron deficiency, I would like to speak rather more fully. It is becoming more and more widely recognised that a deficient iron intake is responsible for a very large number of cases of anæmia, particularly in infants and in women during the child-bearing period of life. You will all, no doubt, be familiar with Dr. Helen Mackay's most valuable contributions to the study of nutritional anæmia in infancy. The importance of her work consists not only in her demonstration of the common occurrence of this condition and of the simple and effective means available for preventing and treating it, but also in her conclusion that anæmic infants are considerably more susceptible than infants with a normal amount of hæmoglobin to many of the common ailments of infancy.

Anæmia in women of the child-bearing age has attracted considerable attention. It has been studied intensively, for example, in Aberdeen by Professor Davidson and his colleagues. His work suggests that there is some definite relation between the onset of this type of anæmia and a deficient intake of iron, though to cure the anæmia after it has made its appearance, massive doses of medicinal iron are much more effective than merely increasing the amount of foods relatively rich in iron. It would appear that this type of anæmia is by no means confined to women of the poorer classes, for I have heard distinguished obstetricians declare that they meet it commonly among their wealthiest West End patients consulting them for ante-natal advice. In a sense, some slight degree of nutritional anæmia would seem to be almost the rule

among the women of this country. It is, I think, commonly held that if the normal hæmoglobin percentage of males be regarded as 100, that of females ranges about 90. Dr. McCance of King's College Hospital recently examined the hæmoglobins of some 15 or 20 healthy males and of the same number of apparently healthy females. The hæmoglobin percentage of the males averaged 102 and that of the females 92. He then gave them all 100 mg. of iron for a few weeks and re-examined their blood. The average amount of hæmoglobin in the males had risen from 102 to 103, whereas that in the females had risen from 92 to 102. It appeared that the amount of iron in the ordinary diet sufficed to maintain the hæmoglobin of the males at a normal level, but was not enough to counterbalance the extra losses of the females.

Here, perhaps, I may be permitted to draw your attention to the fact that the question of what is and what is not an adequate physiological supply of iron is not quite as simple a problem as was thought a year or two ago. It appears that the iron in certain types of food which are rich in this element, as, for example, meat and spinach, is present in such a combination that much of it is not available for use in the body. If such turns out to be really the case, the iron content of foods will need to be expressed in terms of available iron as well as total iron for purposes of practical dietetics.

So far I have run over very sketchily some of the immediate effects of food deficiencies in relation to the occurrence of disease. Evidence is accumulating, however, to show that food deficiencies may have more remote effects on health which are none the less important. The following are illustrations of the principles which may be involved. It is known that vitamin A or its precursor carotene, must be supplied to ensure the maintenance of the normal structure of the epithelium of the body. When the supply is deficient, there is a marked tendency for the epithelium to become hyperplastic and keratinised—this latter tendency, incidentally, being responsible for diminishing the local resistance of tissue surfaces to invasion by bacteria. There is some evidence that this change is not completely reversible when the deficiency is made good. Thus, Mrs. Mellanby has described changes of this type in the gums of adult dogs, associated with pyorrhœa alveolaris—the lesion being produced by a diet deficient in vitamin A, not throughout life,

but only during the period of active growth. It has not yet been shown that this particular deficiency explains the occurrence of pyorrhœa alveolaris in man, but the experimental observation does suggest as a general principle that to secure the advantages of perfect nutrition throughout life it is of great importance to ensure that no deficiencies are permitted to occur in infancy and childhood.

A further illustration of the more remote effects of dietetic deficiencies on predisposition to disease is to be found in the work of the past decade on the relation of dietetic factors to dental caries. This problem is not a simple one, but a great deal of light has been shed on it, particularly by the work in this country of Mrs. Mellanby. There is an increasing body of evidence in favour of the view that the habitual diet of the individual plays an important part in determining his susceptibility to dental caries, not through the local effect of food residues in the mouth, but through the effect of specific dietetic factors on the internal structure and metabolism of the teeth. Of these specific factors those which control calcification would seem to be of particular importance. However this may be, there is almost universal agreement that a variety of disorders and diseases, ranging from dyspepsia to septicæmia, may be traced to dental caries. There is, therefore, a strong case for the argument that such diseases may be, at least in some instances, preventable by attention to those dietetic factors which tend to promote perfectly formed, healthy teeth and to increase the resistance of fully erupted teeth to decay.

One other point I would make which relates primarily to physical development and maintenance of vigour and vitality rather than to the actual prevention of disease. It is sometimes assumed that there is no need to worry about our supplies of vitamins and minerals in this country because symptoms of severe grades of deficiency are rarely met with, except in the case of the calcifying factors. The available evidence at the present time strongly suggests that this attitude is not in accordance with physiological principles. Sherman in America has published many observations pointing to the fact that by increasing the supplies of vitamins given to his stock animals to a level well above that necessary for maintenance, he produces increased rates of growth, an increased span of life, greater fertility and generally improved reproductive capacity. Other experiments have been recently carried out on the effect

of increasing doses of crystalline vitamin B.1 on the rate of growth of animals. With each fresh addition of this vitamin to the quantity found necessary merely to secure continuous growth, an acceleration in the rate of growth was found up to a dose 160 times the minimal dose which was the largest dose tried. There is no reason to suppose that this general principle is not of general application in the mammalian kingdom. We have, in fact, evidence of similar growth-stimulating effects produced in children by special dietary additions—the famous milk experiments carried out both in England and Scotland, and the observations of Dr. Friend at Christ's Hospital.

What steps should be recommended to secure for our people that optimal state of nutrition which should guarantee them freedom from diseases which are directly or indirectly likely to be caused by dietary defects? While it cannot be claimed that our knowledge of human nutrition is at present so complete that we can confidently define the optimum diet for all classes of individuals, many of us believe that our knowledge is sufficiently advanced for us to be able to recommend certain practical measures. These can be summed up in a few words. The aim is to secure a greater consumption of the "protective foods"—dairy produce of all kinds, eggs, liver, fat fish, fresh vegetables and fruit—and a lessened consumption of what we might call the inert foods, refined cereals, sugar, jam and vegetable fats. In special cases, as, for example, the feeding of young children and women during pregnancy and lactation, a very strong case exists for the provision, in addition, of some more or less artificial source of vitamin D.

The difficulties in the way of securing this end are not to be minimised. They are partly social and political in origin, partly agricultural and partly educational. It is being more and more widely recognised by governments that they have a great responsibility in securing for their peoples an adequate state of nutrition. Their declared aim in certain instances is to examine the possibility of bringing reasonable supplies of the more health-giving foods to the masses of people who cannot at present afford to buy them. The co-operation of agricultural experts is essential to devise means of producing in sufficient quantity the amounts of "protective" foods considered advisable. It has been calculated, for example, that in the United States, where there has often been enormous over-production of certain food mate-

rials, there is not at the moment sufficient land under cultivation to supply their own population with a diet which could be classed according to modern standards as liberal. Education will have to play its part, for it is not poverty alone which is responsible for the provision of inadequate diets.

The problem is being seriously tackled in many countries including our own. The Health Organisation of the League of Nations is giving a strong lead, and many of you will no doubt be familiar with the pamphlet recently issued under their auspices by a committee of "health experts," in which standards are suggested for feeding different classes of individuals, not merely on the basis of the older standards of calories, protein, fat, and so on, but emphasising the need for adequate daily rations of the protective foods.

Many of you, I know, have not only recognised already the important part which problems of nutrition play in preventive medicine, but have made valuable contributions to our knowledge in this field. The indications are, as far as I can see them, that in the near future all those who are engaged in the responsible task of supervising the health of our populations will be called upon to pay increasing attention to the factor of nutrition with the double object of improving the physique and lessening the amount of ill-health and disease among them.

DR. M'GONIGLE.

It is no light task to follow Professor Cowell in setting before the Society information on nutritional factors in the prevention of disease and, though I am fully sensible of the honour conferred upon me in being asked to do so, I approach the task with some trepidation.

As a medical officer of health, a considerable proportion of whose time is occupied in the conduct of ante-natal and child welfare clinics, it appears to me that my contribution to this discussion might usefully be concerned with the practical application of nutritional science to everyday life as seen by the medical officer of health.

Laboratory nutritional experimentation carried out on small animals has demonstrated that the nature of the diet exerts a profound influence upon the life of the experimental animal. We owe to biologists, physiologists and biochemists a deep debt of gratitude for their work and it is our duty, as practising public health officers, to attempt to liquidate that debt by applying to the population under our care

the biological knowledge which they have made available for our use.

There exist certain difficulties in the application to human beings of nutritional knowledge gained from observations on small animals kept under laboratory conditions. The physiological processes of human beings are not in all respects identical with those of the small mammals commonly used in the laboratory, and differences exist among the animals themselves, as witness the biological attitude to vitamin C of rats and guinea-pigs. The laboratory worker can control his variables but the medical officer of health in his dealings with the human population is faced with many variables, most of which are uncontrollable and some of which are unknown. Care and caution should, therefore, be exercised in the interpretation and application of animal nutritional research to human beings and extensive field research work is necessary before dogmatic conclusions can be formulated.

Dietary deficiencies are common in large proportions of the population of this country, but it is rare to see clearly defined clinical conditions attributable to any one particular deficiency. Marked cases of scurvy, or osteomalacia are uncommon in England, but this absence of gross deficiency states must not be allowed to lead to the assumption that optimum or adequate quantities of the food factors associated with the conditions have been ingested. Consideration of our national dietary will make it clear that total absence of any one food factor is unlikely to occur, but instances of sub-optimum quantities of multiple factors are, in fact, common and play a large part in the production of much vague ill-health and sub-normal nutrition. It is not always appreciated that the child presenting signs of mild rickets suffers, not merely from a shortage of vitamin D, but also, in most cases, from sub-optimum quantities of vitamin A, of calcium, of phosphorus, of iron, and of first-class protein. So, as a result of these multiple deficiencies, we get the pale, anæmic, flabby, mildly rachitic child liable to catarrhal and other infections. The treatment of such a child should not be confined to the administration of vitamin D, but should be based upon a realisation that there may be a shortage of many dietetic constituents.

Experiments on small animals have shown that successful reproduction is closely associated with the character of the diet. Rats can be so fed that they are incapable of impregnation; but alteration in their diets can produce

a bodily state in which they abort, miscarry, give birth to stillborn young, to live young which they are incapable of suckling, or to live young which they can properly nourish. The interpretation of these phenomena in terms of human reproduction is not easy because of the presence of numerous variable factors the effects of which cannot easily be assessed, but recent work with wheat germ extract (vitamin E) in Stockton-on-Tees and elsewhere does appear to indicate that some abortions and miscarriages can be prevented. Some pregnant women suffer severely from muscular cramps and from tumultuous movements of the fœtus. The relief obtained by the ingestion of calcium is, in many cases, dramatic and the conclusion may be drawn that the diet had contained inadequate quantities of this mineral.

Inability to feed human infants is far from uncommon and there appears to be ground for the supposition that a shortage of protein (including first-class protein) in the mother's diet may be a contributory factor in the failure of the breasts to function satisfactorily. Anyone who takes the trouble to calculate the amount of protein present in a pint of human milk will realise that, during lactation, the mother's need for this dietary substance is considerable.

Analysis of family budgets show that the completeness of diets purchased varies with income. The lower the family income the more does the diet purchased deviate from the optimum, and further, inquiries indicate that death-rates follow the same trend.

DISCUSSION.

The President (Dr. W. G. Savage) referred to the importance of the particular phase of nutrition dealt with by the opening speakers. He had been especially interested in Professor Cowell's remarks on small deficiencies of vitamin A. The numerous recorded experiments on animals fed on diets deficient in that vitamin, and the local changes which had been shown to take place, were doubtless familiar to most public health workers. Did those anatomical changes occur in man in similar circumstances? With regard to the hæmoglobin level in women, were they any better for the increase from 92 per cent. to 102 per cent.? Dr. Savage also expressed appreciation of the many interesting points raised in Dr. M'Gonigle's contribution.

Dr. E. H. T. Nash (Medical Officer of Health, Heston and Isleworth), dealing with the question of the high protein value of artificially dried grass as compared with hay, asked if there was any indication of work along the same lines with regard to other vegetable products. Referring to the President's remarks, he did not think there had been any denial that the work which Rowland had carried out was

equally applicable to man so far as the intestinal tract was concerned. The question of small vitamin deficiencies he considered called for wider research.

Dr. Maitland Radford (Medical Officer of Health, St. Pancras) said there was one aspect of the subject which it was simple to understand, namely, that if the people had not sufficient money they would not have enough food, or food in adequate variety. It was to be regretted that recent discussion on the subject had not resulted in the acceptance of an official figure of the costs of food necessary to maintain an individual in health. Such a standard would be of far-reaching value in the prevention of malnutrition. An analogy might well be drawn with administrative methods adopted to secure adequate ventilation. In a case of overcrowding and inadequacy of air space, the people were counted and the room measured, a recognised scale of space per individual was applied and, if conditions were unsatisfactory, administrative action followed. It was not considered necessary to have a medical examination before deciding that a family were at risk in respect of lack of air space. The application of a scale of food values in considering the nutrition of a family would be of similar advantage.

Dr. T. W. Hill (Deputy Medical Officer of Health, West Ham) held that the opening speakers had made the subject of dietetics more complicated than it really was. He referred to a comparison of the physique of the peoples of western nations with that of certain eastern natives. In the north of India the inhabitants of the Hunza States exhibited the finest physique in the world and did not suffer from any of the diseases to which western peoples succumbed. The former lived entirely on a diet consisting of wholemeal cereals, milk and milk products, fresh fruit and vegetables, with meat only occasionally. The inhabitants of western countries, on the other hand, lived largely on white bread, white sugar, tinned fruit and jaded vegetables, with meat every day, and such a diet was likely to undermine the health of any nation. The underlying principles should commend themselves to all public health officials. There were, he claimed, two fundamental problems in relation to the question of diet—ignorance and poverty.

Dr. Victor Freeman (Assistant Medical Officer of Health, Heston and Isleworth) referred to the possibility of increasing the pulse rate by the giving of vitamin B₁, and to the need of cod-liver oil with a definite vitamin D content.

Dr. E. H. R. Smithard (Medical Officer of Health, Southall-Norwood) raised the question of administering extra calcium by means of injections.

Dr. Agnes Nicoll (Assistant Medical Officer, Willesden) asked if the connection between the capacity to earn and the capacity to survive from the hygienic point of view had been considered.

Dr. P. A. Galpin (Tuberculosis Officer, West Ham), in a reference to "dietetic rebels," held that though increase of purchasing power would accomplish much, it would not solve all dietetic problems. It was necessary to persuade people to take the necessary protective foods. Out of a group of persons it had been

found that some 50 per cent. left either green vegetables or fat or both on their plates. He had been convinced that it was his duty to carry out not only a physical examination of cases sent to him but an enquiry into the question of diet with the object of inducing parents and children to accept the food provided.

Dr. Maurice Mitman (Divisional Medical Officer, London County Council) referred to work carried out in a London County Council hospital on the value of certain of the vitamins in relation to measles, with definitely negative results.

Dr. Robert Sutherland (Medical Officer of Health, Brighouse) also mentioned the use of vitamins in measles. In cases that had proved fatal, bronchopneumonia had set in before treatment had been commenced.

Professor Cowell, replying to the question regarding vitamin A deficiency and local changes, said that such changes had most certainly been shown in association with obvious signs before death, though he was unaware that they had been demonstrated in milder degrees of deficiency. On the question of hæmoglobin level in women, there was no evidence that the women with 92 per cent. were worse off. It was really a matter of principle. The chances were that the level of hæmoglobin tended to get progressively lower as time went on, and it appeared to be a matter of some importance to bear in mind that the stage might be reached where anæmia would result. With regard to the storage of vitamin C, information was coming more and more rapidly to hand because of the chemical methods now available for determining vitamin C. While laboratory research and field observation were necessary in that connection, only the former had shown the way, but no one had paid the slightest attention to the results that could be obtained. Referring to vitamin B₁ deficiency in animals, Professor Cowell explained that it did lead to slowing of the pulse, which could be restored by giving vitamin B₁, and this had been used as a test. He thought it unlikely that any effect on the pulse rate of human beings would be obtained by giving vitamin B₁. As to the vitamin D content of various cod-liver oils, those of reputable firms were warranted to contain a minimal quantity of the vitamin. Methods of supplying calcium in pregnancy included the giving of milk in considerable quantities or probably more conveniently by means of calcium lactate. With regard to the value of vitamin A in infections, he had endeavoured to make it clear that the evidence all the way through was very conflicting, and that it was impossible to demonstrate the anti-infective action of vitamin A.

Dr. M'Gonigle, who also replied, said it was unnecessary to administer calcium hypodermically in antenatal work, as it could be given in tablet form. The capacity to earn, raised by Dr. Nicoll, he considered not such a large factor as formerly. The "dietetic rebel" and the fat-shy child constituted a difficult problem, though it could be overcome in many instances if the children were separated from their parents.

A vote of thanks, moved from the chair, to the opening speakers was accorded enthusiastically.

Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

The Society and the Southport Congress.

The Society was not only well but prominently represented at the 'Royal Sanitary Institute Health Congress at Southport, so very many of those holding high office being present. First and foremost, of course, was the President, occupying the chair of the joint meeting of the Medical Officers of Health Conference with the Preventive Medicine Section. Then there was Dr. Fenton, Chairman of the General Purposes Committee, as Chairman of the Council of the Institute, performing the multitudinous duties of that officer in addition to those of the President of the Congress—Sir Kingsley Wood—unable to be present, his presence in the House of Commons being necessary in connection with the Midwives Bill and other matters. Attending the Congress and playing more or less important parts were also the Treasurer of the Society (Dr. G. F. Buchan), the Vice-Chairman of the General Purposes Committee (Dr. Wood), the Executive Secretary, the Consultant Secretary, and the Honorary Editor. At other than their own conference the sections at which most medical officers of health and members of the Society were seen were Preventive Medicine, Maternity and Child Welfare, Health Visitors, and Sanitary Inspectors: the last-named largely because nearly everybody attending the Congress makes a point of putting in an appearance there. Fellows of the Society and members of the Council presided over two sections: the President (Dr. W. G. Savage) presiding over a joint meeting that numbered four or five hundred, and the Treasurer over another joint meeting (Maternity and Child Welfare and Health Visitors) numbering not far short of these figures.

Health Officers in Conference.

In his presidential address, Dr. Savage dealt with questions affecting "Water and Sewage Schemes in Rural Areas" and gave a most interesting and practical paper descriptive largely of the procedure followed in his own county of Somerset that had been productive of very excellent results. Dr. Buchan, in his opening remarks, discussed the important matter of the training of health visitors, and received cordial thanks, proposed by one of the most honoured and most warmly welcomed delegates, Surgeon-General Cumming, until recently head of the

United States Public Health Service and present at the Congress, with Mrs. Cumming and Dr. Spencer, a senior Surgeon in the United States Public Health Service, as representative of the Government of his country. The vote, which was most gracefully proposed, was no less gracefully seconded by Dr. James Fenton in one of the multitude of speeches he was called upon to deliver during the course of the proceedings. The subjects discussed at the two meetings mentioned were, at the first-named, "Public Dental Services," and at the latter, "Child Guidance and the part of the Health Visitor in Reduction of Maternal Mortality." The object of those concerned in discussing dental services was to show the necessity for securing such an expansion as would make facilities readily available to every member of the population. The inclination of the meeting was very obviously in the direction indicated by the readers of the opening papers, of whom two were medical officers of health—Dr. Tibbits of Nottinghamshire, and Dr. Underwood of Shoreditch—and a resolution appropriately embodying the views expressed received ready and complete acceptance. In the papers read at the Health Visitors' Conference there was very much that was useful in the shape of information and much also that was interesting in regard particularly, perhaps, to child guidance, the reader of the paper on the subject—Miss Turner—having acquired a great deal of practical experience as Psychiatric Social Worker, Springfield Mental Hospital. Miss Turner's paper, as did also that of Miss Frederick, Health Visitor at Woolwich, on maternal mortality regarded from the standpoint of the health visitor, led to exchange of views, opinions and experiences that secured the keeping of the meeting going until nearly lunch time.

Housing and Overcrowding.

At the Sanitary Inspectors' Conference the paper that attracted most attention from medical officers of health was that on "Overcrowding and the Housing Act, 1935," submitted by Mr. Stewart Swift, Chief Sanitary Inspector of Oxford, and an authority on housing and housing legislation. Apropos the Sanitary Inspectors' Conference and the papers read thereat, note may be made of the excellence of

the choice of subjects commonly made and of the arrangements generally in connection with the discussions, so far at any rate as the sanitary inspector members of the meeting are concerned. Things move so smoothly and the interest is so well maintained that clearly time must be given to the selection of speakers and to indicating to each just what aspect of the subject he is to deal with. In every sense this is most proper and may be commended to those in charge of sections and conferences—not excepting medical officers of health—where methods are more haphazard and speakers are liable to wander far from the point and purpose of the discussion and to prove, quite frequently, almost inaudible. And audibility and the neglect of the organisers of this and other congresses to secure either that only speakers who can speak up are included in the programme or that some form of voice amplifier is installed, is something upon which it would be easy to enlarge or base complaint, only there are other matters more appropriate for reference.

Delegates from Overseas.

Amongst these other matters there is that concerning the Section of Tropical Hygiene and the many very distinguished visitors from overseas that it played some part in attracting to the Congress. The Section itself actually calls for reference because it was a new one and was very definitely of medical interest. Meeting in the afternoon, the Section was less well attended than it might, indeed should, have been since the programme, which included, in addition to papers by the President (Dr. Peacock, late Deputy Director of Health Services in Nigeria) and Professor Blacklock of Liverpool, a number of slides and films, was a most interesting one. The fact that the overseas delegates were representative of some forty-five countries was mentioned several times at the Congress and at this Section and the luncheon given in their honour that preceded the meeting. The names of General and Mrs. Cumming and Dr. Spencer as American representatives have been mentioned already. In addition, however, from the United States there were Professor Strong of Harvard, representing that University and the State of Massachusetts, and Dr. Rudolfs, delegate from the American Public Health Association. Prominent amongst others were Professor Mühlens of Hamburg, the representative of the German Government and also of Hamburg, along with Professor Peters,

Vice-President of the Health Organisation of that city. As on other occasions, Professor Bentley attended to represent the Egyptian University, and there were representatives also from Guatemala, Iran, Luxembourg, Colombia, Panama, China, etc. The representation of the Dominions and Colonies was unusually large, several places, for example, Australia with five, India with four, Hong Kong, South Africa and Uganda with three each, sending more than one delegate. Having regard to the size and diversity of the overseas representation it was very unfortunate that the time at disposal following the overseas luncheon—because of the meeting of the Section of Tropical Hygiene—was so short. Usually this occasion is one when opportunity is taken by delegates to offer greetings and to say a few words. Actually there was only time for four or five speakers. They were so good, however, that they made up for those that had to be missed. Another year it is probable that the Council of the Institute will arrange a morning session for the Section so that there will be less need to hurry over luncheon and a steadier and slower pace may be set for the proceedings that follow. In this way greater opportunities of making more intimate contact and adding, it may be hoped, to the pleasure of their visit may be secured. As it was, of course, the parts of the Congress here referred to were highly successful, and of the meeting as a whole exactly the same may be said.

SHOES AND RHEUMATISM.—During 1935 a scheme for advising women patients as to the purchase of suitable shoes has successfully been launched. There are many patients whose pain is increased—and, indeed, in some actually caused—by shoes which cripple the feet and defy any attempts to loosen stiff joints and re-educate weak muscles. Expensive surgical shoes are not needed, but guidance as to suitable type and emphasis on the importance of securing a good fit which allows plenty of room for supports are important. In February it was decided to ask a number of firms to send samples of ordinary shoes cut on hygienic lines. Eight firms submitted either one or more samples, which were examined by two of the physicians at the clinic, and a list was compiled of those approved. The scheme was ready to be put into operation in September. Since then 32 patients have been advised. In 19 cases the shoes have been obtained, with the result that in 17 cases foot troubles have been practically overcome. In every case the patient is advised to bring the shoes for the doctor's approval before actually paying for them.—*Report of Medical Board, British Red Cross Society Clinic for Rheumatism.*

Orthodontic Schemes.

By ELWIN H. T. NASH, M.R.C.S., L.R.C.P., D.P.H., Medical Officer of Health and School Medical Officer, Heston and Isleworth.

The fact that Dr. Nash was to deliver an address on this subject was prominently announced in PUBLIC HEALTH and agenda papers of the Society. On the occasion of its delivery before the Home Counties Branch there was a fair attendance of members and others, but to the many who, unfortunately, were unable to be present, the appearance of the paper here will no doubt be welcome.

MY reasons for bringing this paper before my fellow administrators in the public health service are, first, that I can give a report on the place that, in my opinion, the practice of orthodontia must take in the future dental services of the country, based on five years' working of the pioneer municipal orthodontic clinic in this country; secondly, that it may be a justification for my administrative methods which have been adversely criticised by some of the members of the school dental service; and thirdly, I want to show that necessity for treatment is not only dental, but medical and, particularly, psychological.

Like all school medical officers, one was unaware of some of the awful mouths that afflicted children, and that orthodontic measures, other than extraction of teeth that were often quite sound, were measures difficult of accomplishment amongst the dentally ignorant portion of the population. There is no school medical officer who has not had his patience tried to breaking point in trying to persuade the parent, where the offspring needs several fillings to save his teeth, only to be met with the reply that they can have them out but they "don't hold with stopping 'em." Again, how often has one tried to persuade this class and those more intelligent that the removal of two or four sound teeth is necessary to save ultimate overcrowding and deformity, only to be met with the blankest of refusals.

My stimulus towards the utilisation of apparatus for the cases that could not be treated adequately by timely extractions was given by Mr. Cale Matthews, Dental Surgeon to King's College Hospital, who, during one of my presidential years of the Medical Officers of Schools Association, read a paper on the rectification of these deformities during school life. He was dealing with children in high-class preparatory schools and the junior forms of the public schools. My democratic soul rebelled that such beneficent treatment should be available only to the well-to-do and not to

the child population I am responsible for. I could not hope to emulate the exquisite pieces of apparatus fashioned by Mr. Cale Matthews, but I felt that something should be done to make the treatment available to my school population, despite the fact that the Board of Education had not progressed dentally at that time much, if any, beyond the vision beautiful of the six-year-old molar, and were not likely to look with any approval on the provision of apparatus in a dental clinic. I want all the critics in the dental service to appreciate that every step I took to establish orthodontia as a day-to-day part of our dental service was based on these facts. Had I attempted five years ago to do the work as I am doing it now, I am certain that the Board of Education's attitude would have been entirely adverse. I am not unacquainted with the Board of Education's views on school and dental matters as a result of 26 years as a Chief School Medical Officer, and I felt that to educate them to my views meant that my motto had to be *festina lente* and my "factor of safety" very high.

The questions that you will be asking are: (1) Is there a demand for this work? (2) Is it justified (a) by reason of its expense; (b) by reason of the time it takes from what I call the ordinary routine work of the school dental officer?

With regard to the first question, the cases requiring orthodontic treatment have been assessed in one instance as high as 30 per cent. of the school population. This figure, of course, includes the minor cases, which certainly for the time being do not come within our purview. I think you may take our figure as a fair criterion of the cases that call for treatment. I use the word "call" advisedly, as I feel that it is the right expression to use in this case. Our school population is now 12,000, and in five years we have had 850 cases under treatment, of which 459 have been completed.

Again, you will ask: "What has been the need for the treatment of these cases?" The

models I am exhibiting, and the lantern slides of cases will, I hope, demonstrate to you the need for the treatment from the health point of view, as unless a mouth can function properly as a masticating machine its possession is of doubtful benefit to its owner.

There is another point which is to my mind of immense importance in the case of the severer forms of deformity, particularly inferior retrusions, and that is the psychological damage, particularly in the case of females. There is in these cases a marked inferiority complex which overshadows everything. You have only to sit opposite one of these cases in the train to see the constant effort to cover the protruding teeth. Speech seems to bring into use facial muscles that normally are not in evidence. If I may use the expression, speech is almost a conscious muscular effort as regards the muscles that control the lips. It may be that it has been my lot to see the tragedies of these cases at close quarters.

As I recently wrote in an article in the *British Medical Journal*, a very near relative of mine has had the whole of his life dominated by his bad inferior retrusion. His preparatory school days were made a misery by the gibes of his fellow pupils, and his later years a misery by his dental troubles and the fact that his deformity is such that an artificial denture would baffle even the genius of Wilfred Fish. Again, a friend who died recently, possessed a mouth which as a model would have brought sheer joy to the continental caricaturists like *Simplicissimus* when they wanted to illustrate an English aristocrat. To talk to him was difficult, as one's attention would become fixed on the constant efforts to cover his awful teeth. These in his later years got more and more discoloured until they looked like a row of lichen-covered tombstones reminiscent of the moping owl and the ivy mantled tower of Gray's immortal *Elegy*. His dental adviser would not tackle a denture.

I recently reported in the *British Medical Journal* a case where a boy's whole outlook on life was jeopardised by his dental deformity. The boy won a scholarship to the county school just after we had made arrangements for treating his dental condition—a set of supernumerary incisors in the upper jaw—which ultimately caused a very severe deformity to his mouth. He left school and got a post as interviewing clerk in an insurance office through the influence of his father, who was a member of the staff. At the end of his first week

he was told that he could not do his job owing to the trouble he had with his dental deformity. The mother in her distress brought the boy to me on the Saturday morning of his first week at work, asking what I could do. As school medical officer—nothing, as he had left school. As an individual anxious to help—very little, as he was 16 and these cases can only be dealt with efficiently at about 10 to 11. I got Mr. Evans, our orthodontic specialist, to take him over as a patient at the Royal Dental Hospital, hoping for some improvement after the removal of the supernumerary teeth.

Again I want to emphasise the importance of the psychological effect of these dental deformities, a fact which seems, so far as I can make out, to have not been sufficiently stressed. Its effect is lifelong in many cases, and is far worse from the point of view of the happiness and success of the individual than the actual dental deformity itself. As I have stressed before, one of the outstanding features of this work has been the manner in which a mother who has handed on to her daughter an inferior retrusion, which has made her own life a misery, will grudge no money or time in order to ensure that her daughter does not suffer as she has done.

What are the origins of these deformities which afflict our children, and can we as public health officers do anything to prevent their occurrence?

With regard to the causation there are two main causes: (1) Heredity. (2) Developmental (a) caused mainly by naso-pharyngeal obstruction; (b) caused by habits such as thumb sucking, dummy sucking, blanket sucking, lip sucking, etc.

With regard to class (1), Professor Brash has called attention to the large number that are due to this cause, and one has only to see the parents of the patients to realise the frequency with which this tragic legacy has been involuntarily bequeathed to the offspring.

With regard to class (2), the protagonists of the obstruction theory seem to claim this as the *fons et origo mali* in almost every case. To them a necessary preliminary is the removal of adenoids with or without tonsils. I am bound to say that in several of the cases I have seen, such adenoidal tissue as existed had at the age when the patient was seen, ceased to be a material cause of obstruction either *per se* or as the result of any accompanying catarrh.

What I have seen is that a number of these cases that have been referred to hospitals for

the removal of tonsils and adenoids have turned up again with little or no improvement as the result of the operative procedure. On examining the patients the reason has been abundantly apparent. The cause of the obstruction has been, and still remains, due either to enlarged turbinals, a deflected septum, or both. So gross are these that it is seldom I cannot demonstrate the condition to the parent by merely tilting up the end of the child's nose in front of a window. Here is the tragedy of the position which reflects no credit on us as a profession. In not a single case of this type when I have asked the parent if the child's nose was examined, has the answer ever been in the affirmative. With regard to the cases with deflected septa, a difficulty arises in that most surgeons dealing with the nose will not operate before the age of 12 owing to their dread of the operation damaging the support normally given by the septum. I have, however, found one surgeon who will operate on these cases, viz., Mr. Philip Franklin, to whom our deepest sympathies must go out in regard to the tragic happening in the fire at his house in Wimpole Street. In such cases as he has operated on, the results have been entirely satisfactory.

It is surely imperative to see that the operative proceedings to relieve the obstruction are complete, as it is such things that bring operative procedures into disrepute.

With regard to the habit-produced deformities, it is normally sufficient to stop the habit to prevent further progression, but these cases cannot be dealt with orthodontically until they reach the age of nine or ten. In the case of thumb and finger suckers there is often considerable difficulty in breaking the habit which, if not broken, often runs on for years. We have devised wire guards, made for us locally, which are worn night and day. These we find the most effective preventive.

It is not, I find, appreciated by the medical profession at large, how great the deformity caused by thumb sucking can be. The upper incisors are pushed out and the lower incisors pushed in, as will be shown in the models and patients exhibiting this condition.

Sir Robert Woods of Dublin, the famous oto-laryngologist, in the *British Medical Journal* of October, 1935, urges that these deformities might be due to congenital syphilis. I have no hesitation in saying that in the cases under our observation there was never any suspicion of congenital syphilis. This deformity is so clear cut that it is possible from the mouth or models

to say whether it has been caused by thumb sucking or dummy sucking. The latter does not push the lower incisors inwards in the same manner.

With regard to the treatment of these cases, we as school medical officers cannot hope to employ the beautiful and elaborate pieces of apparatus, particularly those that are fixed, by reason of (a) the expense of providing them, (b) the fact that many of the parents lack the means or intelligence to bring their children up for adjustment of apparatus. If a child has to be brought some distance at frequent intervals, the cost of transport is a burden the parents cannot and will not face, in the latter case often due to the fact that they do not realise the importance of the dental deformity to the child.

Moreover, I do not think we can claim that the cosmetic perfection that the orthodontic specialist provides at necessarily large fees is a part of our duty, which I consider to be to provide an efficient and healthy masticating machine, and to remove any deformity which may be a cause of psychological disability in the years to come. We have only used one fixed apparatus and that was after repeated efforts to make a neurotic boy retain his plate. His fixed apparatus also was a failure.

The choice has to be made between judicious extraction at the appropriate time, and the use of apparatus to expand the arch and perform other functions such as raising the bite or pushing forward the mandible. Judicious extraction, for instance, of the four sixes at the appropriate time, can give an excellent result. In some cases the closure of the gap is so close that a visiting card cannot be placed between the front edge of the sevens and the adjoining fives, and that in some cases is accomplished without any tilting whatever. This perfection of movement is not always the case, as when deciduous teeth have had to be removed as the result of caries, it is often necessary to insert a splint plate to keep the distance and space for an erupting tooth, and to prevent the teeth tilting into the vacant space, moving with the root apex as the fixed point.

There are those who, like Dr. Sim Wallace, are whole-hearted enthusiasts for the removal of the proper teeth at the proper time, letting nature remodel the mouth. To Wallace, the expansion of the arch to make room for overcrowded teeth is anathema, and he pours scorn on what he calls the gorilla faces that are produced,

It may be that in the lean and hungry looking type the expansion may produce a physiognomy more reminiscent of the Zoo than the drawing-room, but it has not been our experience. We use both according to the demands of the case and the psychology of the patient and parent. In the past more hostility was aroused in the uneducated parent by the desire to remove sound teeth for orthodontic reasons than anything else.

My first step was to get my committee to purchase subscription tickets at the Royal Dental Hospital, each expenditure of one guinea providing us with four hospital letters. The provision of these hospital letters to the patients did not cover the cost of orthodontic apparatus, and as the Royal Dental Hospital required this to be "paid in one sum" before the apparatus was fitted, this produced difficulties very early in the scheme.

This scheme failed by reason of the waste of time due to the multiple journeys made by the parents and patients. Even now there is insufficient appreciation of what it means to a parent to come up to a London hospital from a district in the periphery. It means in the first place, a financial expenditure of 1s. 6d. for the adult fare, and half for the child, if it can travel as a half, and this pre-supposes that they spend nothing on food, which is not usually the case. This expenditure I have found has meant to some families of restricted means that they have gone up by the workmen's train in the morning in order to save the difference in the cost, and loafed about London until noon when they were to be seen. If they take no food it means at least the railway fares for two persons; and still junior medical officers will light-heartedly tell a patient to come up every few days for some kind of treatment or to have an apparatus adjusted, not realising the terrific burden that they are placing on the family.

Quite apart from the financial burden, there is the waste of time, which, if there are other children in the family, is a serious matter. It means the parents have got to spend the greater part of the working day in their visit to the hospital, and arrange for some kindly neighbour to supervise the other children, to attend to their meals, and see that they get off to school again in time.

This arrangement also had the drawback that the patients were used for demonstration purposes, and entirely misconceived opinions were reported to us as the result of these

demonstrations to students in front of the parents. It soon became apparent that there was no chance of success based on this method of administration.

My next step was to approach the hospital authorities with a view to a more co-ordinated scheme whereby they would act as consultants, and we should do the work in our own dental department. I did not get much encouragement at first, except from Mr. Evans, who is in charge of the children's section, the reason being, apparently, that several schemes had been started with municipal authorities and had, without exception, broken down on administrative grounds.

It took me some time and several visits to convince Mr. Evans that my ideas were workable, and it is to his enthusiasm that one must ascribe the success of the scheme as it now functions. There was some difficulty in assessing what my authority should pay for the services we asked. Eventually it was agreed that for a payment of 12s. we were to be provided with a specialist's opinion, such radiograms as were necessary, and any pathological report which might be required to elucidate the condition. Then came the difficulty of assessing what payment should be required from the parent for the necessary plates, bands, etc., which were necessary for the treatment that was advised by the Royal Dental Hospital Staff. This was the most difficult part of the whole proceeding, and it was only after many enquiries that Mr. Evans and I came to the conclusion that a flat rate fee of 15s. was necessary to provide all that was required for the complete treatment of every case. This was to cover not only the dental mechanic's fee, but the cost of the necessary gold or other metals and materials requisite. As far as we were concerned, this 15s. worked out surprisingly well.

It then became necessary to draw up some form which would accompany the patient to the hospital, which would bear on it the provisional diagnosis made by my dental staff, and would also leave accommodation for the report of the dental surgeon at the hospital in such terms that the work could be carried out in my own dental department. The form devised worked entirely satisfactorily, it being understood that it was a confidential document sent back to me by the hospital authorities.

I found it absolutely necessary to insist that our patients were starred in some way and not used for teaching purposes, owing to the confusion which results in dentally ignorant

minds from discussions taking place in front of them. This arrangement worked satisfactorily except in a few cases where the hospital surgeons had required the patients to go up at intervals. Otherwise it meant one visit only from this district to the hospital.

As far as treatment was concerned, everything worked well. There was only one little difficulty, and that was that, as was inevitable, different members of the staff had different opinions on what was necessary to be done, particularly from the point of view of the removal of tonsils and adenoids.

As time went on it was obvious that to get the best results the work had to, if possible, be decentralised from the hospital entirely. This at first I was unable to do, because I could not rely on getting the radiograms I wanted done elsewhere, but in June, 1932, I advised my committee to approach the Board of Education for permission to appoint an orthodontic consultant to visit once a month in the same way that the orthopædic consultants do in so many districts. I am glad to say that the Board of Education were by now convinced of the value of the work we were doing, and agreed to the payment to Mr. Evans, as orthodontic consultant, of a fee of three guineas a visit, which is the highest fee they allow. This meant that, except for cases requiring radiograms, there was now no need for any visit outside our own area.

Ultimately I got my committee to appoint Mr. Evans as the orthodontic consultant to the authority. It is this appointment which has caused so much heart-burning amongst school dental officers. Now the scheme works extraordinarily smoothly. Mr. Evans comes down once a month and sees a very large number of cases, many a time up to 65. This is made possible by the organisation of the work and the staff, which enables Mr. Evans to do this work within the limits of a morning session. A small work bench has been provided in the dental clinic, so that if the orthodontic consultant wants a piece of apparatus slightly altered, this can be accomplished while the patient waits.

The children file in to a row of seats near the door, and each one is provided, by the nurse at the table, with its case card and box of models. There are three seats adjoining the dental chair in which the patients sit. As each patient in turn gets into the dental chair, the dental mechanic at the back on the left, having opened the box of models, has the last pair exhibited by the side of the patient ready

for Mr. Evans's comparison. Directly the patient has moved into the dental chair, the other two patients in the chairs alongside move up, and the gap at the end is filled from the pool near the door.

The stenographer is standing just to the right of the patient, and all Mr. Evans has to do is to examine the patient, compare with the model which the dental mechanic is holding, if necessary asking the nurse, who is standing behind on the right of the patient with the dental card, to read the last entries, and then simply to think aloud whilst the stenographer takes down what he is saying, the instructions being entered on the child's card for the guidance of my dental staff.

I have been criticised by members of the school dental service for the methods I have utilised in launching this pioneer orthodontic scheme, and in order to, if possible, minimise their hostility, I would like them to see my point of view. My school dental surgeon (Mr. Cohen) is close on sixty; he is practically stone deaf, and has been so for years; consequently he has been cut off entirely from auditory commune with his fellows in the matter of meetings and things of that kind for many years. His enthusiasm and ability are enormous, and to compensate for his disability I see that he is supplied with everything in the way of literature.

My school dental officer, therefore, had had no chances of that intercourse which is so necessary and valuable in keeping up-to-date although he read everything that could be got hold of.

Further, one had a Board of Education to think of, and one recalled Osler's dictum in his earlier editions to this effect, that "there are other altars at which a young man may light fires than those of Bacchus and Venus," and one felt that it would want considerable persuasion to get the Board of Education to light fires at altars other than that to the six-year-old molar.

I do not think there will be a large number of orthodontic consultants appointed after this. I am sure that the newer generation of school dental surgeons will be able to undertake the vast majority of the orthodontic cases which arise, but in every other branch of medicine it gives a sense of security to the practitioner, and is of value to the patient in a difficult case, to have the advice of an expert, and difficult cases will arise in orthodontic practice as in every other form of medical, surgical or dental practice. Only this week, during the monthly

morning session, two cases arose of great difficulty, which my staff had referred to Mr. Evans, and in one of these the difficulty was so great that Mr. Evans kept the models to ponder over later to see really what was the solution in the way of treatment.

Sir Norman Bennett, writing to me on the subject says: "Even if it (orthodontics) becomes more general, I think that specialists would be needed. Although elaborate appliances would not be used, that does not make the correct diagnosis, prognosis and definition of scheme of treatment any the easier."

I do not think that orthodontic specialists will be appointed in the same way that obstetric consultants are appointed in every area, but I think there will be, and should be available, within reasonable reach, the advice of an expert in dealing with really difficult cases.

I am certain of this, however, that had I not assured the Board of Education that the work was being supervised by one of the most skilled men in the country, I should not have got the support that I have been able to rely on, and which was evidenced in a special section of their annual report. Still more, what to me is one of the most pleasing things, is the extension of the work which is taking place in various parts of the country. Above all, the most satisfactory thing is a letter I recently received from one who I know has criticised some of the administrative procedures in which the writer, noting the extension of orthodontic work that is taking place, ascribes it to the pioneer work which we had been doing in my district.

The criticism has in some cases been unkind and un-understanding, and possibly somewhat jealous that an outside administrator has been able to convince the Board of Education of the necessity of something which they regard as their peculiar prerogative. I think the culmination of carping criticism is that of the school dental surgeon to the county borough of Ipswich, who writes in his annual report for 1934: "In my opinion the appointment of orthodontic specialists is a matter more for sorrow than imitation." In his case his age is somewhat similar to that of my school dental surgeon, but he has had, so far as I know, the blessings, and I cannot call them anything else, of normal hearing, and faculties which should have enabled him to get his orthodontic information and experience by contact with his

fellows, which is denied to my senior school dental officer.

Despite the criticism, I remain entirely unrepentant, as I feel that as a result of what I have done I have persuaded, shall I say, the Board of Education some years before they would normally have arrived at that point, that orthodontics are a real part of the dental work of the school service. Only those of us who have seen the beneficial results and seen the effect, not only on the child but on the parent, of the removal of these deformities, can appreciate the value of the work.

My committee are enthusiastic, and I make bold to say that any committee who takes the work up and sees the results, will feel that they are contributing substantially to the sum of human happiness.

The practice of orthodontia has a very definitely scientific basis behind it, and a language of its own which must be understood to interpret the findings of those who are carrying on the work.

The classification which is generally adopted is that of Angle, which is based on the relationship of the mesio-buccal cusp of the upper first molar, with the buccal groove of the first lower molar. This produces three different categories: class (1), in which the relationship of the two aforementioned teeth is normal, and produces a normal mouth; class (2), in which the relationship of the tooth in the upper jaw is anterior to its proper position, and produces a general class of deformity known previously as superior protrusion, but now as inferior retrusion, the upper teeth projecting beyond the lower jaw, sometimes into the external atmosphere; and class (3) in which the relationship of the upper molar is posterior to its normal position, producing the prize-fighter's jaw, that is, the protrusion of the teeth in the lower beyond those in the upper jaw.

With regard to definition, the departures from the normal in the orthodontic sense are described as versions, and described in relationship to the front of the mouth and the tongue and the cheek.

I have not attempted so far to do my own dental radiography. At first I had an arrangement with the Royal Dental Hospital whereby they did such radiograms for me as were found to be necessary. This, of course, involved the tiresome journey up to town. I have recently been able to conclude an arrangement with the West London Hospital on the following terms:

	s.	d.
First film	2	6
Subsequent films ..	1	6
Complete upper jaw ..	7	0
Complete lower jaw ..	7	0
Complete dental examination ..	12	6

They are sending me excellent radiograms and reports, and the railway journey, and, therefore, the expense to the parents, is reduced by more than a half. I am getting it efficiently done at a reasonable cost, and for the time being I do not think that the expenditure on an X-ray outfit is justified.

As to the finances of the work, I had hoped to be able to give the fullest details as to the cost involved, but unfortunately the devastating fire in my offices has rendered that impossible. I am, therefore, unable to add anything to the figures I published in 1933 in a paper read at the Royal Sanitary Institute Congress at Blackpool. (*Journal of the Royal Sanitary Institute*, Vol. liv, No. 3, September, 1933, p. 171.)

It is very difficult to separate the overhead charges to be set against a work of this character, which occupies a varying time of a number of members of a large staff. I was very anxious that these financial statistics should be accurate (a) from the point of view of the Board of Education and (b) from the point of view of any of my colleagues who intend to take up the work. The difference that has been made in the financial details are that the full fee chargeable to the parents has been reduced from 37s. to 25s., i.e., by the amount paid to the Royal Dental Hospital, which was done after Mr. Evans was appointed on my staff as orthodontic consultant. In addition to this the scale of charges to the parents has been amended and is now as follows:—

Income per head after deducting rent.	Charge to parent.
Less than 8s.	Nil.
Between 8s. and 10s.	6s.
Between 10s. and 12s.	12s.
Above 12s.	25s.

(full cost).

In a few cases, difficulties have arisen where the plate has been lost or broken by the child. It has required much thought to assess the responsibility and with it the amount (if any) that the parent should pay. Where any payment has been judged due from the parent, practically without exception it has meant wrangling and numerous letters and interviews before the parents could be made to see the

justice of the claim. Fortunately, the cases are few and far between.

Dealing with difficulties, one of the questions one is so often asked is: "Don't you have difficulty in getting the children to wear their plates?" Of the 850 cases that have been dealt with, the number of cases that have had to be abandoned for this cause can be numbered on the fingers of one hand, and they without exception are of the neurotic type. These cases, when they arise, give no end of trouble, and endless patience has to be displayed to try and overcome the difficulty with the child and, what is quite, if not more, important, in some cases the fond parent.

The figures I referred to as covering our expenses were as follows:—

	£	s.	d.
For 1930	183	18	1
" 1931	251	15	6

This, however, does not include any charges for staff or overhead expenses. We received in return from the patients:—

	£	s.	d.
In 1930	207	10	6
" 1931	151	16	0

This means that, for the first year and a half, our scheme was in existence, the cost to my authority was £76 7s. 1d.

Our financial commitments now are a fee of three guineas per session once a month to our orthodontic consultant, and payment to the dental mechanic on an agreed scale.

When the orthodontic consultant was appointed I impressed on him, as firmly as possible, the fact that our public health work had to be viewed from an angle entirely different from that of his West End practice. I said that if I got an 85 per cent. efficiency for a small expenditure, I, from the public health point of view, should be satisfied. Mr. Evans is enthusiastic about the results, and he claims that my figure of 85 per cent. is being very materially exceeded, and that our results are little short of the best that West End specialists can produce.

You will also want to know something of the apparatus which is used. The principal piece of apparatus, which is the foundation treatment in many cases, is what is known as a Badcock plate. This is a plate split in two halves with an expansion screw and guide bar, so arranged that the nut which has to be turned can be adjusted with accuracy by reason of the fact that the four facets are numbered.

So far as I can make out, until we entered

the field no one had ever attempted to entrust the parents of the elementary school class with the manipulation of a Badcock plate. We set to work to train our parents to use the adjusting spanner, the general instructions being that they gave the screw a quarter turn every two days. We have found the parents respond to this, and it works entirely satisfactorily.

The expansion plate, however, is often only the base on which other treatments are added. Plates may also serve by means of an inclined plane added at the front to advance the mandible in cases of inferior retrusion.

Prominent teeth are withdrawn into their hiding place within the mouth by means of labial wires with springs of different character. It is amazing how small a pressure continuously exerted will produce the movement or rotation of a tooth. In addition, certain teeth can, if pressure is relieved, be brought into their proper relationship merely by continuous pressure of the lips. This, however, can be assisted by means of what is known as a lip exerciser, that is, a curved flat plate with a lever attached, which the patient holds between the lips for long periods, as for instance, when reading, and as time goes on the effort can be increased by loading the lever with little weights in order to strengthen the action of the muscles.

Again, through the unfortunate fire, I am unable to give you our last year's figures with regard to the number and character of the appliances used. I think you may assume that the following list which I put in my first paper, is relatively similar:—

The total number of appliances made during the year were as follows:—

Coil springs	9
Inclined planes	2
Splints	11
Retention	4
Labial wire and coil springs ..	1
Expansion	14
Expansion and retraction ..	7
Retraction	30
Expansion and screws	2
Screws	26
Expansion and inclined plane ..	1
Bite plates	3
Retraction and inclined plane ..	4
Lip exerciser	1
Repairs	10
Progressive alterations	5
Gold bands	4
Dentures for school children ..	2

Total 136

The list of the different kinds of deformities also remains much about the same:—

Narrow arches	16
Labioversions	20
Linguoversions	20
General crowding	32
Interlocked bites	2
Suckers—lip	3
finger	2
thumb	2
tongue	1
Open bite	2
Close bite	12
Perversions	4
Torsoversions	14
Supraversions	2
Inferior retrusions	21
Superior protrusions	1
Impacted teeth	2

It is, perhaps, a little difficult, when so many districts are definitely dentally under-staffed, to advise that this particularly beneficent work shall be added, as it is absolutely certain that if it is undertaken there will be a still further call for dental services in that area, particularly amongst the more intelligent section of the population.

I have found that this work has brought an entirely new conception to the parents of our school children of what dentistry really means. Hitherto it has meant the pulling-out (I use the word advisedly, because that is the one the parents use) of teeth too far decayed to be saved, and the filling of teeth in order to save them. Their vision has been bounded entirely by this horizon, and the introduction of something which widens that horizon and makes them understand for the first time what a really scientific profession that of the dental surgeon is, creates a respect for the advice given and the decisions arrived at. This in turn means that the more intelligent parents take a greater interest in their children's mouths, and this brings more work on the shoulders of the dental staff.

As most of you are aware, I am generally probing into the future in some way or another, but of all the work that I have undertaken in my career as a medical officer, none has brought me such satisfaction or such gratitude from the parents as the institution of the orthodontic service which I have just described.

DR. A. G. MORISON, Deputy Medical Officer of Health for the City and Port of Bristol, has been appointed Medical Officer of Health for Wembley.

The Society.

Reports, Proceedings and Announcements.

NOTICES.

THE ROLL OF MEMBERS.

The Roll of Members for the session 1936-37 is now being prepared for the Press. Members are asked to notify the Executive Secretary, if they have not already done so, of any changes which should be made in their entries, *i.e.*, qualifications, appointments, etc.

ANNUAL SUBSCRIPTIONS.

Members who have not yet paid their subscriptions for the current session (notices were sent out in this connection recently) are asked to make early payment and thus to save the staff at headquarters further labour in collecting these amounts before the annual audit.

THE ANNUAL DINNER.

Members are again reminded that the Annual Dinner is to be held this year on Friday, November 20th, at the Piccadilly Hotel, London, at 7.15 for 7.30 p.m. Tickets 12s. 6d. exclusive of wines. Dr. Ernest Ward (President, 1936-37) will be in the chair, and Sir Kingsley Wood, the Minister of Health, and Lord Dawson of Penn have both accepted invitations to be present. The toast list is to be a short one, and arrangements are being made for members and their ladies who so wish to proceed to the hotel ballroom for the cabaret and dancing.

NOMINATIONS.

Members who wish to nominate candidates for election at the beginning of the new session commencing in October are asked to do so before the end of August, so that the names of prospective members can be included in the new Roll of Members.

THE HOME COUNTIES BRANCH.

President : Dr. A. W. Forrest, M.O.H., Leyton.
Hon. Secretary : Dr. R. P. Garrow, M.O.H., Hornsey.

Fifteen members of the Branch met at British Industries House, Oxford Street, London, on May 1st, 1936, and were conducted over the

establishment by Dr. Snowden (Superintendent of the Medical Section) who afterwards entertained the party at tea and received the cordial thanks of the members for his kindness in making the visit so interesting.

Prior to the tour of the building, certain items of Branch business, relating mainly to the Presidency of the Society and to a joint meeting with the Fever Hospital Medical Service Group, were dealt with.

On June 5th, 1936, the President and fourteen members made a tour of the Wellcome Museum of Medical Science, Euston Road, London, in the company of Dr. S. H. Daukes, the Director. After tea a hearty vote of thanks was accorded to Dr. Daukes for the instructive afternoon he had so kindly provided and for his hospitality.

THE MIDLAND BRANCH.

President : Dr. P. G. Horsburgh, M.O.H., Nuneaton
Hon. Secretary : Dr. R. H. H. Jolly, M.O.H., Wolverhampton.

The annual meeting of this Branch was held at the Town Hall, Nuneaton, on June 25th, 1936, the President occupying the chair. Ten members were present. The Mayor of Nuneaton welcomed the Branch and hoped the members would have an interesting and successful meeting.

The President referred to the loss sustained by the Branch through the death of one of its senior members, Dr. T. M. Tibbetts of Quarry Bank. Dr. H. D'Arcy Ellis associated himself with the President's observations. Members present expressed their sympathy by standing in silence. The Hon. Secretary reported that he had sent a letter of condolence to the relatives.

The following officers and members of Council were elected for the session 1936-37 :—
President : Dr. A. Massey (Medical Officer of Health, Coventry).

President-Elect : Dr. E. S. Robinson (Medical Officer of Health, Stourport U.D.).

Vice-Presidents : Sir John Robertson, Drs. E. H. Snell, H. D'Arcy Ellis, G. N. Anderson, and P. G. Horsburgh.

Elected Members of Council : Drs. A. Auden, P. S. Blaker, E. Cassie, S. M. Burn, Wyndham Parker, Gibbons Ward, and Hamilton Wood.

Drs. J. A. M. Clark and W. A. Marris representing the Staffs. and Birmingham Branches of the British Medical Association.

Hon. Treasurer : Dr. E. H. Snell.

Hon. Secretary : Dr. R. H. H. Jolly.

Hon. Auditor : Dr. W. M. Clendinnen.

Representatives on the Council of the Society : Dr. H. Gibbons Ward and R. H. H. Jolly.

The Branch unanimously adopted the recommendation of the Branch Council that the name of Dr. H. D'Arcy Ellis (Medical Officer of Health, Amblecote U.D.C.) should be submitted to the Council of the Society for election as a fully-paid Life Fellow. Dr. Ellis was one of the original members of the Birmingham and Midland Society of Medical Officers of Health when it was formed in 1875.

At the conclusion of the meeting, the party paid a visit to Arbury Park and Hall, one of the stately homes of Old England, parts of which were designed by Christopher Wren for the Newdigate family. By the kindness of the Mayor of Nuneaton, tea was provided in the Town Hall. Dr. Massey proposed and Dr. Jolly seconded a hearty vote of thanks to the Mayor and to Dr. Horsburgh for the hospitality provided and also for the excellence of the afternoon's programme. Before dispersing, the members paid a visit to the combined infant welfare centre and school clinic recently built in the centre of the town at a cost of £8,000.

THE SOUTHERN BRANCH.

President : Dr. A. B. Williamson, M.O.H., Portsmouth.

Hon. Secretary : Dr. A. E. Druitt, Asst. M.O.H., Hants County Council.

The annual meeting of this Branch was held at Slough on July 3rd, 1936, the President occupying the chair. Members were accompanied by friends.

Dr. A. B. Williamson, having been unanimously invited to stand for re-election as President for the next session, generously declined the honour, feeling that it was one to be shared amongst the members.

The following officers were elected for the session 1936-37 :—

President.—Dr. A. E. Druitt, Assistant Medical Officer of Health, Hants County Council.

Hon. Treasurer.—Dr. H. Leslie Cronk, County Medical Officer, Hants County Council.

Hon. Secretary.—Dr. E. Croft Watts, Medical Officer of Health, Farnborough Urban District.

Representative on Council of the Society.—Dr. R. H. Wilshaw, Medical Officer of Health, Worthing.

Representatives on Tuberculosis Group.—Dr. W. J. Hart, Deputy County Medical Officer, Hants County Council; Dr. W. D. Beck, Clinical Tuberculosis Officer, Southampton.

Executive Committee.—Dr. H. C. Maurice Williams, Medical Officer of Health, Southampton; Dr. T. E. Roberts, School Medical Officer, Portsmouth; and Dr. W. J. Hart.

The President gave an outline of the plans for the forthcoming Health Week to be held in Portsmouth from September 14th to 19th.

Previous to the business meeting the Branch visited, by private coach, Watford and Slough. At Watford "The Stanborough" Hydro and Clinic was visited. Dr. J. E. Cairncross, the Medical Director, conducted the party round the institution, where the various departments were inspected. The latest appliances were on view, including the most recent valve model Falconer apparatus for diathermy, of which there are only two examples in England. Members and their accompanying friends were entertained at an excellent lunch on vegetarian lines. Dr. Cairncross introduced Dr. H. R. Harrower (Medical Director of the Harrower Laboratories at Glendale, California) who, after some years of practice, had turned his attention to the special study of the endocrine glands, particularly in their relation to the prevention of onset of infection. During these researches he had evolved the substance known as Edwenil—now extensively used as a protein-free antigen for the control of endotoxic infections. Later, the wards and surgical department were inspected and followed by a visit to the maternity block and hospital for the less wealthy patients in a separate building.

On arriving at Messrs. Horlicks' Malted Milk Factory at Slough, Drs. Avery and Williams met the party, which made a tour of inspection and were much impressed by the cleanliness and modern technique of the factory. After tea a hearty vote of thanks to the management was proposed, seconded and enthusiastically carried.

THE MATERNITY AND CHILD WELFARE GROUP.

President: Dr. G. C. M. M'Gonigle, M.O.H., Stockton-on-Tees.

Hon. Secretary: Dr. Muriel Radford, 1, Manor Way, Potters Bar, Middlesex.

Hon. Asst. Secretary: Dr. Virginia Saunders Jacobs, Asst. M.O.H., Woolwich.

A meeting of the Group was held at the house of the Society on June 19th, 1936. The President occupied the chair and eighteen members were present.

Lady Williams (Hon. Secretary, Joint Council of Midwifery) read an extremely interesting paper entitled "**Maternal and Infant Mortality in Relation to Nutrition**" which contained an account of the work with which she was associated in the Rhondda Valley, and was illustrated by numerous graphs. This paper will be published in full in a later number of the journal.

An animated discussion followed in which Dr. Mackintosh, Dr. Smithard, Dr. Maitland Radford, Dr. Saunders-Jacobs, Sister Bryson (Senior Inspector of Midwives in the Rhondda Valley area), Dr. Pandit, Dr. Goodwill and Mr. Elliston took part. Lady Williams replied, and Dr. Nicoll proposed a very hearty vote of thanks to Lady Williams and to Miss Bryson, which was carried by acclamation.

The Group held a session at the **National Maternity and Child Welfare Conference**, at Picton Hall, Liverpool, on July 3rd, 1936. The President was in the chair and papers were read by Dame Louise McIlroy, D.B.E., D.Sc., M.D., and Professor S. J. Cowell, M.A., M.D., Professor of Dietetics, University of London, on "Ante-Natal Nutrition." The meeting was well attended and the subsequent discussion was opened by Dr. C. O. Stallybrass of Liverpool, and continued by Councillor Clarke of Chester, Mrs. Winfield, of the Women's Citizens Association, Dr. Dunstan Brewer, and Alderman Charlesworth of Wallasey. Dame McIlroy and Professor Cowell replied.

The annual general meeting of the Group was held later in the afternoon following a business meeting at which Dr. G. C. M. M'Gonigle read his Presidential address, which will be published in a subsequent number of the journal.

A Group dinner was held in the evening at Reece's Restaurant and was a great success, being attended by some 65 members and guests. Dr. Morris Jones proposed the toast of "Our Guests," to which Alderman Burns

replied. He said that although Liverpool might be a "distressed" area, it was certainly not "depressed," and that they had never allowed any stinting of the maternity and child welfare services. Mrs. Braddock, in proposing the toast of the Group, spoke of the wonderful way in which the medical staff, especially Dr. Bell, had been found to respond to new demands made upon them by the maternity and child welfare committee. Dr. Nash replied for the Group. Dr. Stella Churchill, in a characteristically amusing speech, proposed the toast of "Our Hosts," to which Dr. Frazer replied. Dr. Nicoll toasted "The President," who made acknowledgment and thanked everyone, especially the committee, Mrs. Braddock and Dr. Bell, who had done so much to make the conference a success.

On July 4th, a Group meeting was held at the Medical Institution, Mount Pleasant, and was attended by 58 members. Dr. M'Gonigle was in the chair, and papers were read by Dr. R. E. Roberts on "X-rays and Pelvimetry," and by Dr. J. Burke, on "Amniography." Both papers were illustrated by lantern slides and films, and it is hoped to report them in full in a subsequent number of the journal.

Dr. R. J. Minnitt gave a demonstration of films and apparatus appertaining to "Gas and Air Analgesia in Midwifery." Of particular interest was a box containing the whole necessary apparatus for this form of analgesia, including the cylinders, and measuring only 18 inches by 12 inches by 5 inches. Films were shown of the use of the hospital apparatus; of the self-administration of gas and air analgesia during the second stage of labour; and for dressing a sloughing wound. In reply to questions by Dr. Powell, Dr. Maule Horne and Dr. Brewer, Dr. Minnitt said that, as regards contra-indications for the use of gas and oxygen, the machines were issued with the instructions that any cyanosis at all was a contra-indication. He said that 100 per cent. relief from pain was obtained.

Mr. Marshall, F.R.C.S., demonstrated a number of lantern slides and films on "Certain Aspects of Obstetrics." He illustrated the following subjects: the method of delivery of a breech with extended legs; the withdrawal of liquor amnii in cases of hydramnios, by means of a syringe through the abdominal wall, and by catheter or stylette per os; the method of application of Kjelland's forceps; delivery of arm and shoulder presentations; lower segment Cæsarian section; the use of forceps to

deliver the after-coming head; and the use of Willett's forceps to control bleeding in placenta prævia.

Dr. M'Gonigle and Dr. Nicoll expressed the thanks of the Group to the lecturers.

In the afternoon a party of 42 were conducted round the Alder Hey Children's Hospital and were shown, among other things, the preparation of feeds, and the hospital's isolation system. A paper was read by Dr. Cecile Asher, entitled "Nutrition in Infancy." She divided the mortality of her cases into weight groups and found that there was a heavy mortality in children who were 20 per cent. below the average weight. In her investigation she obtained a detailed history of the previous feeding of each infant. A feed should contain adequate calories and should fulfil the protein requirements; she also carried out a careful medical examination of the child, and made a point of distinguishing between dehydration and emaciation. She discussed the various types of disturbance found, including digestive disturbance, infections, and deficiency diseases. In the treatment of rickets she advocated the use of the mercury vapour lamp, and the administration of cod-liver oil (3,000 units for cure and 1,500 units for prevention). To prevent infection by contact with adults she suggested the wearing of masks. She also advised the inspection of the ears and sinuses, and for children over one year of age the giving of raw apples. She stressed the importance of the health visitors following up the cases after their discharge from hospital, and said that infants do better in their normal home environment. Dr. Asher also referred to the value of breast feeding.

Dr. Crosbie referred to the importance of co-operation between the maternity and child welfare and the hospital services. If a child was ill it should be possible to send it into hospital at once. In Liverpool, Dr. Bell was notified 24 hours before a child was discharged from hospital, and it was subsequently closely supervised by a health visitor. He expressed appreciation of Dr. Asher's valuable paper.

ANNUAL REPORT, SESSION 1935-36.

The Group, the membership of which has increased from 280 to 335, has had a successful session. Excellent papers, provoking discussion, have been read, and the attendances have been good. An equal number of meetings have been held at 5.30 p.m. and at 8.30 p.m. for the convenience of members. The complete programme was as follows:—

1935.

October 18th.—"The Place of Sugar in the National Diet."—Dr. W. H. S. Wallace, Assistant Medical Officer of Health (Maternity and Child Welfare), St. Marylebone.

November 22nd.—"Congenital Syphilis"—lecture-demonstration by Dr. David Nabarro at the Hospital for Sick Children, Great Ormond Street, London.

December 6th.—Dinner-discussion meeting at the Criterion Restaurant, London. Subject: "Politicians and Public Health." Openers: Captain G. S. Elliston, M.C., M.P., and Lieut.-Col. Sir Arnold Wilson, K.C.I.E., D.S.O., M.P. Forty-three members and guests present.

December 7th and 8th.—Post-graduate course on "The Problems of Child Psychology" at the Institute of Medical Psychology, London. The following papers were given: "Physiological and Temperamental Conditions in the Psychological Disorders of Early Childhood," by Dr. Roles; "Principles of Training and Parenthood," by Dr. Alice Hutchison; "The Common Disorders of Early Childhood and their Treatment" and "Play Therapy," both by Dr. Emmanuel Miller; "The Maternal Psychology of Breast-Feeding," by Dr. Grace Calver; and "The Origin of Psycho-Pathological Conditions in Early Childhood," by Dr. Hadfield. Fifty-five attended.

1936.

January 18th.—Visit to Willesden Municipal Maternity Hospital. Address on "The Working of a Maternity Hospital Unit," by Mr. Arnold Walker, F.R.C.S.

February 21st.—"Some Factors in Maternal Mortality and the Part Played by Publicity in Combating Them"—Dr. Andrew Topping, a Senior Medical Officer of the London County Council (formerly Medical Officer of Health, Rochdale).

March 20th.—"Neo-Natal Mortality; its Causation, Prevention and Treatment"—Dr. Eric Pritchard. Discussion opened by Dr. Virginia Saunders-Jacobs with a short paper on "Underlying Causes of Neo-Natal Mortality."

March 27th.—"The Prevention of Neo-Natal Death, Injury and Disease." Joint discussion with the Royal Society of Medicine (Sections for the Study of Disease in Children; Obstetrics and Gynaecology; Epidemiology and State Medicine). Dr. Ethel Cassie read a short paper on behalf of the Group.

May 15th, 16th and 17th.—Meeting in London.

May 15th.—Morning visit to Nursery School and Welfare Centre, Walthamstow. Paper on "Some Aspects of Education in the Nursery School" by Miss de Lissa, Chairman, Nursery School Association of Great Britain and Principal, Gipsy Hill Training College. Afternoon visit to St. Thomas's Hospital. Lecture on "Respiratory Affections in the Pre-School Child," by Dr. Doynne Bell. Demonstration of ante- and post-natal exercises, and exercises for children up to five years of age, by the Margaret Morris Movement. May 16th.—Morning visit to Guy's Hospital. Lectures on "Endocrine Therapy

with special reference to Pregnancy and Children" (Dr. Bishop) and "The Renal Complications of Toxæmias in Pregnancy" (Dr. Osman). Afternoon river trip to Woolwich to see places of public health interest. May 17th—Visit to Marie Curie Hospital, Hampstead. Demonstration of radiological technique (radium and X-rays) in gynaecological cases, by the Director (Dr. Hardon) and staff. Seventy-seven members attended the course.

June 19th.—"Maternal and Infant Mortality in relation to Nutrition"—Lady Williams, Hon. Secretary, Joint Council of Midwifery.

July 3rd and 4th.—National Maternity and Child Welfare Conference at Liverpool. July 3rd—Session arranged by the Group. Subject: "Ante-Natal Nutrition." Papers by Dame Louise McLroy and Professor S. J. Cowell. Discussion opened by Dr. Stallybrass, Deputy Medical Officer of Health, Liverpool. Presidential address on "Our Future," by Dr. G. C. M. M'Gonigle. Annual business meeting. Group dinner at Reece's Restaurant; sixty-five present. July 4th—Papers and lantern slides on "X-rays and Pelvimetry" (Dr. R. E. Roberts) and "Amniography" (Dr. J. Burke). Papers, apparatus and film on "Gas and Air Analgesia in Midwifery," by Dr. Minnitt. Paper, lantern slides and film on "Certain Aspects of Obstetrics" (Mr. Marshall, F.R.C.S.). Afternoon visit to Alder Hey Children's Hospital. Paper on "Nutrition in Infancy" (Miss Cecile Asher, M.D.).

In March, Dr. Ethel Cassie, who was acting for the third year as Group Representative on the Council of the Society, was obliged through increased pressure of work to resign from the Group Committee and as their representative on the Council of the Society. Dr. Cassie's resignation was accepted with much regret, and the Committee have put on record the Group's appreciation of the work Dr. Cassie has done for them and for the Society as a whole. Dr. Catherine Morris Jones, Assistant Medical Officer (Maternity and Child Welfare) Gloucester County Council, has been appointed her successor.

At the beginning of the session, the Yorkshire Sub-Group decided, with regret, to suspend its meetings for the time being. It had been found impossible, during the previous winter, for a sufficient number of members to attend owing to long distances and inclement weather. The Midland and Northern Sub-Groups continue to flourish.

Eight committee meetings have been held. Average attendance—11 (number of committee members—24).

Three sub-committees have been formed to consider:—

(1) *Salaried Service of Midwives Bill*.—The Council of the Society asked for the Group's observations. The

memorandum drawn up by this sub-committee was used by the Council as a basis for the submission made to the Ministry of Health in May.

(2) *Central Midwives Board—New Section B Rules*.—The Council of the Society asked for the Group's observations. It was felt by the committee, in relation to the sustained high neo-natal mortality and the dependence of the young infant on the skill and special knowledge of the midwife, that the new rules failed to provide sufficient paediatric instruction. The sub-committee's memorandum recommended, among other things, actual supervision and instruction by a paediatrician during the midwives' training. The memorandum was asked for urgently by the Council and has been submitted to them.

(3) *Ministry of Health Circular 1,550—Children under School Age*.—Consideration of the memorandum drawn up by this sub-committee has been deferred till next session.

GROUP OFFICERS FOR THE SESSION 1936-37.

President.—Dr. Agnes Nicoll.

Past-President.—Dr. G. C. M. M'Gonigle.

Vice-Presidents.—Drs. Marjorie Back, Maule Horne, Stella Churchill.

Representative on Council of Society.—Dr. Catherine Morris Jones.

Hon. Secretary.—Dr. Muriel Radford.

Hon. Assistant Secretary.—Dr. Virginia Saunders-Jacobs.

Committee.—Drs. Jessie Balsillie, Victor Freeman, Phillip Garrow, Jean Mackintosh, E. H. T. Nash, Maitland Radford, Violet Russell, Margaret Scott-Dickson, Nora Smith, Edward Smithard, Margaret Strathie, William Wallace, Nora Wattie, Isobel Wright, Agnes Young.

BIRMINGHAM AND MIDLAND SUB-GROUP.

Chairman: Dr. Henry P. Newsholme, M.O.H., Birmingham.

Hon. Secretary: Dr. Agnes Young, ASST.M.O., Warwick C.C.

The summer meeting of this Sub-Group took place at Nottingham on June 20th, 1936. It was preceded by an informal luncheon in the Mikado Cafe. The Chairman presided and eleven members were present. They were happy to have as guests, Mrs. Scott, late of The Children's Hospital, Nottingham, and Dr. Tibbits, Medical Officer of Health, County of Nottingham. An excellent lunch was served and many subjects were discussed.

Thereafter the party adjourned to the Children's Hospital, Nottingham, where they were received by Dr. Scott, Honorary Physician to the Hospital. A tour of the buildings followed and the excellent arrangements, very modern

equipment combined with the keen alertness of the staff, were noted and admired. Dr. Scott demonstrated many cases in his wards. They included: Melæna neonatorum, pink disease, tubercular abdomen, coeliac disease, rheumatic endocarditis, poliomyelitis and asthma. Of special interest were X-ray photographs of two freak cases which had come under the care of Dr. Scott in hospital. The first showed a dermoid cyst with teeth in the cranio-pharyngeal canal; the second a pneumo-thorax in a child *æt.* 6. The thanks of the members to Dr. Scott was expressed by Dr. Allen, and seconded by Dr. Hepburn.

The party then proceeded to the Collin's Maternity Hospital. The members were welcomed by Dr. Jean Morton, Medical Superintendent. Before conducting a tour of the Hospital she explained its origin and how it owed its existence to the generosity of Abel Collin as far back as 1705. The tour of the Hospital was very interesting; the wards bright, airy and attractive, and the patients looked extremely happy. An excellent tea was then served by the matron and her staff. Before the members dispersed, Dr. Newsholme thanked Dr. Morton and the members of the staff for all the trouble they had taken to make the visit so interesting and enjoyable. Dr. Balsillie, in a few eloquent remarks, associated herself with Dr. Newsholme's sentiments, and the members responded with enthusiasm.

THE FEVER HOSPITAL MEDICAL SERVICE GROUP.

President: Dr. E. H. R. Harries, Med. Supt., North-Eastern Hospital, London County Council.

Hon. Secretary: Dr. Alexander Joe, D.S.C., North-Western Hospital, London County Council.

On June 26th, 1936, a combined meeting of the Group with the Home Counties Branch was held at the house of the Society. Dr. A. W. Forrest (President of the Branch) was in the chair, and was supported by Dr. E. H. R. Harries (President of the Group) as Vice-Chairman, thirty-eight Fellows of the Society being present.

As the joint meeting coincided with the annual meeting of the Group, the following were announced as having been elected by the Group for session 1936-37:—

President: Dr. E. H. R. Harries.

Vice-Presidents: Drs. H. S. Banks, E. W. Goodall, and Sage Sutherland.

Hon. Secretary: Dr. A. Joe.

Members of Council: Drs. Topping, Gunn, Cubley, Anderson, Armstrong, McGarrity, Leete, Kennedy, James, Swyer, Thompson, W. A. Brown, Reid, and A. W. Forrest.

Dr. A. W. Forrest (Medical Officer of Health and School Medical Officer, Leyton) read a paper on "Some Aspects of Scarlet Fever and Current Methods of Control," this being his presidential address to the Home Counties Branch. The paper, which will be published in an early number of PUBLIC HEALTH, was afterwards discussed by Drs. Harries, Adamson, Dunstan Brewer, Caryl Thomas, Joe, Goodall, O'Brien and others.

THE Sixth Annual Conference of Women Public Health Officers will be held at the Town Hall, Cheltenham Spa, on Saturday afternoon, September 26th, 1936. Though limited to two sessions, no fewer than six subjects of interest to health visitors and others engaged in maternity and child welfare work will be discussed. Dr. Donald E. Morley (Medical Officer of Health, Cheltenham Spa) will preside over the evening session. Details of the meeting may be obtained from the Women Public Health Officers' Association, 7, Victoria Street, London, S.W.1.

INTERNATIONAL HOSPITAL ASSOCIATION—STUDY TOUR IN CZECHOSLOVAKIA.—Arranged to take place from August 29th to September 15th, this tour should be of great interest to all connected with hospital work and organisation. The tour is divided into two parts: from August 29th to September 6th there will be a post-graduate course of lectures and visits, the period September 6th to 14th being devoted to a study tour of the sanatoria of the High Tatra Mountains. Among the towns to be visited in the first part of the course are Carlsbad, Prague, Zlin, Brunn and Moravská Ostrava. Visits of inspection will be paid to the Government Health Institute in Prague, the Masaryk Home in Kr, the Bata Hospital and Social Welfare Institution in Zlin, and the Tuberculosis Department of the Municipal Hospital of Bulovka. Further particulars of the tour and fares at party rates may be obtained from the Czechoslovak Travel Bureau (Cedok), Ltd., 21, Regent Street, London, S.W.1, or from Messrs. Thos. Cook and Son, Ltd.

The Literature of Preventive Medicine.

Minor Medical Mysteries. By LEONARD WILLIAMS, M.D. London: Cassell & Co., Ltd. 1935. pp. 211. Price 5s. net.

In the medical profession it is doubtful if there is anyone more capable than Dr. Leonard Williams of putting attractively before the general public, matters that appear to be primarily of interest only to members of the medical profession. In this volume, with its tremendously attractive title, he writes in such a way as to bring the general reader completely into the confidence of the doctor; solving any number of puzzles relating to life and disease in words that are always simple and very often enthralling. Some of the subjects upon which he discourses are: twins, giants, dwarfs, left-handedness, genius, fear, colour of the hair, nudism, sleep, fashion in disease, fasting, girls and games, face lifting, cakes and ale, tobacco, the near future, middle age, and growing old gracefully. As it is quite possible for doctors as well as members of the laity to find something new and entertaining in what he has to say on these or the numbers of other matters discussed, the book is recommended to both.

Sedgwick's Principles of Sanitary Science and Public Health. By SAMUEL C. PRESCOTT, SC.D., Dean of Science and Head of Department of Biology and Public Health; and MURRAY P. HORWOOD, PH.D., Associate Professor of Biology and Public Health; both of the Massachusetts Institute of Technology. London: Macmillan & Co., Ltd. 1935. pp. 654. Price 18s. net.

The name of Sedgwick has always been one to conjure with, not only in the United States of America but here, and when his "Principles of Sanitary Science and Public Health" first appeared in 1901 it was very warmly received and widely read. Though they have re-written and of necessity very greatly enlarged it, Dr. Prescott and Dr. Horwood have managed to retain much of the Sedgwick atmosphere and thus add to the interest as well as the value of the book. Designed primarily for students in science or engineering interested in sanitary science and public health, it should also prove of interest and value to public health officials, public health engineers, public health nurses, social workers, and civic-minded men and women who are interested in public health work.

In recommending the book to all of these, opportunity is taken of offering warm congratulations to the authors, both for having undertaken the task of re-writing Sedgwick's "Principles of Sanitary Science and Public Health" and for the way in which they have done it.

Mentality and the Criminal Law. By O. C. M. DAVIS, M.P., D.S.C., Head of Department of Forensic Medicine, Bristol University; of the Middle Temple, Barrister-at-Law; and F. A. WILSHIRE, of the Middle Temple, Barrister-at-Law. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Ltd. 1935. pp. 168. Price 5s. net.

The object of this small book is to present in as concise a manner as possible the salient points connected with the law of England regarding the commission of criminal offences by mentally disordered persons. As the subject is one that continually gives rise to difficulty both to lawyers and members of the medical profession, the authors deserve thanks for having undertaken the task of summarising the opinions of the leading authorities on the subject, and giving references to these. They deserve congratulation also on the manner in which they have performed their task. The book is one that cannot fail to be of value and that deserves to be strongly recommended.

Food Values at a Glance. By VIOLET G. PLIMMER (part author with Professor R. H. A. Plimmer of *Food, Health, Vitamins*). London: Longmans, Green & Co. 1935. pp. 94. Price 3s. 6d. net.

Feeling that if the various constituents of a food were distinctively coloured "like the layers of a Neapolitan ice" and branded with their vitamin content, the nature of each food-stuff could be seen at a glance, the author of this book set about preparing charts on this principle. These are intended primarily for those concerned with nutritional problems and no doubt they will be appreciated by them. So also will the summary of the general principles of nutrition which have been designed to assist in the planning either of individual meals or in catering on a large scale.

Manson's Tropical Diseases. Edited by PHILIP H. MANSON-BAHR, D.S.O., M.A., M.D., D.T.M. AND H. (CANTAB.), F.R.C.P., (LOND.), Physician to the Hospital for Tropical Diseases, London, etc. Tenth edition. London: Cassell & Co., Ltd. 1935. pp. 1003. Price 31s. 6d. net.

Progress in the field of tropical medicine has been so great during the six years which have elapsed since the last edition of this book appeared that an almost complete revision had to be undertaken. The work has been entirely re-set and many new text figures have been introduced, as well as several new half-tone and colour plates executed by the Editor. Of these special note may be made of the teaching plates of intestinal and blood protozoa. Manson's "Tropical Diseases" is now so well known, recognised and accepted as the book on the subject that it is quite unnecessary to make commendation or recommendation upon it.

Healthy Babies. Their Feeding and Management. By THE HON. MRS. NOEL OLIVIER RICHARDS, M.D., B.S., M.R.C.P., M.R.C.S., Physician, The Infants' Hospital, etc.; and A. DOROTHEA BAKER, M.B., CH.B. London: Cassell & Co., Ltd. 1935. pp. 96. Price 1s. net.

This book, one of Cassell's Health Handbooks, edited by Dr. Dorothea Baker, is sponsored by Sir Humphry Rolleston and addressed to all those concerned with the health and happiness of babies—parents, nursery nurses, medical practitioners and students, trained nurses, midwives, health visitors and teachers of hygiene. It bears the stamp of first-hand experience and at once gives the impression that the writer *knows* babies and motherhood. It is a book of facts, its every sentence thoughtfully and clearly worded, containing no vague statements and none of the clichés so common in books on the feeding and management of babies. The information varies from a description of the care of a baby's nails and the importance of its nose being snub to the difficulties and untoward symptoms necessitating the seeking of experienced advice, the latter without unduly alarming the parents. The clear single-line illustrations help to demonstrate clothing and the handling and holding of the baby during its toilet and feeding. A book without fads and immensely readable, it should be in the hands of all those engaged in maternity and child welfare work.

The Housing Policy in the Netherlands. By H. VAN DER KAA, General Inspector of Health, The Hague. League of Nations publication. London: Allen & Unwin. 1936. pp. 102. Price 2s. 6d.

Early in 1935 the League's Health Organisation undertook to collect documentary material with regard to housing problems, to which recourse might be had by administrations requiring information on such matters. Each volume in the series on urban housing relates to a particular country, and that under review provides a study of national housing policy in Holland—legislation, state intervention, public bodies, municipal and county councils and private initiative. The methods of determining housing requirements are described, and numerous general, technical and financial statistics are given. The volumes also, of which those relating to France and Italy are now available in French only, contain examples of town planning and architectural design, building methods and technical and health standards now applied. A further volume dealing with Poland is promised shortly.

Vitamins and Other Dietary Essentials. By W. R. AYKROYD, M.D., late Beit Memorial Research Fellow; Member of Health Section, League of Nations, 1931-35; etc. London: William Heinemann (Medical Books) Ltd., 1936. pp. 226. Price 7s. 6d. net.

The demand for this, second, edition of his book has given the author, Dr. Aykroyd, an opportunity of making certain deletions and additions that progress made in the short period of four years since the first edition appeared has rendered necessary. It gave him an opportunity also of making declaration that if called upon to re-write the book he would adopt throughout a more optimistic attitude towards the world-wide problem of malnutrition. The reason offered for this change in attitude is that at last the existence and extent of that problem, and on the positive side, the possibilities of raising health standards inherent in the modern science of nutrition, are being generally realised and understood. Coming from one so distinguished, these declarations are most welcome, as indeed is the book as a whole, because it provides an account eminently clear and readable of a subject which, though vastly important, is not too readily understood by the general reader.

Correspondence.

The Editor does not accept responsibility for the opinions of correspondents.

SEPTIC TEETH.

To the Editor of PUBLIC HEALTH.

SIR,—I have been asked by the Council of the Dental Group to correct an impression conveyed by Dr. Doyne Bell in a paragraph on septic teeth appearing in *PUBLIC HEALTH* for July. Dental officers are unanimous in advising the extraction of septic teeth of the temporary dentition.

There is a condition known as "arrested caries" in which the surfaces of the molars are blackened and might appear to any but a dental expert as decaying, septic teeth. It has not yet been explained how this condition is produced. Such children have told me that they do not like sweets any more because they make their teeth ache. Dentine seems to be able to put up a resistance to dental caries, of which the enamel is incapable, being less than 1 per cent. organic. If the pulp is encroached upon and dead or dying, the teeth are septic and should be extracted.

Speaking for myself, I am in agreement with Mr. Bulleid against wholesale extractions, and I think that four molars is enough to extract at one time. If possible, two molars occluding should be saved.

Fully appreciating Dr. Doyne Bell's instructive lecture, I would like to say that dental authorities agree that the cause of these teeth decaying is to be found, not in any defect in the teeth themselves, but in pap feeding and excessive sweetness in the food.

I am,

Yours faithfully,

GEO. THOMSON, L.D.S., ENG.

July 16th, 1936.

[The statement to which Mr. Thomson refers in the first paragraph of his letter appears in a report of a lecture given by Dr. Doyne Bell in a post-graduate course arranged by the Maternity and Child Welfare Group (*PUBLIC HEALTH*, July, 1936, p. 359), and is to the following effect: "*Septic Teeth*.—These were probably the result of a nutritional defect, but were not always due to defective vitamins. The lecturer maintained that more harm resulted from the wholesale extraction of milk teeth than in leaving them when septic, and that a little caries if brushed did little harm."—*Ed.*, P.H.]

PARENTAL VACCINATION AND TRANSMISSIBLE IMMUNITY.

To the Editor of PUBLIC HEALTH.

SIR,—Dr. Makgill's letter in the July number of *PUBLIC HEALTH* raises two interesting questions: (1) whether variola minor can develop into variola major, and (2) whether the immunity acquired by one attack of smallpox or by vaccination can be passed on to the immunised person's offspring. Apparently, Dr. Makgill answers the first question in the affirmative, for he states that after a month or two the disease (variola minor) "worked up in virulence" and 56 deaths occurred. This event, so far as I know, is against all the experience of variola minor as it has shown itself in various parts of the world during the last thirty or forty years.

As regards the second question, may not the absence of fatal cases amongst the Europeans have been due to better treatment and nursing than would have been practised amongst the natives? The form of smallpox prevalent was evidently not very severe, even amongst the natives, for the fatality, according to the figures given by Dr. Makgill, did not exceed 4 per cent. Dr. Makgill does not bring forward any evidence that the immediate ancestors of the Europeans in New Zealand in 1913-1914 had been vaccinated or had suffered from smallpox.

I am,

Yours faithfully,

E. W. GOODALL.

Hemingford Abbots,
Hunts.
July 12th, 1936.

THE Annual Congress of the Chartered Society of Massage and Medical Gymnastics will be held at the Bedford College for Women, Regent's Park, London, from September 21st to 25th, 1936. A very full and attractive programme has been arranged for each day, and a cordial welcome is extended to all medical practitioners and others interested in the work of the Society. Details may be obtained from the Secretary at Tavistock House North, Tavistock Square, London, W.C.1.

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Editorial.

The League of Nations and Nutrition.

BY the majority of people the League of Nations is regarded as a body exclusively concerned, not always with conspicuous success, in the prevention of war. It is unfortunate, therefore, that conditions at the time of its appearance prevented the Interim Report of the Mixed Committee on the Problem of Nutrition* from assisting in making it clear to the ordinary man in the streets of the cities of Europe and elsewhere that the League had other activities, amongst them that of nutrition in relation to public health and economic and social organisation, and, in order to secure investigation of the problem, had set up a Mixed Committee under the Chairman-

*London: Allen and Unwin, 40, Museum Street, W.C.1. Official No.: A.12. 1936. II. B. Price 2s.

ship of Lord Astor. Members of the Commission of Health Experts and experts of the International Labour Organisation and the International Institute of Agriculture sit on the Committee, together with agricultural and economic delegates from all over the world. As will be understood, the scope of the problem is very wide, and though the Committee has been at work for several months it has been found impossible, if not inadvisable, to issue a report covering the whole ground in such detail as is necessary for a satisfactory survey. In the main, the Interim Report, which is the first of a series of volumes to be published, deals with the relationship between nutrition and health, setting forth only preliminary observations on the economic and agricultural aspects of the problem.

In relation to nutrition and health, the report attempts to state in language intelligible to the layman the importance of a fully adequate diet to the public health of communities, and emphasises that much can be done in every country towards the improvement of health by improving the diets of those sections of the population whose nutrition is defective; in other words, considerable proportions of the population of all countries are prevented from enjoying greater health by dietary deficiencies. The principles of correct nutrition are expounded and the need for vitamins, minerals and calories explained, mention of special articles of food being made with reference to their particular health values. Of these, milk is upheld as the one food of outstanding health value. Special emphasis is laid on the paramount importance of a sufficient and correct food supply to pregnant and nursing mothers, infants, children and adolescents. In education and popular instruction it is realised that much can be done. Ignorance of dietary principles, it is claimed, is considerable both in the poorer and wealthier classes, though the wealthier are to some extent saved from the effects of their ignorance by the variety of foodstuffs which their greater purchasing power enables them to procure. Education of students in the principles of sound nutrition can with advantage be extended, while the general public can be reached through the usual channels by which public interest is aroused in any subject.

In the chapter on nutrition and labour, the report of the International Labour Office entitled "Workers' Nutrition and Social Policy" is summarised. Some of the most significant findings are briefly set out, and, from family budget statistics, it is revealed that the consumption of protective foodstuffs increases with increasing incomes, whereas that of cereals remains more or less stationary, the general conclusion being that "the question of income is thus at the root of the workers' nutrition policy."

Under the head of "Nutrition and Agriculture" it is explained that, on account of the fall in agricultural prices, malnutrition in many agricultural countries has become very severe. The farmers are unable to find a profitable market for their goods, and the produce, instead of being consumed, is either stored or destroyed. The lack of purchasing power of agricultural communities consequent

upon this state of affairs reduces the demand for the products of industrial countries with a resultant stagnation of trade. There are two main agricultural methods by which the situation may be improved: (1) by improving methods of farming and so lowering the cost of production; (2) by changing the type of agricultural product grown. To make good the most common deficiencies prevalent in all countries of Western civilisation, an increase is needed in consumption of products which, by their nature, are most suitable for local production. The protective foods—fresh milk, fresh vegetables and fresh fruit—are perhaps the most important. If national agricultural industries are reorientated to produce less of cereals and more of protective foods, as is advocated for improvement in nutrition, this may help to restore international trade in foodstuffs which can be more advantageously and economically secured by importation.

Discussing the economic aspects of the problem, it is unhesitatingly claimed that the greatest single cause of defective nutrition is poverty. Improvement of nutrition amongst the poor lies in the increase in consumption of the protective foods which are relatively costly. Therefore, improvement in dietaries is associated with maintenance and improvement of the general level of income. Nevertheless, some measure of improvement may be attained by better organisation of supplies, by education and by other methods. In recent years, the economic depression has intensified malnutrition by the reduction of the standard of living in large areas of the world, and by the restrictions that have consequently been imposed on the international movement of goods. The two first essentials of a sound economic policy directed towards improved nutrition are the absence of restrictions on the supply of foodstuffs which tend to raise prices, and provision against avoidable fluctuations in the availability of supplies. The Committee have not entered into any criticism of national commercial or agricultural policies but have drawn attention to certain of the effects of these policies on national nutrition. The depression is not the cause of malnutrition but in some groups of populations it has intensified the ill. Adequate nutrition cannot be assured by a policy directed exclusively towards countering the effects of the depression, and the need for constructive nutritional policies will not cease when the last signs of

the depression have disappeared. Attention is drawn to the spread between the prices paid to the farmer and those paid by the consumer for agricultural products, and while it is realised that reduction of these margins is a very difficult matter, the creation of more adequate marketing facilities or the encouragement of more efficient marketing organisation should be promoted. From the standpoint of national policy the problem lies in reconciling the interests of the poorer consumers in matters of cheap and abundant food supply with the interests of producers.

The main suggestions of the Mixed Committee to the Assembly are that they should recommend Governments:—

To pursue the study of the problem of what nutrition should be in each country (having regard to differences in national economic structure, in climate, and in available sources of supply) in order to obtain optimum health.

To take all measures to ensure up-to-date teaching and instruction to medical students and the general public in the principles of correct nutrition.

To support the Health Organisation of the League in its endeavours to promote the application of modern nutritional science.

To consider what steps should be taken, whether at the public charge or otherwise, to meet the nutritional needs of sections of the communities with low incomes, in particular as regards ensuring adequate supplies of safe milk for expectant and nursing mothers, infants, children and adolescents.

To take steps to improve and cheapen marketing and distribution of foodstuffs especially, so that protective foods may be as far as possible available to all.

To consider international unification of analysis and grading of foodstuffs to promote purity and quality.

To consider the desirability of any modification of general economic and commercial policies that would help to secure the supplies of foodstuffs necessary for a sound nutrition policy.

To co-ordinate all work on the subject and, in the absence of a central authority, set up a body for the purpose.

To ascertain, *inter alia*, how far existing national dietaries fall short of the new standards of nutrition, and collect informa-

tion on food consumption by families of different occupational groups, at different income levels as well as on the distribution of the population by family income, etc.

Of the importance of this Report—though described as "Interim"—and its findings there can be no question.* Nor can there be of the recommendation that education of the people is essential. That there may be devised at an early date some effective schemes of securing the spread of information and its general adoption is greatly to be hoped.

* * * * *

Experimental Epidemiology.

TO claim for the report of Professor W. W. C. Topley and Professor M. Greenwood on Experimental Epidemiology recently issued by the Medical Research Council* that it is a noteworthy contribution on the subject is almost too modest. Actually it would be difficult to imagine a subject of study more important for human welfare than that with which it deals—the spread of epidemic diseases among mankind.

The experimental method which the report describes was devised to solve a particular type of problem that has proved refractory to other forms of study. On the one hand, laboratory experiments, performed under strictly controlled conditions, have yielded a mass of information with regard to the response of the individual host to artificial infection, and as to methods by which that response may be modified. On the other hand, the data collected by the epidemiologist have taught much in regard to the behaviour of naturally infected herds, and something of the effect of interfering in the natural course of events, as for instance by prophylactic immunisation against smallpox, diphtheria or typhoid fever. The collection of statistical evidence under field conditions, however, is so beset with difficulties that the assessment of the relative importance of the interrelated factors, determining the course of events in infected communities or herds, has so far proved impossible.

It is to problems of this kind that the method of the experimental epidemic can be applied. Given that continued exposure to risk of infection raises the average resistance of the surviving members of a herd, whether

*Special Report Series, No. 209. H.M. Stationery Office, 1936. Price 3s. 6d. net.

by active immunisation or by selection of the innately more resistant animals, or by both mechanisms together, various questions arise. Is this increase so great that the infection will eventually die out, if none but uninfected immigrants are admitted to the herd? Is it possible by the active immunisation of all entrants to reduce mortality to zero, or eventually to eliminate the infecting organism by depriving it of access to susceptible hosts? If dietetic factors play a significant part in resistance to infection, is their influence so important that on an optimal diet animals will be indifferent, or relatively indifferent, to prolonged exposure to the risk of natural infection? If no single factor is found to exert a decisive effect, will it be possible to attain the desired level by combining several different methods of raising the average resistance of a herd?

To some of these questions the evidence set out in this report offers limited and tentative answers. The work, it is suggested, is to be regarded as a preliminary survey of the field, rather than as an application of the technique to a well-defined series of problems. Experimental epidemiology, as is shown in Section I of the report, has its own technical difficulties and limitations. Before the effect of any method of interference with the natural course of events can be assessed, it is necessary to obtain an adequate picture of the behaviour of herds that are exposed, over prolonged periods, to the full risks of natural infection. Such a picture is outlined, for mouse typhoid and mouse pasteurellosis, in Sections II and III, and for a virus disease of mice—ectromelia—in Section IV.

In the remaining sections there is discussion of the influence on herd infection and herd resistance of variations in the virulence and infectivity of the infecting organism, of artificial immunisation of the animal hosts at risk, of changes in diet, of the presence of a bacteriophage, or of dispersal of an infected herd at different phases of the epidemic process. It is of some interest to note that the existence of "epidemic strains" of bacteria, which have been postulated by many epidemiological workers to explain happenings observed in the field, has been confirmed by these experimental studies, and that it has been possible to define certain of their properties.

None of the methods of interference so far

attempted has sufficed to eliminate the risks of disease and death under the conditions of severe and continuous exposure to which the herds were subjected in most of the experiments under review. The most promising results were obtained in active immunisation against ectromelia. The negative findings must, of course, be regarded as applying only to the actual infective agents used and to the experimental conditions obtaining: this part of the inquiry is as yet in its infancy.

There can be little doubt that the experimental epidemic affords a more natural, and more severe, method of testing the value of any prophylactic procedure than assays carried out by more artificial tests on individual animals. Admittedly, it can never replace field observations made under completely natural conditions; but it may well indicate possible solutions to many of the more important practical problems, and so direct the field epidemiologist along the most fruitful lines of inquiry.

The report may be counted one of those which the description "epoch-making" be applied. That it will and must receive and careful study by all engaged in the and practice of preventive medicine is c

The Overcrowding Survey.

THE Report on the Overcrowding in England and Wales,* recently published, is a document of the first importance to public health and social points of view. It contains a wealth of reliable information regarding the size and housing accommodation of working-class families in every area in England and Wales. From the text of the report and the tables in the appendix it is possible to ascertain where, and how far, overcrowding exists in families and dwellings of all sizes, and thereby make accurate plans of the measures required to abate the overcrowding thus revealed. The salient fact brought to light by the survey is that out of 8,924,523 dwellings inspected, 341,554 (or 3.8 per cent.) were overcrowded within the meaning of the Housing Act, 1935.

The report indicates clearly that, in spite of extreme cases, the working-class family of average size is housed well above the statutory minimum standard, and 46 per cent. of all working-class families are shown to be so well

*H.M. Stationery Office. Price 8s. net.

housed that the number of persons in each family could be doubled without causing overcrowding. On the other hand, in addition to the 341,554 overcrowded families, about 380,000 more are very near the borderline.

Other calculations show that the average number of units in a working-class family is 3.2 for all families, 3.1 for uncrowded families and 5.6 for overcrowded families, and disclose that, while the average overcrowded family is 74 per cent. larger than the average family, it occupies accommodation on the average 37 per cent. less. Overcrowding is much more common in two and three room dwellings than in those of any other size.

The report contains tables and maps showing the overcrowding position in individual areas. It is, for the most part, worst in the East End of London, and on the North East Coast; London, Northumberland and Durham together contain two out of every five overcrowded families, though they contain less than one in six of the whole population. The most overcrowded county borough is Sunderland, where one working-class family in every five is overcrowded and there are practically as many overcrowded families as in Kent, Surrey and the West of England taken together. Excluding London, the area south of a line drawn from the Severn to the Wash contains 8,000 fewer overcrowded families than Northumberland and Durham together.

To compare the overcrowding position in the various parts of the country, whether in the London boroughs, and in the county boroughs, is the least. The most overcrowded county borough is Hebburn urban district, while five of the county boroughs report no overcrowded families. The most overcrowded rural district is the Ham and Islandshires (22.2 per cent.). To compare the overcrowding position in the county boroughs, the least overcrowded of the county boroughs is Bournemouth, the least overcrowded of the county boroughs.

The average overcrowding percentage for the different classes of local authorities is: London boroughs, 7; county boroughs, 4.2; non-county boroughs and urban districts, 3; rural districts, 2.9.

The question of overcrowding in dwellings owned by housing authorities is of special interest. The tables in the report show that the degree of overcrowding in the houses of most authorities is greater than in privately-owned houses. This is accounted for by the fact that in providing new houses, local authorities have for the most part erected dwellings of a size

suitable for the average working-class family. In practice, however, they have carried out their duty to deal with the worst housing conditions and to give preference to large families unsuitably housed. Particularly, they have taken as tenants families with young children who, as they grow up, overcrowd the accommodation available. Even the overcrowded families concerned, however, are much better housed now than they were before they obtained a council house. Altogether 873,033 dwellings owned by housing authorities were inspected, of which 44,888 (or 5.1 per cent.) were overcrowded. The percentage for privately-owned dwellings is 3.7. Taking the different classes of authorities, the highest percentage of overcrowding in council houses is in the London boroughs where it is 10.5, the worst cases being Poplar (28.9 per cent.), Stepney (23.6 per cent.) and Bermondsey (20.0 per cent.). The survey discloses, incidentally, that at the time of the survey quite a large number of the ordinary non-parlour, three bedroom, type of council house, which on the overcrowding standard should accommodate five-and-a-half to seven persons according to the sizes of the bedrooms, were in fact occupied by a much smaller number. The probable explanation is that the houses in question have been in the same tenancy for a considerable number of years and family changes have reduced the number of occupants. The existence of these under-occupied houses simplifies the problem of abating overcrowding in municipally-owned houses as it opens the way to re-arranging tenants. A further table shows that the overcrowding in council houses is for the most part due to housing large families in normal sized dwellings and not to any appreciable extent to the practice of sub-letting.

The primary object of the survey was to provide information to facilitate the abatement of overcrowding in pursuance of the Government's policy as embodied in the Housing Act, 1935. It is not yet possible to say exactly how many new houses will be required to deal with the situation revealed by the survey, as much of the present overcrowding can be abated by re-arranging the existing accommodation. The report, however, estimates tentatively that the number of new houses required may be expected not to be more than about 200,000, and the task of abatement within a comparatively short time should, therefore, be well within the compass of the great majority of local authorities, without any danger of interference with the present slum clearance campaign.

The Tuberculosis Conference.

THE Twenty-second Annual Conference of the National Association for the Prevention of Tuberculosis, held in the Conference Hall of the London County Council on July 16th, 17th and 18th, was opened by the Minister of Health, the Rt. Hon. Sir Kingsley Wood. In his address the Minister paid tribute to the National Association and pointed out that, as a result of the work of that body, public opinion had been stimulated to the need for dealing with the tuberculosis problem, for the building of sanatoria and dispensaries, and finally to the adoption by the Government of a national scheme. He held that credit for the progress in the prevention of the disease was not due to the tuberculosis scheme alone; improved housing, better nutrition and a purer milk supply had each played a part. Stressing the fact that numbers of cases still remained unnotified until after death, he expressed the hope that there would be an increase in the educational side of the work by local authorities, and consequently that people would seek the advice of the tuberculosis dispensaries more readily. Sir Kingsley Wood ended with a plea for closer co-operation between the maternity and child welfare department and the school medical service.

The President of the Conference (Sir Robert Philip) in his opening remarks explained that the meeting provided an opportunity of putting views by recognised authorities before the general public and of correcting mistaken ideas. The tuberculosis schemes in Britain were, he claimed, equal to, if not better than, any in the world. The position with regard to tuberculosis in cattle he considered unsatisfactory, and he saw no reason why there should not be accomplished in this country what Denmark had done in eradicating the disease from the herds.

The choice of subjects for discussion at the different sessions was in all cases good. The first three, indeed, were not only of importance but controversial also, while the fourth—"Tubercle-free Herds: Present Position and Policy"—revealed itself to be of extreme and general interest.

The first session was occupied by papers on "The Significance of the Examination of Contacts," and was opened by Sir Arthur Salusbury MacNalty, Chief Medical Officer of the Ministry of Health, who said that statis-

tical enquiries had shown that the incidence of morbidity and mortality from tuberculosis was much greater in a contact population than in the general population. He regarded as the most important objective of contact examination, the detection of the source of infection in the home—the primary infecting case. Contact examination was also a means of detecting the incipient case which responded most favourably to sanatorium treatment. He was of opinion that the results of contact examination had fallen short of expectations in regard to adults: repeated examination of contacts he considered impossible and suggested that there should be some basis for selection of contacts for observation.

Dr. F. J. Bentley (London County Council), in preparing his paper, had sought to obtain the views of all the metropolitan borough tuberculosis officers, particularly as regards the importance of examining (a) child contacts and (b) adult contacts. It was shown that only a little over a quarter were clearly in favour of child contact examination, whereas over 75 per cent. were emphatic on the need for examining adult contacts. Figures collected in London over the last ten years had revealed 7 per cent. of 40,000 adult contacts with pulmonary tuberculosis, but only 1 per cent. of over 46,000 children examined were so affected. Dr. Bentley concluded by saying that "our task, therefore, for the future should be, not to rest content with mounting up large numbers of child contacts, but to concentrate on the examination and supervision of young adult contacts—both male and female, but especially the latter—of known positive sputum cases in the household or of cases of pulmonary tuberculosis who had died within the preceding five years."

Dr. G. B. Dixon (Birmingham) stressed the importance of contact examination of children and adults, both for discovering the source of infection and for early diagnosis of secondary cases. Contact examination, in his opinion, was not complete without an X-ray film of the chest: in children under ten years of age the contents of a stomach lavage and the faeces should be examined for tubercle bacilli. His own experience in regard to this latter procedure indicated that young children suffering from benign forms of intrathoracic tuberculosis were occasionally foci of infection requiring segregation and treatment.

Mr. Frank Kiernan (New York) gave an

interesting and detailed account of the methods adopted in the United States of America for the detection of early and latent cases of pulmonary tuberculosis. Not only was routine contact examination carried out, but mass examinations of the school population had been made in certain areas. He considered this last method of detecting cases worth while, but it was expensive and it was questionable if the cost was justified.

The discussion on "The Protection of the Adolescent and Young Adult from Tuberculosis" was opened by Dr. R. R. Trail. He pointed out that in the age-group 15-25 years the morbidity and mortality rates had shown little decrease, and in the case of females there had actually been an increase in recent years. Dr. Trail considered that the only real protection was early detection, and advised the introduction of some scheme for routine screen and film examination of all young adults for the ascertainment of latent disease: such a scheme, he claimed, would be less expensive over a 20-year period than that at present in operation, involving the expenditure of vast sums of money on treatment.

Dr. Jane Walker, continuing the discussion, said that her investigations had shown the undoubted significance of fatigue as a factor in the causation of tuberculosis in the young female adult population. Present conditions of work under high pressure and long journeys to the place of work led to fatigue: the cost of travel reduced the money available for food, and under-nutrition was probably the most important single factor. She advised that all young persons entering industry or college should have a full medical examination, including an X-ray report.

Dr. S. Vere Pearson dealt with an entirely different aspect of the problem. The mental strains of industrial depression, unemployment, low wages, the sorrows and trials of war, were, he said, probably more important as factors in producing active tuberculosis than under-nutrition, overcrowding, etc. The young were particularly prone to such strains, and the discouragement to which youth was subjected possibly explained much of the peculiar susceptibility of adolescents and young adults to severe pulmonary tuberculosis.

Papers on "The Need for Closer Co-operation between the Maternity and Child Welfare Service, the School Medical Service

and the Tuberculosis Service" were read by Dr. W. T. Munro (Glenlomond Sanatorium), and Dr. G. Macdonald (Battersea), followed by Dr. Letitia Fairfield and Bailie Stewart Reid (Glasgow). Dr. Munro held that chronic pulmonary tuberculosis was a late manifestation of a childhood infection, and declared that early tuberculosis in children could be diagnosed by careful clinical examination and by taking the case history accurately and in detail. He pleaded for the better training of all medical officers (maternity and child welfare and school) in the early recognition of childhood tuberculosis, and advised that they should be informed of every notified case of pulmonary tuberculosis so that particular attention could be given to the contacts. By early recognition and treatment of the disease in children he claimed that much serious disease in later life could be prevented.

Dr. Macdonald disagreed with Dr. Munro on many points, expressing the view that, in the great majority of cases, childhood tuberculosis could not be diagnosed clinically, and that medical officers of the maternity and child welfare and school medical services were not qualified to diagnose tuberculosis. The idea that all tuberculosis was a childhood infection had, he said, been abandoned. Recent research appeared to show that treatment of the first infection during childhood did not materially influence the course of the disease in later life, and that there was no conclusive evidence that late adult tuberculosis spread from a healed childhood focus. The control and eradication of tuberculosis lay in the protection of the child from infection and re-infection from adult sources.

Dr. Letitia Fairfield considered that closer co-operation between the maternity and child welfare clinics and the tuberculosis officers was necessary in regard to knowledge of tuberculous families and reports on contacts and suspects. She particularly stressed the importance of examining women in the early stages of pregnancy for any evidence of pulmonary tuberculosis. Bailie Stewart Reid gave a detailed account of the methods adopted for co-ordinating the various services in Glasgow.

At the last session, when the subject for discussion was "Tubercle-free Herds: Present Position and Policy," Sir Robert Philip

vacated the chair in favour of Sir Frederick Hobday. Papers were read by Major D. S. Rabagliati, Major Brennan de Vine and Dr. L. Jordan, explaining in detail the different factors militating against an increase in the number of tuberculin-tested herds. Major Rabagliati expressed the hope that the attested herds scheme and the Milk (Special Designations) Order, 1936, would, in their amended forms, be the means of increasing the number of tubercle-free herds in this country. Schemes in Scotland, he said, were much in advance of those operating in England. This, according to Dr. Jordan, was mainly due to the Milk and Dairies (Scotland) Act, 1914, having been strictly applied, and to the stimulus given by supplying only grade A (tuberculin-tested) or certified milk to the schools. Major de Vine pointed out that the Government subsidy was leading to the slaughter of young heifers. It would be preferable, he said, to slaughter the old tuberculous cows and retain the young heifers; withdrawal of the subsidy for heifers might help this. He also considered that the Milk Marketing Board should subsidise tubercle-free herds instead of milk manufacturers.

All sessions of the Conference were well attended—a testimony to the excellence of the papers and discussions, and to the interest taken in the problem of the prevention of tuberculosis.

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The London School Child.

IN his report for the year 1935 as School Medical Officer to the London County Council,* Sir Frederick Menzies finds himself able to report in favourable terms with regard to what are described as the three great indices by which social conditions and their improvement can be assessed, namely, nutrition, cleanliness and clothing. In respect of nutrition, representative school doctors are of opinion that there has been no deterioration in the general condition of nutrition of the London school children. So far as cleanliness goes, it is stated that the percentage found free from even traces of nits or pediculi in the hair was 97, which is the best result ever obtained. And in the matter of clothing it is disclosed that so far as adequacy is concerned this is "very

satisfactory." Even in respect of dental conditions the note struck is rather more cheerful than in previous years: not only has there been an increase in the number treated; there has been improvement in the figures derived from medical inspection.

The total number of inspections of all kinds and of re-inspections was no less than 512,296. This must have represented a vast amount of work for the medical officers. It is gratifying to find, however, that even with such a volume of routine work time was still found for the carrying out of special investigations, and in the report there is reference to them and to particular features emerging from the work done in the ordinary way of business. In connection with otorrhœa—a defect most prevalent amongst entrant infants—and hardness of hearing there is a note on the making of audiometric examinations in elementary schools which should prove interesting to others. It is interesting to learn also that special search for rickets revealed a slight increase over previous years. In a note with regard to vaccination it is shown that the percentage of children with obvious marks is less than before; the highest figure being 52 per cent. amongst "leavers" (13½ year old children). A useful piece of work of which a special description is given was that done at the "nutrition centres" established in various parts of the metropolis. In a general way it may be claimed that the results all round were satisfactory and sufficient to justify the setting up of the centres and a continuance of their operations. In relation to dental treatment it is interesting to learn that during the year an experimental orthodontic scheme was set up and that there is every prospect of extensions in the future. The scheme for dealing with stammering children continued to operate at the ten centres provided for the purpose. The number of children who attended was 432, and of these, 124 were discharged as cured. Centres for adult stammerers exist at two evening institutes. At these, pupils whose cure was not completed before leaving day school continue treatment.

Other notable schemes discussed in the report which call for mention include those dealing with rheumatism, personal hygiene and child guidance. The first named, it is pointed out, has now been so extended that the majority of children suffering from rheumatism may be brought within its ambit at the earliest possible moment. Actually there are now in the rheumatism units 630 beds for acute and sub-acute cases and about 200 for convalescents. In 1935,

1,639 children—some 63 per cent. of the number nominated—were admitted to the units. Under the personal hygiene scheme every child is seen at least three times a year, and in 1935 no fewer than 1,629,068 examinations were made. In 140,755 cases (8·6 per cent. of examinations) the child was noted as verminous, about 52 per cent. being recorded as showing nits. So far as child guidance is concerned, the fact that there are now six clinics in operation is noted. During the year a considerable number of cases were dealt with at each with varying results. Naturally there are a great many other matters considered in the report, very full details being given, for example, with regard to nursery schools and the results obtained therein; infectious diseases, making special reference to immunisation against diphtheria and scarlet fever in residential establishments for children; open-air education; school journeys; provision of meals, and so on. Of these it is possible only to make mention.

Of special investigations carried out, those in regard to the audiometer and nutrition have been referred to already. One in which results that may be counted striking were obtained was that in which Dr. W. A. Scott made comparison between the physique of athletic boys in elementary schools with that of their non-athletic class-mates. The boys observed numbered 280 in each group and actually it was found that there was no significant difference between the two groups from the point of view of physical measurements. Results somewhat more surprising were obtained on making a comparison of the physique of boys excelling in different types of sport, what appeared being that the type of physique which supplied the best talent in boxing, football and swimming, was, in each, quite different from that of the others. Boxers were short and heavy, footballers corresponded to the average, while swimmers were very tall but with a normal weight for their height.

As the report suggests, the great bulk of the work done is on the personal and medical side. This does not mean, however, that the environmental is neglected. Actually the earliest reference in the volume is to school buildings and equipment—the new schools (fifteen of them) to be erected, those to be modernised, and so on. Following an investigation and discussion with the Council's Architect upon the subject of drinking fountains, the decision arrived at was that the most suitable form was the bubble jet. The cost of this is placed at

38s., plus the cost of water services and drainage, which varies considerably in each case. The situation preferred for the fountains is the playground. Quite obviously much thought and care are devoted to the London school child, and from the report it is very clear that so far as his health is concerned, the results obtained are extremely satisfactory.

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Local Education Authorities and Mentally Defective Children.

A MEMORANDUM addressed to local education authorities on this subject (Administrative Memorandum No. 151—June 22nd, 1936) by the Board of Education contains information of so much interest and importance that it has been considered proper to make rather full reference to it here. The object of the Board of Education and the Board of Control jointly with that Board has been to remove certain difficulties in the ascertainment and notification of mentally defective children. So far as ascertainment is concerned, the memorandum points out that under the Education Act, 1921, Section 55, Sub-section 1 (a), the duty of ascertaining which children are mentally defective rests with the local education authority. No difficulty should be experienced in ascertaining which children are idiots or imbeciles, or in notifying their names to the mental deficiency authority. It does, however, happen in some areas that imbecile children who would not be educable in any school are retained in public elementary schools, causing trouble to their teachers and deriving no benefit themselves. Every care should be taken to notify the names of such children to the mental deficiency authority as early as possible, and it is suggested that the opportunity of the general survey of all children which is made at the age of eleven should be taken to make a final decision on cases of doubt. No imbecile child should be allowed to remain at school after this age. The fact that in some areas the mental deficiency authority's arrangements for the care of defectives are inadequate is said to deter the local education authority from notifying; but it is only as the former are made aware of the extent of their liabilities for mental defectives that they are likely to make better provision.

The ascertainment of educable mentally defective children is more difficult, and in the notification of children of this type, who are much more numerous and constitute a more serious social and educational problem than the

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lower grade children, real difficulties arise which it may be useful to discuss. As regards notification of children leaving special schools, local education authorities have long been empowered to notify educable mentally defective children who are about to leave special schools as well as exceptional children whose cases fall under Article 2 (b) (detrimental children) and Article 3 (special circumstances) of the Mental Deficiency (Notification of Children) Regulations. In addition, since the passing of the Mental Deficiency Act, 1927, they have been empowered to notify not only those children who on leaving special schools require institutional care or guardianship but also those who require supervision. Since there is some evidence to show that the fullest use is not at present being made of the power of notification with a view to supervision it is possible that local education authorities may not yet fully realise the value to the child of this provision.

Most children leaving special schools require some kind of after-care. This may, of course, be provided voluntarily in the child's own home; but the certainty that all defectives are abnormally dependent on their environment may make some continuous statutory supervision and help desirable in addition. Notification enables a child to be assisted by the mental deficiency authority, and to abstain from notifying children who require after-care is to deprive them of what may in later years be a valuable help and support. The mental deficiency authority's duties towards the notified defective include regular visitation and arrangements for training. In areas where these duties are carried out by trained visitors with an understanding of the needs of mentally defective children, the benefits to the child and to his relatives at this transitional period of his life cannot be doubted. Arrangements may be made for him to continue his training at an industrial centre, or through the visits of a home trainer; he may be helped to attend a club; he may have work found for him, or he and his relatives may be helped in many other ways by a sympathetic home visitor; and most important of all, he is being given help before he gets into social trouble rather than after. A case under statutory supervision is one which is "subject to be dealt with," and the mental deficiency authority may at any time vary the treatment to institutional care or guardianship, should the visitor's reports indicate the need. In the memorandum the hope is expressed that local education authorities will notify under Article 4 of the Mental Deficiency

(Notification of Children) Regulations all mentally defective children about to leave special schools who would benefit by supervision.

In the case of educable mentally defective children not in special schools, it follows that as the law now stands, they cannot at any time be notified to the mental deficiency authority unless under the comparatively limited application of Article 2 (b) (detrimental children) and Article 3 (special circumstances) of the Mental Deficiency (Notification of Children) Regulations. Yet they, equally with the children in special schools, remain the responsibility of the local education authority until they reach the age of sixteen. The mental deficiency authority, for its part, has not the power to ascertain until that age, and then only if the defective falls within Section 2 (1) (b) of the Mental Deficiency Act. Those educable mentally defective children, therefore, who are not in special schools are too often left during the critical years from the age of fourteen without training, supervision, or control.

Accordingly, in order to provide some mitigation of these difficulties in areas where there are no special schools, and wherever educable mentally defective children have not been in attendance at special schools, arrangements should be made for their supervision by co-operation between the local education and mental deficiency authorities. Since the children have not attended special schools there is no power of statutory notification, but much can be done in the form of voluntary after-care until they attain the age of sixteen when the mental deficiency authority is empowered to deal with them should it be necessary. In different areas this voluntary supervision may be arranged for in different ways; sometimes by after-care committee of the local education authority, sometimes through voluntary associations for mental welfare, and sometimes by the mental deficiency committee's own officers. Whichever method is pursued, the purpose should be kept in view of providing voluntary supervision until the child reaches the age of sixteen and of maintaining informal contact with the mental deficiency committee. At the age of sixteen the power of ascertainment is vested in the mental deficiency authority, whose duty it then is to decide whether any action is required under the Mental Deficiency Acts. If in the meantime any active trouble is reported it is open to the local education authority to report the case to the

mental deficiency authority under Article 3 of the Mental Deficiency (Notification of Children) Regulations.

The Health of Tanganyika.

THE annual medical report of Tanganyika for 1934 is the first to be submitted by Dr. R. R. Scott since his appointment as Director of Medical Services in the Territory. Dr. Scott has held a number of offices and has given valuable service to Tanganyika in all of them. This opportunity may be taken of expressing the hope that there may be many more reports from him and that none may be less satisfactory than this. The report is a useful record of work well done, and contains indications of progress to be made and suggestions as to the course to be followed.

According to Dr. Scott, the lines along which development of medical services will have to proceed, if the facilities already provided are to be utilised to the best advantage, include consolidation of the existing framework. The foundations of the service, i.e., the most widely dispersed and numerous medical units (there are in all 29 executive medical and health posts) are the tribal dressers who are in closest touch with the native population. To raise the standard of their work and increase and maintain the confidence of the population is essential for progress, for by so doing the soil is prepared on which to implant the idea of prevention of disease, the conception of which is so small, though the need is so great among a primitive people. In the past, here as elsewhere, the tendency has been to confine attention to hospital treatment, serving only a limited area in any one district. It has been found necessary to take a broader view of the problems to be faced, and to utilise the available resources for the greatest benefit of the largest number of people. It is recognised that the large non-native population of the Territory demands treatment, especially treatment which is outside the range of the general practitioner. For this purpose it will be necessary to provide increasingly for specialist services. In addition to the specialist appointments in medicine, trypanosomiasis, malaria and tuberculosis already made, it is expected shortly to add a surgical appointment, and before much longer an ophthalmologist, a

psychologist and a radiologist. At the moment the particular need is for a tutorial medical officer to co-ordinate and assist in the training and examination of the African personnel. "With the improvement of the financial condition of the Territory," says Dr. Scott, "it is hoped that employers of labour, whether in agriculture, mining or other undertakings, will help us to show, by taking full advantage of the advisory services offered by the department, that healthy labour pays. By so doing they will contribute an increasing share towards the improvement of the material welfare of the country, quite apart from the inevitable improvement which will result in their own profits."

In relation to public health generally, there is shown a marked tendency to lay down lines similar to those followed in the British Isles, and in many places, as the report shows, the results obtained are quite excellent.

Obituary.

JOHN SMITH PURDY, M.D., D.P.H.

THE Society records with regret the death of Dr. J. S. Purdy, Medical Officer of Health of the Combined Metropolitan Sanitary Districts and City of Sydney, New South Wales. Born at Morpeth in 1872, Dr. Purdy received his medical education at St. Bartholomew's Hospital and the University of Aberdeen. He graduated M.B., C.M., in 1898, took the D.P.H. at Cambridge in 1903, and in the following year proceeded to the degree of M.D. After general practice in a colliery district in the North of England, Dr. Purdy held a number of official appointments in this country and in New Zealand and Tasmania, finally settling in Sydney in 1913. He served in the South African War as Surgeon-Captain of the 6th New Zealand Mounted Rifles, and in the Great War as Lieut.-Colonel commanding the 10th Australian Field Ambulance. He gained the D.S.O. in France, and at the end of the War returned to his Sydney appointment, from which he was due to retire in 1937. Dr. Purdy had been a Fellow of the Society of Medical Officers of Health for many years.

DR. ELWIN H. T. NASH writes to point out that in his article on "Orthodontic Schemes" (PUBLIC HEALTH, August, 1936, p. 384) the word "not" should have appeared before the word "unaware" in the second line of the second paragraph.

Scarlet Fever Control on Modern Lines.

By ANDREW W. FORREST, M.A., M.D., CH.B. (EDIN.), D.P.H., Medical Officer of Health and School Medical Officer, Leyton.

Since the question of the value of and necessity for hospital isolation of cases of scarlet fever is receiving close consideration in many quarters at the moment, this valuable presidential address of Dr. Forrest to the Home Counties Branch, read at a joint meeting of the Branch and the Fever Hospital Medical Service Group, will be found most helpful and will be read with great interest.

IN 1927 Sir George Newman concluded his preface to a special report on "Some Administrative Aspects of Scarlet Fever" with these words:—

"A practice or tradition in regard to a particular disease all too readily becomes established, fixed and static; yet in view of their purpose and growth, scientific measures of disease-prevention continually call for critical re-examination as to their truth and necessity, and for vigilant reconsideration from the point of view of the legitimacy and expediency of the expenditure incurred."

A generation ago scarlet fever was considered to be a specific infectious disease of fixed type, and the orthodox measures used in its control were applied in a fixed manner. Since that time there has taken place a profound change, not only in the prevalent type of the disease, but also in our knowledge of its nature and epidemiology; yet we continue to apply some routine methods of control which were designed to deal with the much more serious type of scarlet fever which was prevalent so long ago. Unfortunately, some of these methods result in widespread loss of time, energy, work and schooling; and they give rise to substantial public expenditure.

During recent years our former conceptions of the nature of infection and epidemiology of scarlet fever have been shattered at such a rate that we cannot afford to disregard the results of experience of any method of dealing with the disease, however unorthodox it may appear.

What is Scarlet Fever?

During recent years bacteriologists have been very active in their efforts to throw light on the nature of the infection in scarlet fever and allied diseases. The great increase in new forms and types of streptococci, and the ingenuity displayed in their nomenclature—well described by Topley and Wilson as a "riot of christening"—are sufficient to con-

fuse the physician who is faced with the actual clinical and administrative problems connected with these diseases. There is conclusive evidence that uncomplicated scarlet fever is due to infection by one or other of many different strains of the hæmolytic streptococcus; but organisms with the same morphological and biochemical reactions are to be found, not only in widely varying forms of disease and in those who have recovered from these diseases, but also in anything up to 36 per cent. of apparently healthy persons.

The Dick test and the Schultz-Charlton reaction may be useful in diagnosis; but they are of limited value, and least reliable in the very type of case in which their help is most needed. On what, then, is the clinician to rely in trying to arrive at a diagnosis?

Medical practitioners have always regarded the typical scarlatiniform punctate erythematous rash as the diagnostic feature *par excellence*, and subsequent consistent desquamation as clinching the diagnosis; but experienced observers have always been baffled to find patients with typical rash and strawberry tongue who did not peel, and other patients with typical peeling who have had no previous rash.

In a recent bacteriological investigation of 100 suspicious cases, Brown and Allison found that the incidence of rashes was almost equal in the bacteriologically positive and negative cases; that evidence from the tongue, temperature and pulse-rate was of no diagnostic value; and that only 40 per cent. of the positive cases eventually showed consistent desquamation.

Even after the most thorough clinical and bacteriological investigation, the diagnosis of scarlet fever may be beset with extreme difficulty; and with the mild type of the disease now prevalent it is recognised to be one of the

most difficult to diagnose of all infectious diseases. It is the busy general medical practitioner, however—with little or no time and facilities for bacteriological and serological tests—who has the responsibility of not only diagnosing but notifying a condition which cannot be regarded as a specific epidemiological entity. It is, therefore, not a matter for surprise that in a large percentage of patients, notified and admitted to hospital, the diagnosis of scarlet fever is not confirmed—Brown and Allison estimate that 39 per cent. of doubtful cases of scarlet fever are not infectious and do not require hospital treatment of any kind.

Last February, Dr. Hobson of Oxford published a most interesting series of cases and observations. He found that:—

- (1) An erythema is inconstant in infections due to a hæmolytic streptococcus.
- (2) It may be a feature of those due to a non-hæmolytic streptococcus.
- (3) Though it is more frequent in infections due to hæmolytic streptococci, it is a poor guide to the course, prognosis, or infectivity of the disease in a given patient.
- (4) Infections due to hæmolytic streptococci with or without an erythema, are generally highly toxic, highly infectious, and have a striking association with sequelæ of all kinds. *The appearance of an erythema is probably a favourable sign.*
- (5) An infection due to a non-hæmolytic streptococcus may have sequelæ in no way distinguishable from those due to a hæmolytic strain, whether there is an erythema or not.

If, as he says, these statements and conclusions are sound—and they have not been refuted so far—then it is pertinent to consider what alterations in, or modifications of, existing practice and teaching should be introduced.

Methods of Control.

In dealing with scarlet fever, as in the case of most infectious diseases, the traditional methods of control are:—

- 1, Notification; 2, Isolation; 3, Disinfection; 4, Supervision of contacts. What has been—and is—the effect of these methods as practised?

Notification.—In view of the acknowledged difficulties in the diagnosis of scarlet fever, and the presence of virulent strains of strepto-

coccus scarlatinae in so many non-notifiable types of infection and in such a large proportion of apparently healthy persons, it cannot be expected that the present system of notification of scarlet fever can result in the ascertainment of more than a very small proportion of persons who are capable of conveying infection.

Hospital Isolation.—Towards the end of last century, isolation hospitals, many of a temporary nature, were built for the isolation of the infectious sick. In the first place their function—as the name "isolation hospital" implies—was segregation rather than treatment. It was difficult to persuade patients to enter them. Frequent resort was had to the power of compulsory removal, and the element of compulsion was ever present in the minds of infectious patients and their relatives.

Nowadays there is a complete reversal of the position. The modern fever hospital is—or should be—soundly constructed, efficiently staffed and well equipped with every facility for the effective isolation, diagnosis and treatment of all forms of infectious disease. The difficulty one meets nowadays is not that of coaxing or compelling patients to enter hospital, but of persuading them that removal to hospital is not a necessary measure of control. As a result of the acknowledged benefits to be derived from hospital treatment, members of the general public now regard any suggestion of home isolation and treatment as a furtive attempt to deprive them of a social service to which they have a legitimate right.

It is a matter for gratification that during recent years such rapid progress has been made in the design, equipment and staffing of so many fever hospitals, and that the Local Government Act of 1929 (Sec. 63) is likely to put an end to the parochial attitude which has been responsible for the multitude of small isolation hospitals throughout the country; for the small two-disease isolation hospital is the relic of a past age, and has been aptly described as a "costly shrine of an exploded superstition." Unfortunately, there are still many such small hospitals, and they raise problems and difficulties in administration which are not appreciated in areas served by more modern fever hospitals.

Incidence and Mortality.—Experience throughout the country has shown that there has occurred during the last 40 years a marked and progressive decline in the severity of, and

mortality from, scarlet fever, but no marked reduction in incidence. The decline in severity and mortality are undisputed facts, and very welcome; but the decline began before removal to hospital became general as a method of control, and it has continued in all parts of the country irrespective of the extent and nature of the institutional accommodation and treatment provided. A recent disturbing element in the progressive decline in mortality is recorded by the Registrar-General in children below 15 years of age. In that age-group the mortality per million has risen from 45 in 1931 to 83 in 1934.

Period of Isolation.—A belief, apparently traditional, that scarlet fever desquamation was *per se* infective, was responsible for prescribing for generations the traditional minimum isolation period of six weeks; and it required the upheaval of the Great War, with its unprecedented demand for every available bed, to shake our belief in the necessity for six weeks' isolation. Now we know from experience that in uncomplicated cases no useful purpose is served by prescribing a detention period of more than four weeks, and that a much shorter detention period can be adopted with safety. Indeed, it is now generally recognised that it is not the patient released after four weeks' detention who gives rise to return cases so much as the patient who has been detained for a much longer period. Nevertheless, the older members of the general public still view with suspicion any detention period less than six weeks; and quite recently it was reported that in a village in the north of England "widespread distress and something like a state of panic" existed among parents who refused to send their children to school for fear of contact with other children alleged to have been prematurely and improperly released from the local isolation hospital.

Complications and Overcrowding of Wards.—With regard to the incidence of complications, it is reasonable to suppose that, with all the expert care of patients in hospital, complications are more quickly detected and more adequately treated than they would be at home; but I know no facts or figures to support that supposition. As the result of a questionnaire on this subject addressed by the Ministry of Health to medical officers of health and medical superintendents of infectious disease hospitals in 1923, it was found that only a minority (28 per cent.) considered

that hospital treatment had any effect in reducing the incidence of complications.

On the other hand, there have always been observers who have maintained that the mixing of different types of infection in hospital wards tends toward the development of complications and cross-infections by patients who would have had uncomplicated attacks if they had remained at home; and recent investigations appear to provide bacteriological evidence in support of that contention.

For example, as the result of weekly bacteriological examination of 200 consecutive cases it was found by Allison and Gunn that, whereas 54 per cent. showed no change in type, as many as 46 per cent. showed a second or third type of hæmolytic streptococcus during their stay in hospital. Of those who did not show change in type, 16 per cent. were carriers on discharge after 6·5 weeks in hospital; whereas of those patients who showed change in type, 62·6 per cent. were carriers after seven weeks' detention in hospital. It is very significant that patients nursed in cubicles showed no change in type.

It has been shown conclusively by Griffiths, by Gunn and by Allison and Brown that infection by one strain of hæmolytic streptococcus does not protect against subsequent infection by another strain, and that what we know as "relapses" or "second attacks" are really new infections by streptococci of different types.

It is generally agreed that a definite correlation exists between overcrowding of wards and increased incidence of complications. Like an axiom of Euclid, the association of cause and effect appears to have been accepted as a self-evident truth requiring no proof. Experienced medical superintendents have given their opinion that complications became more common whenever the standards of bed-spacing and nursing efficiency were reduced during epidemics; but I have never been able to find any published results of the comparative incidence rates of complications in wards which were, and those which were not, overcrowded during the same epidemic.

In the estimation of complication incidence rates much depends on the standard accepted by the observer, for one will accept and schedule as a complication a slight departure from normal which would be disregarded by another; and for that reason such rates are not strictly comparable unless their estimation is carried out by the same observer.

In a recent investigation of 808 cases in a large, well-equipped hospital with modern facilities for isolation and treatment, Brown and Allison found that 243 patients (*i.e.*, 30 per cent.) showed complications during their stay in hospital. It is of interest to compare that rate with the complication incidence rate of a small temporary isolation hospital in which the total accommodation and facilities for isolation are inadequate (*e.g.*, of the total accommodation, only 5·8 per cent. is in the form of separate cubicles). During 1934 the incidence of scarlet fever in Leyton was very high and, as measles and diphtheria were both prevalent, the available number of hospital beds was insufficient to meet the demand. Even after the most rigorous selection of cases for admission, the number of patients in hospital was in excess of the standard accommodation during the whole year. My colleague, Dr. F. W. Gavin, undertook a detailed analysis of the incidence of complications during that year, and found that, of 387 scarlet fever patients treated in hospital, as many as 199 (*i.e.*, 51·42 per cent.) suffered from one or more of the recognised complications during their stay in hospital. That is an alarmingly high figure even when allowance is made for the fact that some 23 per cent. of the complications were present on admission.

Comparison of Hospital and Home Isolation.

The practice of different authorities varies within the widest possible limits with regard to the hospitalisation of notified cases of scarlet fever. In some large cities and health resorts the rate of hospitalisation is as high as from 98 to 100 per cent., whereas in many rural areas and smaller towns home isolation is the rule. In most areas, however, the extent of hospitalisation varies between these extremes.

In Leyton, during the last four years (excluding cases occurring in institutions), 63·8 per cent. of patients have been removed to hospital and 36·2 per cent. have been treated at home.

Is there any relative increase in the risk to patients or contacts when one or other of these methods is practised?

Case Fatality.—During the five-year period 1930-34 the case fatality rate in Leyton was 0·94 per cent. for hospital cases and 0·20 per cent. for home-treated cases. Of course, the great increase in the fatality rate is to be expected in view of the circumstances taken

into consideration in the selection of cases for admission to hospital.

Complication Incidence Rate.—In Leyton Isolation Hospital, during 1934-35, the complication incidence rate was found to vary between 29·03 per cent. (during quiet periods) and 51·42 per cent. (during epidemic periods).

I have no knowledge of any published results showing the incidence of complications among scarlet fever patients treated at home, and there are obvious difficulties in the collection of reliable evidence where the personal factors of so many different medical attendants are concerned. On January 1st, 1936, I began investigating these home-treated cases *qua* complication incidence and find that, of 54 patients nursed at home, 44 have made complete and uninterrupted recoveries without complication. The percentage incidence rate of complications (18·51) in these home-treated patients compares very favourably with the hospital rates quoted above.

Contact Attack Rate during Period of Isolation.—As far as I am aware, there are no published results of the comparative percentage attack rate of contacts of hospital-treated and home-treated cases during the same epidemic. Comparison has been made between the two groups on the basis of houses infected, but I am advised that the incidence rate of secondary cases among contacts is the proper basis of comparison.

Table A shows the results of a statistical analysis of the occurrence of secondary cases among Leyton contacts during the four-year period 1932-35. It shows not only the risk to all contacts and to contacts of three different age-groups, but also the risk during the first week as compared with that during the remaining weeks of isolation. As it was found impossible to form any reliable estimate of the number of contacts or primary cases occurring in institutions, these cases have been omitted from the analysis, which deals only with cases of scarlet fever notified from private houses in Leyton.

Reference to Table A shows that the percentage of home contacts (of all ages) who developed scarlet fever was slightly less in the home-treated group (1·70 per cent.) than in the hospital-treated group (1·73 per cent.); but whereas the risk to pre-school contacts was greater in the case of the hospital-treated group, the risk to school contacts was greater with home treatment.

With regard to the date of onset of secondary cases among contacts, it will be seen that—except in the adult group—the percentage of contacts attacked was greater during the first week after removal of the primary case to hospital than during the

whole of the remaining period of isolation. In home-treated cases, however, the risk to pre-school children was much greater after the end of the first week. As regards adults, the risk and the differences are so small as to be of no statistical significance.

TABLE A.

BOROUGH OF LEYTON. SCARLET FEVER. ANALYSIS OF CONTACT ATTACK-RATES OF HOSPITAL-TREATED AND HOME-TREATED CASES. 1932-1935.

	Hospital-Treated.	Home-Treated.	Date of Onset of Attack.					
			Hospital-Treated.			Home-Treated.		
			1-7th Day.	8-36th Day.	Total.	1-7th Day.	8-36th Day.	Total.
1. Cases	1,343	762						
2. Contacts.								
(a) Under school age ...	545	157						
(b) School age	1,562	475						
(c) Over school age ...	4,342	2,246						
All ages	6,449	2,878						
3. Contacts attacked.								
(a) Under school age ...	41	10	27	14	41	3	7	10
(b) School age	43	23	27	16	43	13	10	23
(c) Over school age ...	28	16	13	15	28	5	11	16
All ages	112	49	67	45	112	21	28	49
4. Percentage of Contacts attacked.								
(a) Under school age ...	7.52	6.36	4.95	2.56	7.52	1.91	4.45	6.36
(b) School age	2.75	4.84	1.72	1.02	2.75	2.73	2.10	4.84
(c) Over school age ...	0.64	0.71	0.29	0.34	0.64	0.22	0.48	0.71
All ages	1.73	1.70	1.03	0.71	1.75	0.72	0.97	1.70

TABLE A (1).

BOROUGH OF LEYTON. SCARLET FEVER. INCIDENCE OF RETURN CASES. 1932-1935.

By "return case" is meant a case of scarlet fever occurring in a house in which a scarlet fever patient has been released from isolation within the previous 28 days.

Year.	Following Hospital Treatment.			Following Home Treatment.		
	Primary Cases.	Return Cases.		Primary Cases.	Return Cases.	
	Number.	Number.	Percentage.	Number.	Number.	Percentage.
1932... ..	215	13	6.04	94	0	0.00
1933... ..	447	28	6.26	275	2	0.72
1934... ..	404	14	3.46	270	2	0.74
1935... ..	277	19	6.85	123	2	1.62
Total ...	1,343	74	5.51	762	6	0.78

Return-Case Rate after Release from Isolation.—At one time the return-case rate was regarded as an index of the efficiency of fever hospital administration, and legal proceedings for alleged negligence have been taken by parents of children who have developed scarlet fever following the return home of a patient from hospital. Although the return-case rate may be increased by negligence and inefficiency, it is now recognised that the rate remains fairly constant throughout the country. Different authorities vary widely in their interpretation of what is meant by a "return case," but the majority regard it as a case of scarlet fever occurring in a house in which a patient has been released from isolation within the preceding 28 days. On that basis the figures (Table A [1]) show the comparative incidence of return cases in Leyton following hospital and home isolation during the last four years.

These results show the percentage return-case rate after hospital treatment (5.51) to be more than seven times greater than after home treatment (0.78). Of the return cases following patients discharged from hospital, 20 occurred in the first week, 30 in the second, 16 in the third, and eight in the fourth (*i.e.*, 67.5 per cent. occurred within 14 days of discharge from hospital). There is no evidence of any increase in return cases during periods of pressure and overcrowding of hospital beds; in fact, the year with the lowest hospital return-case rate was one in which the complication incidence rate was exceptionally high.

Disinfection.

The elaborate ritual of terminal disinfection owes its origin to the assumption that infection is conveyed by inanimate objects handled by the patient, by his clothing, and by the very furniture and walls of the rooms in which he lived. Bacteriologists have demonstrated the existence of hæmolytic streptococci in all these situations; but these micro-organisms are parasites requiring warmth and moisture for their existence, and outside the body they perish quickly. As long as the infectious person is in the house or hospital, he can infect others; but when he goes the risk of infection generally goes with him and, except in a few special cases, it may be said that soon after the patient has been removed any germs he may have left behind are so moribund that the need for terminal disinfection has passed. It is surprising how little is claimed for

disinfection, even by its staunch advocates. There are many who take up the attitude that, even although it does no good, it can do no harm; but can it not do harm? Dr. Forbes (Medical Officer of Health, Brighton) has drawn attention to serious harm which may be done by the spraying of living rooms with liquid disinfectant; to the overcrowding of the family caused by the closing of rooms which have been sprayed; and to the sense of false security conveyed to the public, who have been led to regard municipal "spraying and baking" as the last word in disease prevention.

Prior to January, 1930, the Leyton Sanitary Authority carried out the traditional programme of municipal terminal disinfection of bedding, clothing, etc., from infected households. Since that time these measures have been discontinued in the commoner notifiable diseases.

During the five-year period 1925-29, when routine steam disinfection was practised, the percentage of secondary cases of scarlet fever from infected households was 6.08, compared with a rate of 5.51 during the five-year period since 1930, when steam disinfection was abandoned.

Supervision of Contacts.

There must be few areas in which any restrictive control is exercised over the movements or attendance at work of adult contacts, unless they happen to be teachers, school caretakers or persons engaged in the handling and distribution of food. On the other hand, all education authorities throughout the country apply regulations for the exclusion from school of all contacts of school age from infected households.

Exclusion of School Contacts.—The "Memorandum on Closure of and Exclusion from School" is an official document issued under the joint auspices of the Ministry of Health and the Board of Education; and the regulations of local education authorities are based on the procedure recommended in that memorandum.

With regard to school children suffering from scarlet fever, the procedure suggested in the memorandum implies an official belief in the necessity for a six weeks' detention period in hospital, and an even more surprising belief in the efficacy of terminal disinfection. These, I submit, are the cast-off tenets of an outworn creed.

It is with the exclusion of contacts, however, that I am more concerned at present. The rules suggest that, when a person suffering from scarlet fever is being treated at home, all school children living in the same house (which may contain two or more families) should be excluded from school during the whole period of illness and for a week thereafter. The reasons given in the memorandum for such exclusion of contacts are:—

(a) "Because such children, if unprotected by a previous attack, might attend school while suffering from the disease in a latent form or at an unrecognised stage," but the suggested rules for exclusion—appearing later in the memorandum—do not differentiate between children who have and those who have not been protected by a previous attack.

(b) "Because it is known that the infection may attach itself to, and be conveyed by, the throat secretions or the clothes of a person living in an infected dwelling, even although the person himself remain unaffected."

There is every reason to believe that the danger formerly attributed to the conveyance of infection on the clothes of healthy persons has been considerably over-estimated. It is, of course, a possibility; but if it constitutes a real danger, surely the danger is as real in the case of adult contacts, on whose movements no restriction is placed—for the hæmolytic streptococcus, as far as I am aware, shows no predilection for "attaching itself" to the clothes of the school child in preference to those of younger or older members of the family.

Although excluded school contacts may not go to school, they are free to play in the streets and frequent other public places as much as they choose; and they generally enjoy much more than their usual amount of freedom out of doors, due to the fact that they are too much "in the way" of the already harassed mother, who acts generally as sick-nurse. If the infectious patient is isolated satisfactorily in the home, there should be no need to exclude school contacts for more than a week. If, on the other hand, home isolation is unsatisfactory, the patient should be removed to hospital. In any case the long period of exclusion from school of contacts of home-treated cases is a serious matter from an educational point of view and a frequently-used argument against the home treatment of

scarlet fever. There are many parents who are both able and willing to provide the necessary facilities for home isolation and treatment, but they naturally hesitate and decline to make such provision when they are told that it entails the loss of six weeks' education for all school children in the house.

The Efficacy of School Exclusion.—Since January 1st, 1934, Leyton school contacts have been excluded for only one week, irrespective of whether the patient has been isolated in hospital or at home; whereas previously school contacts of home-treated cases were excluded for six weeks.

Over two years have now elapsed since the modified procedure was adopted, and in Table B will be found a summary of the statistical comparative analysis of the incidence of scarlet fever among school contacts during the two-year periods before and since the modification of the regulations.

It will be observed from these figures that the two periods show no wide disparity in respect of incidence and school contacts. The circumstances are therefore suitable as a means of comparing the efficacy of school exclusion.

The one outstanding difference between the hospital-treated and home-treated groups is the ratio of contacts to primary cases. For instance, in the period 1932-33 the ratio was 1.23 for hospital-treated cases and 0.58 for home-treated cases; in 1934-35 it was 1.09 for hospital and 0.66 for home cases. This is to be expected when one considers that many cases are admitted to hospital simply because the number of home contacts makes isolation at home difficult. However, by accepting as the basis of comparison the percentage of contacts attacked, the two groups are comparable.

When comparison is made between the percentage contact-attack rates of hospital-treated and home-treated cases it will be seen that in each of the two periods the percentage was greater when the primary cases were treated at home; but although the difference is statistically significant in the first period, it is not so in the second.

The important point, however, is whether the shortening of the school exclusion period was followed by any significant change in the risk, and it will be seen that such was not the case; for although the resulting contact-attack rate during the second period was

TABLE B.
BOROUGH OF LEYTON. SCARLET FEVER. ANALYSIS OF INCIDENCE AMONG SCHOOL CONTACTS. 1932-1935.

		(1) Primary Cases.	(2) Contacts of School Age.	(3) Ratio of (2) to (1).	(4) No. of Contacts Attacked.	(5) Percentage of Contacts Attacked.
1932-3.	Hospital ...	662	816	1.23	19	2.3
	Home ...	369	214	0.58	12	5.6
	Total ...	1,031	1,030	0.99	31	3.0
1934-5.	Hospital ...	681	746	1.09	24	3.2
	Home ...	393	261	0.66	11	4.2
	Total ...	1,074	1,007	0.93	35	3.4

slightly greater in respect of hospital-treated cases, it was slightly less in respect of home-treated cases.

With regard to the loss of school attendance in the two periods, the new regulations in force during the second period apply only to contacts of home-treated cases; but it will be observed that whereas in the first period 214 contacts lost at least 12,840 school attendances, in the second period 261 contacts lost only 2,610 attendances.

Of course, the number of cases dealt with in this investigation is relatively small, and it is far from my purpose to contend that they afford conclusive proof one way or the other, especially as there are so many factors involved; but from the evidence accumulated so far there is every reason to doubt the necessity for the school exclusion, during the whole period of the illness, of contacts from homes in which scarlet fever patients are isolated. I consider that the results are sufficiently encouraging to justify the continuance of the modified regulations.

Summary.

As the clinical condition known as scarlet fever is merely one of many manifestations of streptococcal infection, its incidence cannot be controlled effectively unless official notification and isolation are applied to all forms of infection by the same causative organism.

Although the prevalent type of scarlet fever is a mild disease with a very low direct fatality rate, its complications—and other infections by the same organism—are conditions responsible for serious subsequent morbidity and a high remote fatality.

Scarlet fever patients aggregated in multiple-bed wards are exposed to serious risk

from secondary infection and complications, especially when the standards of bed-spacing and nursing efficiency are diminished during epidemic periods.

Removal to hospital merely for the purpose of isolation is not a necessary measure of control, and there is no evidence of increased risk to patients or contacts when isolation is carried out in the home.

The return-case rate after release from hospital isolation is seven times greater than after home isolation.

In view of the evidence of the extent of secondary infection in multiple-bed wards, separate cubicles for all patients must be regarded as the ideal form of hospital provision.

At present the most practicable method of cubicle isolation is in the home.

Routine terminal disinfection does not exercise any appreciable effect in preventing the spread of infection.

When scarlet fever patients are isolated at home, routine exclusion of school contacts appears to be unnecessary.

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Ut Ita Dicam.

(Being Comments, apropos and otherwise, on Sundry Matters.)

The Making of Health Books.

There is nothing, in these days, so impressive as the obvious readiness of those who produce the books that the public must study if they are to be, as it is felt they must be, educated on health, to take up at once those subjects that the experts or the specialists declare to be outstanding at the moment. Having regard to the smallness of the reward, as judged from the fact that so very few of the books ever go beyond a first edition, this readiness on the part of the writers is all the more impressive, if not indeed praiseworthy. As is well known, the matters at present declared to be most extremely important and upon which the people, in the interests of their own and the national health, must be informed, are anything having reference or bearing upon maternity and connected with nutrition and dietetics. These last, so recently as at the British Medical Association Oxford meeting, Sir Robert McCarrison declared to be the whole and sole foundation of health, nutrition meaning health, and diet and the proper choice of foods in their due and proper proportions spelling nutrition. Since the word of Sir Robert is both the first and the final on this subject, who would dare question what he says, and who would doubt the necessity for instruction of the people on foods and feeding and nutrition, and the reality of the need for books from which they might easily learn? Clearly those who can write books do not doubt it, and practically never does there arrive a batch of books for review that does not contain at least one with a bearing on this subject. Equally, if not even more true is this of books on aspects of maternity and child-bearing or the avoidance of child-bearing. On the shelves at the moment, dealing with these and matters more or less connected with them, there are, in fact, some five volumes, including one entitled "On Being a Mother," by Dr. Stella Churchill (Gollancz, 7s. 6d.); one called "A Marriage Manual," by Drs. Hannah and Abraham Stone (Gollancz, 7s. 6d.); one intriguingly named "Adventures before Birth," by Jean Rostand (Gollancz, 4s. 6d.) and translated by Dr. Joseph Needham of Cambridge; a fourth, from the pen of Dr. Marie Stopes, on "Change of Life in Men and Women" (Putnam, 6s.);

and lastly, one bearing the title "School Education in Hygiene and Sex" (Heffer, Cambridge, 2s. 6d.), the writer being Dr. Barber, Medical Officer of Felsted School, which may be taken to fall within the group.

Dr. Stella Churchill on Mothers and Motherhood.

Of the five, the one that a writer in this journal may be permitted to regard as the most important is that by Dr. Stella Churchill. It is described as a manual of practical advice for young mothers, and it is claimed for it that it is characterised by knowledge, length of experience, common sense, sympathy and clarity of expression. Writing without, as they say, fear or favour, it is declared that the claim is substantiated and the book possesses all these characteristics. The style is most pleasant and the information that is given, so straightforwardly and with so much freshness of expression, is such as only a woman of experience and medically qualified could possibly offer. Very much of what it contains is the kind of thing that a mother would like to tell her daughter and that the mother would like her daughter to know well and to have always in mind. Much of it the cynic would probably say the modern young woman already knows. Even if this is so, it cannot possibly do her any harm, and may indeed do her a great deal of good, to have told to her again as Dr. Stella Churchill tells it. In addition to a foreword by Professor James Young, in which he examines and rightly commends the book, the contents include some 13 chapters. In these are discussed and explained matters having reference to maternity and affecting reproduction, health, practical motherhood, and so on; with, in regard to childhood and children and their management, some chapters on the first year of life, the toddler stage, nursing of sick children, choice of schools, etc. All these are exceedingly practical and the information given is, of course, sound and accurate. Chapters that call for special mention and that will certainly be appreciated and prove helpful are those headed: love and the modern woman; mother and doctor; adolescence; and the mother in middle life. It is in these particularly that the knowledge and experience of Dr. Churchill

are displayed and that, good as the others are, secure high commendation for the book and its recommendation even to medical practitioners and members of the public health service.

A Baedeker to Matrimony.

The book entitled "A Marriage Manual" is of American origin, the authors, both of whom are medically qualified, being man and wife. For the English edition, Michael Fielding, who, it appears, reviewed the book in the *Eugenics Review*, is responsible. It was because he was so terribly impressed by it—so much, indeed, that he regarded it as unfortunate that it could not at once supersede all other books of a type "designed to guide the gentle reader through the every-day problems of sex and marriage"—that he undertook the task. While not prepared to go so far as Mr. Fielding, there is no exaggeration in saying of it that it is—to borrow, horrid as it is, another of his expressions—a fairly complete and satisfactory "Baedeker to matrimony." That it contains very much that is additional to, or different from, that to be found in others of the multitude of books on this subject is doubtful. The method of treatment also is not entirely new, other authors of manuals prepared for popular consumption having adopted the form of question and answer that the writers here describe as "of hypothetical consultations between a physician and a young couple about to be married." Whether or not all readers will find this form to their liking is difficult to say, but to those who prefer books written in this style, and who desire to have a book telling about such things as the biology of marriage; the mechanism, problems and so on of reproduction; the art of marriage; the prevention of conception, so written, this book may be commended. Like the other two volumes already referred to, "Adventures before Birth" is published by Victor Gollancz, Ltd. Its aim is to put before the woman who enters upon the elaborate business of having a child, the essentials of embryology, the belief being that she may want to have a general idea of the many strange processes that are taking place within her in connection with the formation of her child. The subject is, of course, not an easy one to write about and explain, but Jean Rostand has succeeded very well in doing so, and Dr. Needham has made a translation in

which nothing of the clarity and dignity of expression shown by the French writer is lost. The book is not large and all the chapters, 17 of them, dealing with such subjects as the male germ and the female germ and their union, human evolution, growth, the secret of development and so on, though a little—and unavoidably—on the scientific side, are very readable.

Sex Education.

Readable also and extremely useful is Dr. Barber's "School Education in Hygiene and Sex," which consists of a series of lectures delivered by him at Felsted School, the first six, which are more or less purely on what is commonly called "physiology" and treating of the various systems of the body—digestive, circulatory, and uro-genital, in which sex is discussed—being delivered to boys as a class during their first year at school, at the age of 13 to 15. The seventh and last, which is primarily on venereal disease but contains also much talk on behaviour and urges temperance in all things, is for those leaving school at the age of 17 to 19. The lectures show evidence of careful preparation by one who knows boys and how to approach and talk to them. In publishing his lectures, Dr. Barber hoped to be able to help other medical officers of schools as well as headmasters and parents. For any of the purposes for which it is intended it should certainly prove helpful and there need be no hesitation on anybody's part to obtain and make use of it.

Dr. Stopes on the Climacteric.

Dr. Marie Stopes' object in writing this book was obviously to get as much knowledge as possible into the hands of people—men as well as women—approaching the climacteric. Throughout the volume there is so much insistence upon the need for men recognising that there is for them a "change of life" just as there is for women—and of which they talk so glibly—that it might almost be taken that it had been written primarily and principally for men. Whoever it was written for, it is well done; the things that should be insisted upon are insisted upon. More particularly she stresses that, disturbing as the changes that occur may be, there need be no serious consequences nor necessity for disturbance more profound than that normally

occurring at puberty and adolescence, provided they are recognised and the individual is afforded proper guidance and care at the time. To men the necessity for what is called "prostate control" is commended. Though she writes so much on subjects that are commonly regarded as medical, Dr. Stopes is not, as is now well known, medically qualified. Nevertheless, she writes in a manner that may be described as knowledgeable; of a certainty also she writes attractively, and this, like others of her books, will probably have a wide circulation.

Lindsay and Mottram.

The only book with a bearing on nutrition and dietetics to which reference can be made is Lindsay and Mottram's "Manual of Modern Cookery" (University of London Press, 4s. 6d.). It is described here as "Lindsay and Mottram" because, being in its third edition and something of an institution, it has reached the stage where it is proper to talk of it by the names of the authors. In this third edition, though the form has not actually been interfered with, there has been a good deal of revision. This has not made

the book, as regards the introductory portion in which the principles of diet in relation to cookery and the principles of cookery themselves are discussed, any less instructive and interesting to read. And concerning the remainder of the book—very properly the bulk—in which there are recipes, multitudes of them for all kinds of things good and proper to eat, it has not ceased to be, if indeed it has not become increasingly, capable of inducing hunger following the mere reading of the descriptions. Conrad said, as the authors explain, that the objects of a cookery book can be no other than to increase the happiness of mankind. That "Lindsay and Mottram" is designed in a superlative degree to do, and so, if there is any need to commend and recommend it, it is with enthusiasm commended and recommended.

Envoi, and to be Borne in Mind in the Future.

Like *Punch*, PUBLIC HEALTH is not so good as it used to be. Then again, however, just like *Punch*, it never was.

P.

SPECIAL SCHOOLS.—List 42 (1936) of the Board of Education refers to certified special schools, recognised institutions for the training of blind and other defective students, and nursery schools in England and Wales. Part I of the list includes all schools certified by the Board under Part IV of the Education Act, 1921, for the education of blind, deaf, mentally defective, physically defective, and epileptic children. Part II contains particulars of institutions, schools and classes recognised by the Board as providing higher education for blind, deaf, defective, and epileptic students, and is divided in three sections. In section I the institutions recognised under chapter VII of the Special Services Regulations, 1925, are shown; in section II are schools and classes providing part-time courses recognised under the Regulations for Further Education; and in section III institutions providing secondary education for the blind are set out. Part III contains a list of recognised nursery schools, and shows the accommodation provided. Copies of the publication may be obtained from H.M. Stationery Office, price 1s. net.

THE Central Council for the Social Welfare of Girls and Women in London, in its annual report for 1935-36 gives an account of good work done during the year. Of particular interest is the enquiry into lodging accommodation for girls whose work keeps them late at night. Girls experience considerable difficulty in finding suitable lodgings, and the Central Council suggests that a club house, run on lines to meet the particular circumstances, would be useful. The Central Information Bureau of the Council has dealt with 3,300 enquiries during the year. The largest number was for clubs, particularly mixed clubs. There are districts in London with no clubs open to all girls, no clubs where girls and boys can meet each other and no clubs open on Sundays. The question as to what a girl in domestic service with no friends in London is to do in such a district is one of extreme importance and calling for an answer. The address of the Central Council and the Central Information Bureau is 53, Victoria Street, London, S.W.1 (Telephone: Victoria 6397). It should be widely known and may be used by any girl or woman needing information and advice.

Post-Graduate Teaching in Public Health.

By W. W. JAMESON, M.A., M.D., F.R.C.P., D.P.H., Professor of Public Health, University of London; Dean, and Director of the Division of Public Health, London School of Hygiene and Tropical Medicine; and R. M. F. PICKEN, M.B., B.Sc., D.P.H., Mansell Talbot Professor of Preventive Medicine, Welsh National School of Medicine.

This subject and the speakers who submitted the opening papers brought together, at the ordinary meeting of the Society held in London on May 15th, 1936, one of the largest gatherings of the session, if not indeed of many past sessions, and led to a particularly well-informed and useful discussion.

PROFESSOR JAMESON.

IN 1870 a qualification in state medicine was instituted by the Board of Trinity College, Dublin. The first course of instruction was given in the session 1870-71 and at the first examination, held in 1871, four candidates were successful. One of these, Sir John Moore, is still happily alive and quite recently was chairman of the Public Health Committee of the General Medical Council. Other universities began shortly to follow the lead given them by Trinity College, and in 1886 the Medical Act provided that every registered medical practitioner, to whom a D.P.H. or its equivalent had been granted by any examining body in the United Kingdom, was entitled to have this additional qualification registered in the medical register if such diploma appeared to the Privy Council or the General Medical Council to deserve such recognition. You will remember that the Local Government Act of 1888 required all persons appointed medical officers of health of counties and of areas with a population of 50,000 or more to be holders of a registered D.P.H. Accordingly in 1889 the General Medical Council intimated that they would not consider such diplomas or degrees as deserving of recognition in the Medical Register unless they had been granted under such conditions of education and examination as would ensure, in the judgment of the Council, the possession of a distinctively high proficiency, scientific and practical, in all branches of study which concern the public health. In forming their judgment on such conditions of education and examination the Council expected certain rules to be observed.

These rules briefly required:—

(1) a period of not less than twelve months between the date when a student obtained a registrable medical qualification and the date of his admission to the examination for the Diploma;

(2) six months' practical instruction in a laboratory approved by the body granting the Diploma;

(3) six months' practical study of the duties of outdoor sanitary work with the medical officer of health of a county or large urban district;

(4) an examination conducted by specially qualified examiners and comprising laboratory work as well as written and oral tests.

These rules were revised in 1893 and in 1896, by which time instruction in chemistry, bacteriology and the pathology of the diseases of animals transmissible to man was required, as well as attendance on the clinical practice of a hospital for infectious diseases. Such attendance could be made by a student either before or after he obtained the ordinary medical qualification. Other revisions took place at frequent intervals, and in 1909 the period between medical qualification and the D.P.H. examination was reduced from twelve to nine months.

In 1911 laboratory instruction had to be spread over a period of not less than four months and to occupy at least 240 hours of which not more than half had to be devoted to practical chemistry. It was recommended that this laboratory course should be so arranged as to lay special stress on work which bore directly on the duties of a medical officer of health. At the same time students were required to attend for practical instruction with a medical officer of health on not less than sixty working days. This number was reduced to thirty in the case of those who followed certain courses of instruction in sanitary law, vital statistics, epidemiology, school hygiene and the like. Attendance twice weekly for three months at a hospital for infectious disease was made compulsory.

These rules remained more or less unaltered till 1922 when certain radical changes were made. An interval of not less than two years was demanded between medical qualification and

the D.P.H. examination, the course of training had to extend over at least twelve calendar months, laboratory instruction had to occupy a minimum of 280 hours spread over not less than five months—not less than 180 hours bacteriology and parasitology, 90 hours chemistry and physics, 10 hours meteorology and climatology. The minimum number of hours' instruction was specified in the case of the principles of public health and sanitation, epidemiology and vital statistics, sanitary law and administration, sanitary construction and planning, fever hospital practice and the work of a public health department. The General Medical Council believed that the time had come to adapt the Diploma to candidates who were seriously intending to take up public health as a career, and hoped to put an end to the somewhat casual type of attendance that was being permitted in certain training centres. Large numbers of medical practitioners were desirous of taking up public health work just after the War and there was need for raising the standard of both the training and the examination for the Diploma.

The latest revision was made in 1930 and was characterised by an increase in the total number of hours of instruction to be given to students, by the disappearance of the number of hours specified in regard to individual subjects, and by the inclusion in the curriculum of physiology and biochemistry, radiology and electrology.

It is clear that the course of training for a post-graduate qualification in public health has suffered in much the same way as the ordinary medical curriculum—new subjects have been added but nothing has been jettisoned. The General Medical Council would be acting wisely now if they reviewed the whole position and completely re-drafted the rules for the D.P.H. I am going to leave to Professor Picken the general discussion of post-graduate training in public health and more particularly that part of the training that relates to the second and more practical part of the curriculum. I should, however, like to say that it ought to be possible to bring the requirements of most branches of the public health service within one comprehensive curriculum. Almost everyone entering the public health service in this country begins as an assistant medical officer of health whose duties are usually connected with maternity and child welfare, school medical service or tuberculosis. Many of these younger officers hope later on to become medical officers of health or at all events to obtain some senior administrative appointment. It may be said that a D.P.H. is

not really necessary for a man or woman who is going to specialise in say maternity and child welfare. I cannot quite agree with such a statement. I think that the modern D.P.H. course should be so planned as to make the training invaluable to all medical officers in the public health service. There is much to be said for giving them all the same basic training.

May I now make one or two suggestions? Most of us will agree that if a man is to be successful as an assistant or as a medical officer of health he must be first and foremost a well-trained medical practitioner. He should have held some residential hospital appointments, done general practice and should aim at preparing himself for one of the higher qualifications such as that of Doctor of Medicine or Membership of one of the Royal Colleges of Physicians. Such a course need present no great difficulty to a man of ordinary ability. Residential appointments are much better paid nowadays than they used to be and the holders can usually find sufficient leisure to read a good deal of general medicine or to collect material which will form the subject of a thesis, if one is needed, for presentation for the M.D. degree.

The rule which requires that a candidate may not sit for his final D.P.H. till at least two years after the date of his obtaining his ordinary medical qualification was meant to ensure that a student had some general medical background. I think it has failed in this respect. The interval is not sufficiently long and all the rule has done has been to prevent some promising young people from proceeding to a training in public health immediately after qualification. As no one is likely to secure an appointment in the public health service nowadays on the mere strength of a D.P.H.—he must have had good general experience as well—I believe we should be better without this rule. There would be something to be said for it if it included a requirement that no candidate would be allowed to present himself for the final D.P.H. until he had, in addition to attending the prescribed course of instruction, held one or more appointments as a resident in a general hospital for at least one year.

That part of the curriculum which is devoted to practical laboratory work has come in, perhaps, for the greatest amount of criticism. Some training in laboratory methods is essential. Most public health students have been engaged for some time in clinical work and to bring them back to accurate and precise scientific work is one of the most important things we

can do for them. The present practice is, however, that within a minimum time of 280 hours students are supposed to receive practical instruction in bacteriology, immunology, parasitology and entomology, chemistry, physics, radiology and electrology, meteorology and climatology in relation to public health, and physiology and biochemistry in their application to nutrition and hygiene. It is impossible to do all this even in an institution specially staffed and equipped for post-graduate education. Were a real attempt to be made to give practical effect to this rule, an altogether undue proportion of the time at the disposal of students would be spent on Part I subjects to the detriment of the other and no less important part of the curriculum. It is evident that some simplification is needed here.

Most schools have suffered from what must now be regarded as a wrong interpretation of the term "chemistry in relation to public health." This has been taken to mean the type of chemistry ordinarily practised by a public analyst, with the result that, in my judgment, many hours have been wasted by students in learning the details of technical processes which few health officers are ever likely to use and which have little or no real educational value. A reasonable understanding of this sort of work can be got from a series of well-planned lectures and demonstrations, and I doubt if any detailed water analysis or laboratory exercises of such a specialised nature should be undertaken by students. I am far from desiring to see practical chemistry disappear altogether from the course of training, but I would rather see it given under the heading "Physiology and biochemistry in their application to nutrition and hygiene."

The essential laboratory subject which public health students should be taught is, I think, bacteriology with such medical zoology as can be included within the limits of time. It should be taught, not as an academic subject, but in its relationship to public health and with special reference to immunology. Certain practical exercises in chemistry—*e.g.*, in acidimetry, alkalimetry and hydrogen ion concentration—should be provided to assist students to a better understanding of the subject and its literature. The other basic subject in the first part of the training should, I am satisfied, be physiology. There are few medical schools where applied or human physiology is adequately taught, and there is no more wholesome preparation for the study of preventive medicine than a return to

the physiological laboratory. Such matters as the physiological requirements of the average family—nutrition, diet, family budgets; methods of assessing physical fitness; fatigue in industry; the physiology of ventilation, heating and lighting; the principles of first aid—all these things and many others are the business of applied physiology and a course in physiology of this nature blends admirably with the study of infection and problems of immunity. Some practical chemistry designed to give a clearer conception of certain aspects of nutrition might well be included in such a course.

Public health chemistry, as most of us have known it in the past, might well disappear from the curriculum and we might try to substitute in its place something that will give a student a better scientific approach to the real problems he will encounter later on.

It would be better to omit all reference to physics, meteorology, climatology, radiology and electrology (whatever that may mean)—these subjects so far as they concern the student of public health should be taught in physiology, epidemiology and practical public health administration. To give each of them special mention is to create quite a wrong impression of the requirements of a modern D.P.H. course.

Before handing over the rest of the discussion to Professor Picken, may I say this? I hope that the rules governing the training of public health students will never be made too rigid but that scope will be given to each school to develop freely along its own lines, provided adequate attention is paid to what are regarded as essentials. While the course of training must be vocational in character, we should not aim merely at making our students technically proficient in certain directions, by endless repetition of laboratory processes or by the memorising of statutes and regulations. We have an opportunity during the year the students are with us of helping them to develop a critical faculty and to acquire some familiarity with the literature of preventive medicine that will stand them in good stead in the years to come.

PROFESSOR PICKEN.

There is a tendency in academic circles to look upon a degree or diploma in public health as a purely technical qualification and to criticise accordingly the instruction leading up to it as not being quite the type of work which deserves much attention from a university. On the general purpose of university education the

recently issued Report of the University Grants Committee* touches at several points. For instance, in discussing the problem of numbers of students and their employment, it says:—

"The question of the true purpose of a university education has a bearing on the question of the number of those who ought to receive it, as well as on the form which it ought to take. Are the universities too pre-occupied with the problem of purely professional vocations for their students? Is the emphasis, on the other hand, too academic, too divorced from the practical life of men? Are the advantages of university education to be thought of mainly in terms of the well-being of the blackcoated professions? Ought not a university education to bring its own reward of an enlarged and more balanced mind even in occupations which, because they are manual, have in modern times, perhaps altogether erroneously, come to be less esteemed? Is the corporate life of the university itself sufficiently well designed and organised to promote the fellowship of students with one another and the fellowship of students and teachers so as to provide a background of values for after-life? We ask these questions not because we can give any ready-made answers to them, but rather in the hope that they may stimulate consideration and discussion within the universities themselves."

With regard to medical education generally it has been the aim of the teaching schools and of the medical profession to steer a middle course. In this connection the view of the Committee on Medical Education of the British Medical Association† is expressed in the following paragraph:—

"The primary object of the medical curriculum should be to produce on its completion a practitioner who has acquired a right attitude towards professional duties and responsibilities, an ability to deal reasonably in the early days of practice with such patients and conditions as may confront him, and such basic knowledge and mental training as will enable him to profit continuously by daily experience. It should at the same time constitute such a co-ordinated course of study as will by its mental discipline make the student a really educated person and not merely a skilled technician."

In my opinion our attitude to post-graduate instruction in public health should be very much the same. It is true that Section 21 of the Medical Act of 1886 specifically requires proficiency in sanitary science, public health or state medicine and that the General Medical Council demands only "a distinctively high proficiency, scientific and practical, in all branches of study which concern the public

health."* It is possible to put a very narrow interpretation on this wording, but I am convinced that this is not desirable. The effect of our past predilection with vocationalism is reflected in the present state of the course which tends to place undue emphasis upon a type of teaching, in chemistry for instance, which may at one time have had vocational importance but has now little practical bearing on the future work of a medical officer in a health department. When we realise the extent to which the field of public health in our own time has changed both in scope and in character, and how it is likely to change in the future, it seems clear that we must aim at guiding students to that breadth of view and precision of thought which enlightened citizenship as well as higher administrative positions require, rather than merely try to turn out men and women with some kind of technical proficiency.

I do not propose to criticise in detail the present courses for diplomas or degrees, for I have no doubt that Professor Jameson has covered the ground in a way with which most of us are in accord. There are, however, one or two aspects of the subject to which I should like to direct special attention. If, in place of specialised technical proficiency, an attitude of mind is to be inculcated which does not run to vague generalisations and to the acceptance of ideas which are specious and popular, it seems desirable that the training of public health officials should retain a scientific bias, and that Part I should continue to be devoted to this line of study. More particularly it is essential that men and women in the public health service should be able to read without difficulty scientific articles on the various aspects of preventive medicine and to form judgments as to the value of such articles. They should not have to accept without question the conclusions of specialists because they do not understand the technique of their writings. But this does not mean that they should have to acquire proficiency in the technique of special processes. If they are to be made technically proficient in anything it should be in some branch of science which they may, and should, continue to pursue. Generally speaking, men in administrative positions have practically no opportunity to carry out scientific investigations other than those which involve the handling of statistica

records. To avoid pitfalls they require a certain amount of statistical skill, which need not be profound, and they should also be able to read with understanding the works of statisticians involving more elaborate methods and form their own ideas as to whether the facts and their manipulation justify the conclusions. Teaching in statistical methods should therefore be practical, as it is in the London School of Hygiene and the American schools of public health, but the question arises as to whether Part I, the scientific part of the training, should not contain a course of study leading up to it.

If Part I is to consist of scientific training but to contain no line of study which is purely vocational—a conclusion which I think is unavoidable—how can it be made most profitable? Can it be developed so as to cultivate precise thinking without technicality? Evidently in the past no way of doing this has been found, so that, in the main, study has been confined to two main branches of science, chemistry (with some physics) and bacteriology, both of which were expected to occupy part at least of the time of an officer in the public health service. Latterly, with the new orientation of public health of the past 30 years, physiology and biochemistry have been introduced into the curriculum along with some minor subjects, with the qualification, as in the case of chemistry and physics, that they are to be considered in relation to hygiene or nutrition or the public health. It is not clear what aspects of these sciences will—or will not—have a bearing upon the public health by the time that some of the present students come to hold responsible positions and act as advisers to public bodies, but we can at least observe the tendency of public health thought throughout the civilised world and try to mould our curricula accordingly. One thing about which most of us will agree is that chemistry as usually taught bulks too largely in the curriculum and is narrowly vocational in a direction which is not toward the present-day public health official's vocation.

It seems to me that public health thought is likely to be specially preoccupied throughout our time and that of our successors with problems of infection and immunity, nutrition, growth and physical and mental development, rest, exercise and fatigue, the effect of atmospheres—both outdoor and indoor—on health and the effect of light and other radiations on the human body and its sources of food supply. An understanding of such problems requires a

sound basis of scientific knowledge in bacteriology, immunology, physics and chemistry (which, for this purpose, are really one science) and of physiology, including biochemistry. These are all prescribed in the present curriculum, but I think it is time for the General Medical Council to say that "chemistry in relation to public health" does not mean the chemistry of public analysis (although some instruction on this aspect of the subject, not necessarily practical, must be given). The recapitulation and extension of physics and chemistry, which I think is necessary, could best be done by a biochemist, who would lead the students up to the instruction in biochemistry and physiology which is necessary to a thorough understanding of the problems of nutrition, growth, etc., already mentioned. The practical difficulty is that some, at least, of the medical schools are so organised that it is not easy to find in them a teacher with the time and the necessary qualifications for this purpose. If, however, it were made clear that this is what is meant by physics and chemistry, the appropriate teachers would have to be found. It seems to me that laboratory work in this field is not very important for the public health student, but I should defer to the biochemist and the physiologist in this matter. Obviously, precision of method can be acquired almost equally well in the practical study of bacteriology, parasitology and immunology, and here laboratory work should continue but on the clear understanding that the students are not being trained to be bacteriologists. Personally, I should like to see precision of thought developed by a course of mathematics, perhaps with an actuarial bias and so leading up to the teaching of statistical methods; but I suppose I should be told by the mathematician that statistics is not mathematics, and by the actuary that his field is too abstruse for the average medical mind. I am quite sure that we shall also come to include teaching of psychology in a course which has to deal with mental deficiency and child guidance at its later stages.

So far as the rules for Part II are concerned, a sufficient amount of freedom, on the whole, is allowed to enable teachers to develop their instruction in accordance with modern public health movements. I think it is necessary that advanced instruction in infectious diseases, on the clinical side, should continue, but it seems behind the times to associate practical instruction in hospital administration solely with it. The course might very well have a special section on

* H.M. Stationery Office. Price 4s.

† British Medical Association—Report of Committee on Medical Education. July, 1934.

* General Medical Council—Resolutions and Rules for Diplomas or Degrees in Sanitary Science, Public Health or State Medicine. October 1st, 1931.

hospital administration, theoretical and practical, covering not only fever hospitals but all the other types of institution which the larger authorities now administer. There is also a growing demand in well-informed circles for specific instruction of prospective local government officers in administrative methods, and I am in favour of such a subject being included in Part II, although it may not be easy to find just the right sort of teachers for our purpose.

My main criticism, however, of the present post-graduate study of public health is that it is permissible to conduct it on a part-time basis. The field is now so wide that it is really impossible to devise a course which is both comprehensive and educational and yet may be covered in one year of part-time study. And yet some, at least, of the provincial schools would have no students, or very few, if they insisted either upon the curriculum being spread part-time over two years or involving whole-time attendance for nine months, so long as other teaching bodies are allowed to continue the present part-time system. It is inevitable that men and women who have other employment should desire merely to obtain the minimum amount of information necessary to pass an examination. The breadth and variety of the public health field are now so great that students working under the present conditions are subjects for commiseration, and it is not surprising that many of them finish with smatterings of knowledge and little real understanding of anything; but it is not a good prospect for the public health service.

Under the present rules the minimum period of tuition covers 628 hours. I find it quite impossible to give the necessary amount of instruction in all aspects of the public health in this time, and I do not think it would be any easier if the present type of teaching in chemistry were replaced by the sort of Part I course I have in mind. Indeed, I think that a properly designed curriculum for Part I would prove a greater mental strain on the students and would have to be taken slowly. As it is they have very little time for serious reading, since they have other work to do while the course is in progress and there is only one break in the course, at least in Cardiff, during the twelve months—about two months in the summer. The post-graduate phase of education should encourage and cultivate the habit of wide reading in public health literature rather than stock text-books. As regards undergraduates the Report of the University Grants Committee very properly

says: "If the lecture is to be a stimulus to reading and self-education rather than a substitute for them, the student must have a substantial amount of leisure in which to follow up the lines of study and trains of thought which the lecture has suggested." With this I entirely agree, and what is true for the undergraduate is doubly applicable to advanced post-graduate study. But it is only the exceptional student of public health who can overcome the present difficulties.

It must be remembered that a degree or diploma in public health was originally intended for candidates for responsible positions and that it is for these only that its possession is still requisite. Study for it has, however, already come to occupy so much time that departments have difficulty in allowing members of their staffs the necessary free time. Study has therefore come to precede appointment of any kind and the qualification has become almost a portal of entry into junior office in the public health service. At the same time the number of positions as medical officer of health is rapidly diminishing as the result of the substitution of whole-time for part-time appointments, so that while more people are obtaining the qualification fewer will require it. I do not think, therefore, that we should view with alarm any proposal, such as a full-time course, which might diminish the number of aspirants to a degree or diploma, so long as other provision of a less exacting kind were made for entrants to the public health service who propose to devote themselves to one of its sections. Much of the present D.P.H. curriculum, for instance, is not necessary for those whose work will be limited to the maternity and child welfare service or school medical service, but these medical officers do require special instruction in public health and social medicine adapted to their particular field. Already in Edinburgh and Wales a special qualification in tuberculosis is available for those entering the appropriate branch of the service.

The main argument against whole-time study, to my mind, is that it would tend to exclude some of the ablest men from the service because of their pecuniary difficulties. This would be a very hard hurdle to surmount in our country. The schools of public health in the United States of America which require a year or two years of whole-time study for a degree seem to be able to draw from a reservoir of men and women who have already had experience in the field by means of grants from the Rockefeller Foundation and subsidies from the states or

local authorities which have employed them and to which they will return. I wish I saw prospect of any such assistance in this country, for the need is equally great. Perhaps the existing grant regulations of the Ministry in relation to the training of health visitors might be regarded as shedding a faint ray of hope on the problem. At any rate, it seems to me that the government of a country which sets a mandatory qualification has a responsibility for ensuring not only that the training for it is adequate, but also that the ablest men and women are not debarred from receiving it because of financial disability.

The view I am putting forward, if I may briefly summarise it, is that with slight modification and proper interpretation the present rules give us sufficient freedom to devise a satisfactory curriculum, but that it should be a full-time course extending over at least nine months, as in the London School of Hygiene. I do not think we should try to attract young and inexperienced men into this field of study, but that central and local governing bodies should be urged to accept the responsibility of helping to make full-time study possible for students with some experience. Teaching bodies should, at the same time, provide shorter courses in public health—which might be either whole-time or part-time—and certificates or diplomas for officers desiring to enter the public health service as maternity and child welfare officers, school medical officers, and so on. Short of this arrangement the best substitute of which I have experience is the appointment of half-time officers to health departments on condition that they will take the course of study for a diploma, a practice which has been continuously followed in Cardiff and Glamorgan for more than ten years. It is, however, in my opinion, a poor alternative to obligatory whole-time study.

DISCUSSION.

Professor H. B. Maitland (Director, Department of Bacteriology and Preventive Medicine, University of Manchester) hoped the influence of the Society would be used to secure alterations in the curriculum for the D.P.H. course. As to its general scope, the requirements in public health work nowadays were so extensive that instruction in all branches was impossible. As an alternative to the present curriculum he favoured the establishment of a basic course. It had been suggested that subsidiary diplomas for specialist subjects might suffice, but on the whole he regarded this as inadvisable. The curriculum of Part I of the course was too overcrowded, and he was satisfied that much of the chemistry the students were taught was quite useless to them. It was only necessary that they should possess sufficient knowledge to enable them to interpret intelligently reports of the public analyst.

Chemistry as applied to physiology and nutrition he considered of greater importance, and it would be of advantage if that could be made a major subject. Radiology and electrology could be dropped entirely, in addition to a great deal of analytical chemistry. Part II was working quite well, and he saw no necessity for the two years' clause, which served no useful purpose. It was important not to overload Part II as Part I was now overloaded. He doubted the advisability of spending a great amount of time on statistics, as for those particularly interested a special course was available. With regard to the general character of the course—part-time as opposed to full-time—the best way to take it was full-time, though that would debar a number of excellent candidates who benefited greatly from the clinical training they received in part-time posts in hospitals held concurrently with the period of the course. He hoped the regulations would not be framed to compel the course to be taken in one year. There was no difficulty in taking the course part-time in two years, and the kind of post that could be held part-time might be specified by regulation. It would probably be better if a greater number of medical students took the D.P.H., thus disseminating public health principles.

Dr. Alexander Joe (Medical Superintendent, North-Western Hospital, London County Council) referred to the fever side of the work and expressed gratification that there appeared to be general agreement on the importance of fevers and other infectious diseases and that nobody had proposed to reduce the amount of instruction in them. He agreed that it would be of value if fever practice were divorced from hospital administration, as instruction in the latter subject was necessary independently of that given in the fever course. The work of many students lay overseas, and he wondered how far the teaching of infectious diseases prevalent in this country was of value to them in relation to diseases closely allied to parasitology which they would encounter abroad. Some way would have to be found out of that difficulty. He asked also how far medical officers who were engaged in practical work in public health were qualified, by virtue of the appointments they held, to do the teaching in the D.P.H. course. Would it not be possible in making such teaching appointments to secure some collaboration between the medical schools and administrative bodies concerned? He also suggested that better facilities were needed to enable novices to enter hospitals in order to gain practical experience.

Dr. J. J. Paterson (Medical Officer of Health, East Berks. United Sanitary Districts) said that there had been great developments in the side branches of public health work, and specialist officers now performed many duties which the medical officer of health himself did twenty years ago. Only a small proportion of those taking the D.P.H. would hold whole-time administrative posts, and the curriculum should be made to cater for the others as well. It was impossible for anyone to be master of all the sciences from which public health borrowed, and more attention should be paid to the teaching of broad general principles rather than to technical details. Though prejudiced in favour of chemistry he considered it sufficient in these days if administrative officers were able to discuss reports with the specialist from the

applied point of view. It would be a pity to see further special diplomas introduced, and a compromise might be introduced in the final examination. An important subject was a knowledge of the conduct of council business, and practical training in the regulation of work in a public health office was also essential. After passing Part I of the syllabus a student might have experience in the practical field comparable to a house appointment and then return to his studies knowing better what was required and what was of value to him in the various "ologies" spread out before him. The public health service was tending towards a system whereby smaller districts would gradually disappear and there would be comparatively few administrative officers with a large number of subordinate specialists. The claims of those who specialised in school work, infant welfare and so forth should therefore not be overlooked in framing suggestions for alterations of the syllabus.

Dr. N. M. Goodman (Ministry of Health) thought it was impossible to teach public health by means of a diploma. It needed three qualities, some of which could not be acquired through teaching—commonsense, clinical knowledge, and administration, which he assumed was a gift plus experience. The material that came to the D.P.H. course therefore appeared to be more important than the course itself. General practice was a most valuable training for public health work in developing the essential qualities, especially commonsense, and students should be encouraged to spend a part of their time in general practice. The cleavage between the two branches would then be lessened.

Dr. T. O. Garland (Medical Officer, Carreras Limited) suggested that greater emphasis should be placed on the industrial side of the work, both good and bad factories being visited before the Factory Acts were taught.

Dr. Agnes B. Francklyn (Assistant School Medical Officer, London County Council) claimed that the only test of any course of training was the test of experience. As an old student of the London School of Hygiene and Tropical Medicine of four years' standing, with three years or more of public health work, she had at least had the opportunity of trying out her equipment, which had proved trustworthy. To what extent had the different subjects in the syllabus been of practical help and value? It was difficult to consider each subject separately and to decide which was of use and which was not, as all the subjects dovetailed so closely as to form a complete and inseparable whole, and one could not be discarded without affecting the complete and well-balanced structure in some way. Certain subjects had been of especial value in her experience as assistant medical officer of health and school medical officer. First and foremost the lectures on public health administration and sanitary law had been an unfailing guide. Epidemiology had provided a valuable background for the understanding of present-day preventive problems, and statistics had proved a reliable instrument with which to measure the essential relationship of diverse facts and figures. The greater familiarity with bacteriology had been the means of obtaining confidence in dealing successfully with

epidemics or their prevention. Educational visits to such places as waterworks, sewage farms, special schools, hospitals, factories, training centres, garden cities, rehousing schemes, etc., had been a particularly useful feature of the course. The facts observed at such visits had left a lasting impression where text-book descriptions had faded away. Practical chemistry had been amongst the subjects which had proved of lesser value, many hours having been spent in the laboratory doing analyses and quantitative estimations, etc., and acquiring a technique which in her own case might never be put to further use. Conceivably some of those hours might have been more profitably employed. Another subject had given rise to some misgiving but for another reason. The study of infectious diseases was justly an integral part of the syllabus for the D.P.H. and attendance at a fever hospital was required over a period of time. It was possible, as in her own case again, for a recently qualified assistant medical officer of health to be given sole charge of a fever hospital for short or longer periods without having acquired very much additional experience. The course of study for the D.P.H. did not appear to meet the situation adequately. The instruction was too similar to that received in undergraduate days, the rounds in the wards too crowded and diagnoses already disclosed did not arouse attentive speculation. A great deal of time was spent in recapitulating facts familiar to all students. The whole teaching of fevers required revision; either a house physicianship in a fever hospital should be made compulsory or instruction should be given more in the form of a clerkship with attendance in the admission room and wards and participation in all treatments. The future medical officer of health would need to be extremely skilled in diagnosis; that skill he could attain only by long observation in the admission room and in the wards. No less skill was necessary in treatment, and that again could not be obtained by the mere onlooker. As regards the work under the local medical officers of health, it should become still more practical, preferably on the lines of an apprenticeship.

Dr. J. Johnstone Jervis (Medical Officer of Health, Leeds; Professor of Public Health Administration, Leeds University) felt strongly that what was wanted in public health was less theory and more practice. If only one could get back to the days when pupils were taken by medical officers of health there would be a vast improvement on present conditions. The six months devoted to acquiring knowledge of practical administration was very largely wasted because there was such a tremendous field to cover. Students visited clinics and centres of various kinds and industrial concerns, and were also taken out by sanitary inspectors to see practical sanitation. It was all so much of a jumble. It would be better for a student to be attached to a public health department entirely for six months or even a year and see the whole of the work and take part in it. In that way he would be well equipped from every point of view, but particularly from the administrative standpoint, for his work as a medical officer of health. The best results would be obtained if a system of apprenticeship could be introduced. In addition, every medical officer of health should know something about social economics. Some of his best students had been part-time men.