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Editorial

National Service: The Recruitment of Medical Personnel

The Central Emergency Committee established by the British Medical Association has been recognised by the Government as the agency through which medical men and women are recruited for the Services and for other war work, including civil defence. The Committee is widely representative of medicine in all its branches and includes a direct representative of the Society of Medical Officers of Health, as well as the Chairman of the Public Health Committee of the Association, who is appointed by the public health service members to the Council of that body. Its meetings are attended not only by staff officers of the Services but also by high officials of the Ministry of Health. The interests both of supply and demand are thus acknowledged. The Committee works through local emergency committees appointed in most areas by an open meeting of all practitioners within a Division of the Association, whether they are members of the Association or not. The model scheme provided that public health would be represented on all such local committees, and indeed public health members are taking a very active part in the deliberations of some of them, acting in certain instances as chairman or secretary. There appears to be doubt in the minds of some members of the public health service about the powers and functions of local committees, and a certain amount of uneasiness as to their operations. It may, therefore, be useful to deal with these matters as far as we understand them.

Until a proclamation is made calling up men of a particular age-group for compulsory service, all movements of medical men are voluntary. In any case, until the existing legislation is amended, no man over 41 years of age without a Territorial or Reserve commitment may be called up. As regards those already committed, it is understood that, while the Services were prepared to consider applications either from individuals or from the Central Emergency Committee for release up to the outbreak of war, such consideration or release is now extremely improbable. On the

other hand, new applications for commissions sent direct to any of the Services will not be accepted without prior reference to the Central Emergency Committee, which is guided as to its approval by the local committee of the area where the practitioner resides.

So far the Services have not asked for men over 50 years of age, although a few older men who are outstanding figures in medicine have been engaged for exceptional posts. The Central Emergency Committee has informed local committees that, in its opinion, no man under 35 years of age should be earmarked for work in connection with civil defence or the Civilian Hospital Emergency Medical Service. The latter Service, it may be noted, is not recruited from those in the regular employment of the Government or local authorities. For civil defence the general policy has been to approve only of men well above the minimum age of 35, although in most areas it has been impossible to confine the staffing of first-aid posts to men over 50, even by making the fullest use of the medical women locally available.

Briefly, then, the position is this. Emergency committees have so far exercised no compulsory powers. Any placement or transfer must be made with the consent of the practitioner involved. It appears to follow that no whole-time officer can be moved without the consent of his local authority, unless he is prepared to resign his appointment with all the consequences which this may entail. There are signs that certain local emergency committees do not clearly understand their own limitations, or realise that no action should have been initiated by them for the recruitment of public health officials for any other service without first of all consulting the local authority, or, at least, the medical officer of health. On the other hand, local authorities in some areas do not appear to appreciate the magnitude of the coming demand for medical personnel. It would be unreasonable to expect local emergency committees to endeavour to meet all the requirements of the Services from the ranks of those who have acquired private practices, which may evaporate before they return, and not to seek a fair contribution from the ranks of those whose posts will be, or ought to be, secured for them.

A matter which may present some difficulty is the movement of members of public health staffs in evacuation areas to supplement the corresponding departments in receiving areas or other departments which have been unavoidably depleted. It is understood that a certain number of assistants in evacuation areas may become surplus to establishment in spite of the heavy burden of air-raid precautions. Where large numbers of mothers and children have left a district, some of the women medical officers, in particular, might become available for work elsewhere. If arrangements are contemplated for inviting them to transfer, it ought to be ensured that their present salary, prospective increments and pension rights are maintained, and that they shall return to the posts they now hold as soon as activities are resumed, and, in any case, on the restoration of peace conditions. No concrete plan seems to exist at the time of writing. In the meantime a list of public health officers, mostly retired, who are available for work is being compiled by the Central Emergency Committee with the Society's collaboration, and men and women in this category are invited to communicate with the Secretary and Editor.

Two other points of interest to the public health service may be mentioned. Medical practitioners accepted as specialists in the R.A.M.C. within the authorised establishment, will receive almost immediately the rank and emoluments of Major. A similar improvement of status will take effect in the R.A.F., while the position of specialists in the Royal Navy is still under consideration. Presumably this advance applies to medical officers accepted as specialists in hygiene, bacteriology and several other branches of medical science in which members of the health service are engaged. Secondly, the status of women practitioners engaged by the War Office has now been satisfactorily settled, their emoluments and conditions of service will be substantially the same as for men.

The Public Health Aspects of Evacuation

The Government evacuation scheme has already caused attention to be drawn to the unclean condition of some children from the cities and to the prevalence of such conditions as scabies. The transfer of thousands of children to the less thickly settled areas of the country will certainly involve outbreaks of infectious disease, of which the incidence may fall more heavily on the country children whose level of immunity against the common infections is lower than that of the new arrivals. It is unnecessary to say that thorough control of the epidemic situation and proper care of the health of the child population will be most important factors in reconciling the public to the sudden and vast dislocation of peace-time life involved by an evacuation which will probably have to remain in operation for a period not of months but of years.

The staffs of public health departments—doctors, nurses, sanitary inspectors and clerical—therefore have a great responsibility. What is the present position? In the larger centres of population staffs are, and have been for months, heavily engaged on duties connected with civil defence, rather than with public health. In the reception areas staffs which have only just been adequate for peace-time work now have to deal with the public health provision for an enormously increased population. So far no clear directions have been given by the Ministry of Health about the obviously needed transfer of public health personnel, although Circular 1,871 of September 12th refers to the resumption of school medical inspection, to the existence of verminous conditions or skin troubles among evacuees and to a forthcoming circular on medical matters. The only definite medical step has been the agreement with the B.M.A. for the payment of a capitation fee to private practitioners who treat cases of illness amongst the evacuated children. Meanwhile, many assistant medical officers in the evacuation areas are being retained for duties in hospitals and aid posts for which they have little aptitude or inclination and would be readily seconded to the reception areas which now house their child populations. Some individual medical officers of health on their own initiative are already arranging the transfer of some of their medical and nursing staffs to reception areas, but we think that, in a matter of such national scope and importance, a clear lead is wanted from the central department with details of conditions of service for the transferred officers.

We welcome the important step which has been taken in at least one direction. It will be seen from Sir Arthur MacNalty's letter and memorandum, which we reproduce on page 14, that an Emergency Public Health Laboratory Service has been established throughout the country by the Medical Research Council in co-operation with the Ministry of Health. We understand that the whole scheme was carefully worked out some months ago and was put into operation within a day or two of the outbreak of war. It will be noted that the service does not supplant, but is meant to supplement, the facilities which already exist in a number of areas; nor does the service undertake pathological work of the kind ordinarily done in the laboratories of a general hospital. It is intended that the function of these additional laboratories should be essentially epidemiological in character. Their object is to aid in the diagnosis and control of infectious disease and to act as centres for the distribution of prophylactic reagents. *No charge will be made for the services they render.* Many medical officers of health will have for the first time a well staffed and equipped laboratory within a few miles of their offices. If, however, these laboratories are to yield their full measure of usefulness medical officers of health must get in touch with the officers in charge and must seek their assistance in all cases of doubt. A medical officer of health who, in the past, has had to send every laboratory specimen to a town many miles distant from his district and has had to pay a fee for every examination made may feel some diffidence in making full use of this new service. Such diffidence is quite unnecessary, for not only will he get the laboratory help he needs but he will find that the officer in charge of the laboratory will even be prepared, if circumstances permit, to visit an infected area and assist in the collection of material and in any other ways open to him.

To achieve its full effectiveness the laboratory service should have associated with it an emergency group of epidemiologists. It is just as important that the civil population should feel that all measures are being taken to safeguard the health of the children of this country as that our fighting services should have their full complement of medical officers. It is hoped that the Ministry of Health will take steps, possibly by the attachment of additional medical officers to the staffs of their new regional medical officers, to ensure that everything possible is done to prevent the spread of infectious disease. The problem is no longer a local one; the evacuation scheme has made it one of first-class national importance.

The Ministry of Health Report, 1938-39

The 20th Annual Report* of the Ministry of Health for the year ended March 31st, 1939, contains one new Part, relating to Civil Defence under the heads of Medical Services and Evacuation, subjects which Mr. Elliot, in his foreword says "are likely to take their place for the immediate future as permanent additions to the list of public social services." These matters have certainly had priority over public health work and preventive medicine, especially during the past year, and, unfortunately, we have now had to see the preparatory work of the Ministry and local authorities put into operation. The immensity of the task is shown by the fact that arrangements were made to have available 290,000 beds for war casualties (100,000 by sending home ordinary sick, 100,000 by introducing extra beds into existing hospitals, 50,000 by introducing further beds if necessary, and 40,000 by means of huts). Such questions as whether the public interest is best being served by the appropriation of sanatoria for war casualties, with the result that cases of open tuberculosis have been sent back to homes where the normal occupancy may have been increased by the billeting of evacuees, remain to be solved in the

*Cmd. 6089. H.M. Stationery Office. Price 5s. net.

light of future experience. Moreover, evacuation may have epidemiological repercussions which will tax our public health resources during coming months; the question of the verminous child has already attracted notice in Parliament and we know that scabies may be another minor "horror" of war.

It is refreshing to return to the Ministry's account of public health work proper for the year under review. Thus the standardised death-rate fell by 0·8 to 8·5 and the infant death-rate by five points under the 1937 figure to 53 per 1,000. Both these rates were the lowest on record in their respective categories, and likewise the maternal mortality rate of 2·97 was for the first time below three deaths per 1,000 births. Again, tuberculosis deaths declined by 2,353 from the previous year's total, the biggest fall in one year since 1934. Attention is also drawn to the continued slight increase in the birth-rate to 15·1 per 1,000 population after the low record of 14·4 in 1933; even so, the 1938 rate is still below that of every year before 1933.

The introductory chapters of the report deal with relations between the Ministry and the public and with finance. The public relations side has again been most active through the Press, broadcasting and film newsreels, and special mention is made of the work carried out by the Central Council for Health Education in carrying out the National Health Campaign of 1937-38 on behalf of the Ministry and the Board of Education. On finance, the report shows that the Ministry was responsible for a total expenditure of £148,500,000, of which £70,000,000 was voted by Parliament and the remainder in respect of health and pensions contributions. Of the Ministry of Health vote proper, about £2,400,000 was for central expenses and about £15,000,000 for housing grants. Block grants payable to local authorities accounted for £47,277,000. The Appendices to the report give the usual interesting details and comparisons as to local government expenditure, both current and capital, and as to rateable values and loan sanctions.

Control of Infectious Diseases

Part B—Public Health and Public Assistance—begins with a reference to the Jubilee of County Councils and to the tenth anniversary of the Local Government Act, 1929, which first enabled these authorities to develop comprehensive and co-ordinated health services. Another Jubilee is that of the Infectious Diseases Notification Act and the service instituted by this measure is given a special review in the report. The history and value of notification, isolation, disinfection, supervision of contacts and immunisation are fully discussed. It is interesting to note that a clear direction is laid down as to the responsibility of the M.O.H. in deciding for or against removal of an infectious case to hospital. Of disinfection it is said that "in recent years medical opinion has been that disinfection after infectious disease of rooms, furniture, curtains, wallpapers, etc., is rarely necessary." The report states that diphtheria immunisation schemes in one form or another have now been established by about 600 out of 1,350 local authorities in England and Wales, but that so far very few districts have established the effective proportion of immunes amongst the child population. We are still of opinion that the Ministry itself should provide a much stronger stimulus in the use of this proved means of reducing diphtheria incidence and mortality. Outstanding features of infectious disease in 1938 were a fall in pneumonia notifications, as compare with 1937, by more than 10,000 to 45,160 and in the deaths by about 3,500 to 25,945; this is attributed partly to the lower prevalence of influenza. The notifications of enteric fever decreased from 2,149 to 1,322 and the deaths from 206 to 163, the lowest mortality ever recorded except for 1934 (159). Incidence of acute poliomyelitis was nearly double that of 1937 (1,489 as compared with 768, 530 in 1936 and 633 in 1935); deaths were 172 in 1938, those in the three preceding years being 94, 66 and 97 respectively. The incidence was the highest since notification of this disease was begun in 1912, and one peculiar feature was that it continued well into the winter. 65,008 cases of diphtheria were notified in 1938 as compared with 61,341 in 1937, but deaths decreased from 2,963 to 2,931. Scarlet fever notifications (99,278) were some 3,500 more than in 1937 but below the levels of the preceding years; the mortality was the same at 0·009.

Regarding isolation hospital reorganisation, the report states that the schemes of all but one of the county councils in England have now been submitted in accordance with Section 63 of the L.G.A., 1929. The results will be (*a*) for 133 county districts accommodation to a total of 560 beds will be provided by county councils; (*b*) for 74 districts a total of 1,875 beds will be provided by 74 district councils separately; (*c*) for 812 districts a total of 9,920 beds will be provided by 181 joint committees; and (*d*) for 43 districts a total of 260 beds will be found by arrangement with neighbouring county boroughs.

After a temporary pause associated with the influenza epidemic of 1937, the downward trend in tuberculosis mortality has again shown itself. Deaths from respiratory tuberculosis last year fell to 21,930, compared with 23,971 in 1937 and 29,799 ten years ago; and from non-respiratory tuberculosis to 4,264 last year against 4,560 in 1937 and 6,824 in 1928. The standardised death-rate (respiratory) for 1931 was 476 per million against 523 in 1937 and 709 in 1928; and for non-respiratory 126 against 134 in 1937 and 200 in 1928. An interesting feature of the anti-tuberculosis campaign is that, as the mortality falls, there is a yearly increase in the numbers of person examined for the first time in the dispensaries, but there is no indication that more cases are diagnosed in the early stages. X-ray examinations by tuberculosis officers have increased from 139,081 in 1937 to 167,734 in 1938. Contact examinations have also increased and it is significant that 6·9 per cent. of cases diagnosed as tuberculous were found through this means.

In regard to venereal disease, syphilitic infections of less than one year's duration show a fall of 7·4 per cent. compared with 1937 and of 43·4 compared with 1931. As to gonorrhœa, it is believed that treatment with the sulphonamide group will bring under control a higher proportion of new infections in view of its known efficacy, which has apparently already reduced the number of attendances at centres. The percentage of non-venereal cases examined at centres has risen from 43·63 in 1937 to 46·38 in 1938, and another significant note is that the percentage of venereal cases which have continued treatment until final tests of cure have been made exceeded 50 for the first time.

Maternity and Child Welfare

The section relating to Maternity and Child Welfare shows satisfactory progress, of which there is evidence in the new low records of maternal and infant mortality quoted above. Ante-natal clinics increased by 84 during the year to a total of 1,676, and the 365,250 women who attended represented 60·6 per cent. of the total notified births as compared with 54·19 per cent. in 1937 and 48·85 in 1936. Post-natal supervision is also growing in scope; last year more than 71,000 women attended clinics in this connection. The report says that the midwives' service has been going through a settling down process and solving problems of organisation. At the end of 1938 there were 2,193 domiciliary midwives employed directly by local supervising authorities, and these had attended during the year 111,626 cases as midwives and 28,425 cases as maternity nurses. 104 midwives were employed by welfare authorities (other than L.G.A.s) and 4,822 by voluntary associations under the Act, who had attended 95,788 cases as midwives and 44,095 as maternity nurses. Altogether about four-fifths of the work by domiciliary midwives in 1938 was done by those employed by local authorities or voluntary associations.

During the year, infant welfare centres increased from 3,145 to 3,261 and 687,445 children up to the age of 5 years attended. Under the head of supply of extra nourishment by welfare authorities it is stated that the gallonage of dried and liquid milk supplied increased from 6,600,000 to 7,800,000.

The Cancer Act

The report next turns to cancer, with special reference to the Cancer Act and the duty of providing facilities for diagnosis and treatment which it imposes on county and county borough councils. The provisional cancer death-rate of 1,664 per million for 1938 was almost twice as high as that for the quinquennium 1901-05, and the total deaths from cancer, 68,600, make the largest total on record. The Ministry believe that, in spite of recent developments in therapy, a large proportion of sufferers do not get early treatment either through belated diagnosis or deficiency of accommodation in hospitals which have the means of treatment. The hope is expressed that the Act will bring about a concerted attack on cancer with good results.

Regarding the expressed intention of Parliament that medical officers of health should wherever possible be whole-time officers not engaged in private practice, it is reported that 481 out of 955 M.O's.H. are now whole-time officers, compared with 457 out of 1,001 in the preceding year.

The next chapter refers to the Food and Drugs Act, 1938, and to its main provisions. It is stated that it is hoped to complete the examination of all applications from authorities of 20,000 to 40,000 population which wish to become or to remain food and drugs authorities, by October, 1939, so as to avoid disturbance after the Act comes into force. Of the administration of the Milk (Special Designations) Order, it is said that the Ministry's officers have drawn the attention of some licensing authorities to the need for greater frequency of sampling, co-operation with sanitary officers of rural districts, regular inspection of licensed premises, and segregation of diseased animals. Regarding food analysis, the abstract of public analysts' reports has already been separately published in June last.*

Regionalisation of the Ministry

Under the head of Surveys, Hospitals and Hospital Policy, reference is made to the regionalisation of the Ministry's medical staff of which details were given in our May issue, p. 247. The regional officers will henceforward be responsible for the surveys of public health services in their respective areas. It should be noted that with the outbreak of war, the original regions have been

*H.M. Stationery Office. Price 4d.

increased in number to accord with the Government's emergency areas (see page 16).

Hospital Appropriation

Hospital appropriation under the L.G.A., 1929, has continued. The position at the end of the year was that 50 authorities had appropriated 111 hospitals, and there are now 137 hospitals provided by L.A.s under their public health powers containing 66,805 beds, compared with 59,910 beds provided under their public assistance powers. The statistics of local government hospital work show another increase in surgical operations under general anæsthetic and in out-patient attendances, the respective figures for 1938 being 144,038 and 2,288,140, compared with 130,903 and 1,921,769 in 1937. Capital expenditure in respect of improvements and extensions to hospitals since April 1st, 1930, now amounts to £7,845,398.

The results of the review of hospital accommodation which was made by the Ministry last autumn are of interest. The survey covered all types of hospital, rate-aided and voluntary—existing mental hospitals and colonies and naval and military or Ministry of Pensions hospitals—and was planned on the basis of 14 regions. It revealed that there are 292,592 beds for all purposes in England and Wales, of which approximately two-thirds (196,765) are in institutions or hospitals owned by L.A.s, and of these latter three-fifths (140,689) are in public health hospitals. In the country as a whole, there are 7·14 beds (all purposes) per 1,000 population, but the distribution between regions is uneven, varying from 9·01 beds per 1,000 in the London and Home Counties region to 5·18 in the South Wales region. It is not suggested that these comparisons afford a basis for fixing any standard rates of beds to population. Regarding domiciliary medical relief, the system of "free choice" from a panel of local practitioners under contract with the Council is now in operation in 11 counties and 8 county boroughs.

Under the heading of International Health Work, reference is made to the proceedings of the permanent committee of the Paris International Health Office, under the Presidency of Dr. M. T. Morgan, and of the League of Nations Health Committee, on which Dr. N. M. Goodman represents this country. Investigations and recommendations by these bodies have been referred to from time to time in our columns but the direct assistance to China achieved through the League is noteworthy. Not only did the League organise three units of about 150 persons each to combat epidemics in that country, but on an appeal from the Chinese Government, no less than 8 million doses of anti-cholera vaccine were supplied free of charge through the good offices of 13 countries in less than four weeks.

Part C—Housing and Town Planning—shows further steady progress in the campaign against slums and overcrowding. By the end of the year, over a million persons had been removed from slum houses to new ones since the campaign began in 1933 and the total of new houses built since the Armistice by local authorities and private enterprise was only a few short of 4,000,000. Despite the international crisis of September, 1938, the number of houses built by L.A.s during the year was the highest since 1927-28, and 25,774 more than in 1937-38. Space does not permit of further reference to this part, which includes legal decisions and full details of action taken by L.A.s. The area under town and country planning control has increased by 2,000,000 acres to over 26,000,000 in England and Wales. Attention is drawn to the need of controlled development of permanent holiday camps. Part D, which deals with local government legislation by private bills, reorganisation of districts and with finance, contains much of interest.

Our readers are not directly concerned with the part on National Health Insurance and Pensions, while with that on Civil Defence, referred to above, they have been familiarised through constant association.

Public Health in Wales

As usual with these reports, the Welsh Board of Health has one part devoted to health matters in the Principality, with separate statistics (the figures quoted above are inclusive of both countries). The Welsh birth-rate at 15·3, death-rate at 9·9, and infant mortality at 57 are all rather higher than the combined rates, but the latter figure represents a distinct drop in deaths among infants in Wales, and indicates the result of child welfare work. Infant mortality rates for the four preceding years 1934-37 had ranged between 65 and 62 and in 1921-25 and 1926-30 were 81 and 74 respectively. Tuberculosis mortality at 0·794 was still much above the rate of 0·602 for England and Wales together. Reference is made to the report of the Committee of Inquiry into the Anti-Tuberculosis Service in Wales, which was recently reviewed in PUBLIC HEALTH (April, p. 193) and which made certain recommendations regarding the general level of Welsh public health services.

One's final reflection after reading this report is that in later years it will be held to have marked a well-advanced stage in public health progress, interrupted, alas, by the war in which we are now engaged. Let us hope that the Ministry, the local authorities and the public health service may as soon as possible be able to resume their normal work in forwarding the health and well-being of our community.

Health Problems in a Food Factory.*

By S. A. UNDERWOOD, M.B., B.S., B.SC.
Medical Officer, Rowntree & Co., Ltd., York.

My colleague and I have particular pleasure in welcoming you here to-day, for you, as Medical Officers of Health, really labour in the same vineyard as we do. The small daughter of an M.O.H. friend of mine was once overheard to say that her daddy was not an *ordinary* doctor—he was a Medical Officer of Health; and I think we, as Industrial Medical Officers, fall into rather the same category. We are not *ordinary* doctors—an apple a day will not keep us away. In fact, we are the people who see that the "apples" are provided. It is our duty to see that the prophylactic apple is available to everyone. That it is available in the town and in the home is your concern; that it is available in the factory is ours.

Of course, much of our work runs on similar lines to yours. In a community such as this factory, many of the doctors' duties are of an M.O.H. nature. A smell or a draught, an epidemic or an insect plague which no one else wants to deal with, is referred to the doctor—a useful sort of person who will not scruple to put his nose into the most unpleasant corners and abate nuisances wherever they may occur.

It is with the personnel of the factory and their conditions of work that we are most concerned, and with which most of our routine work is associated. It begins when the applicant for employment first enters the factory. All prospective employees are sent to us for medical examination. This initial examination has three objects:—

(*a*) To weed out the unsuitable and undesirable.

(*b*) To decide the type of work which is suitable for the individual.

(*c*) To recognise any individual peculiarities which might make for special risks in employment.

As regards rejections, the number is small, but there are always some whom we cannot accept—those of poor physique, the unclean, or those suffering from infectious or contagious conditions which might prove a source of danger to others and might contaminate the produce made in the factory.

Each person is placed in a grade or category indicative of size and physique, and the work recommended to the Employment Department is chosen accordingly. I would add here that all candidates are also examined by our psychologist who will further indicate the type of work for which the individual is most suitable.

In some cases the individual has some defect which, although it might render him unsuitable for certain types of employment, would not debar him from other forms of work. In such conditions, work of a particular nature is specified and the harmful work prohibited. In the confectionery trade skin conditions need careful watching. Those with very dry or very tender skins are liable to sugar or chocolate dermatitis and will be accepted only for work not involving that risk. It has also been found advisable to place with some caution those suffering from seborrhœa. Similarly, those with slightly defective eyesight will be recommended for work not involving eyestrain and not involving the handling of fast-moving machinery.

A careful record is kept of height, weight, teeth, eyesight, etc., on entry and on subsequent occasions. It would be ideal to follow up every entry into the factory by medical examinations at intervals of every few months, but this is too vast a task, and we have to compromise by seeing again only those who:—

(*a*) Were noted at entry as periodic re-examination.

(*b*) Are transferred to special or to heavier work.

(*c*) Do not appear to settle down in the work in which they are placed.

(*d*) Any special cases referred to us by foremen, overlookers or personnel staff.

(*e*) After returning from illness—when temporary change of work or hours may be recommended.

We try, as far as possible, to visit each workroom regularly so that we know the various jobs, what they involve as regards effort and their various risks. The employees' panel doctors know nothing of these and we are often, by our knowledge of the nature of a person's work, able to help him in his diagnosis and his treatment by such details supplied by letter or by 'phone. During working hours all departments are visited at regular intervals by one of our nurses, and where foodstuffs are actually handled an inspection of the hands of the workers is made, and any cases of skin disease or untreated skin lesions are referred to us without delay.

Another side of the work is that of treatment both of accidents and of medical conditions. All minor injuries are treated promptly. Trained first-aiders and a limited number of ambulance boxes are available in the workrooms for immediate

*Address to the Yorkshire Branch, Society of Medical Officers of Health, York, 28th April, 1939.

treatment, but all cases must go to the Works' surgery to be seen by Nurse, and if she considers it advisable, she will refer them to us for advice. All our nurses are State Certificated and are well experienced and capable of dealing with most of the minor emergencies. Temporary medical conditions are dealt with where necessary, but if further treatment is required, a note giving details is sent to the panel doctor.

Of course, a lot of attendances at our surgery are for very minor conditions, but we would rather see trivial things before they develop into something more serious. The attendance at the Medical Department is anything between 250 and 300 daily.

You may be interested to know the procedure adopted here with regard to the common infectious diseases. All those employees who have been in contact with scarlet fever, diphtheria or erysipelas are suspended from work and paid their usual wage during absence, for a period not exceeding five days. *This period may be extended at the discretion* of the medical officer, where necessary in particular cases. In a food factory we cannot be too careful to keep these workers out of the factory and our local Medical Officer of Health co-operates in arranging for enquiries to be made, at each house in which a case of fever is reported, as to whether any of the occupants work in a food factory. He promptly advises us of this, and the employee is suspended, a red card being placed in the time card rack informing him of this. His own time card is not replaced until written permission is given from the Works' Medical Department.

Other conditions for which suspension from the Works is ordered are impetigo, scabies, pediculosis, etc. In these cases, however, no payment is made for time lost, and the employee is sent to the panel doctor and will be eligible for National Health sick benefit.

I may say, in comment, that whereas in recent years pediculosis is a much less common cause for suspension, the incidence of scabies seems to have been much higher. I think this is a fairly general experience of medical officers all over the North of England, though I have heard of no cause suggested for this increase.

In referring to the National Health medical scheme, I would remind you that it is only during the last two years that this scheme has included in its benefits young workers between 14 and 16 years of age. There were formerly many young workers who came from poor homes who were denied proper medical attention, and it was then our custom, where medical attention would otherwise not be obtained, to visit them in their homes. It seems to me that this inclusion of juveniles in the National Health scheme is one of the finest measures adopted in this country for many years. It is during these growing years when there is added strain of adaptation to new surroundings in industry that medical attention is most needed.

Our Medical Department also advises on such matters as heating, ventilation, lighting and provision of suitable washing and cloakroom accommodation.

There are other factors which have a big effect on health which at first sight are not so obvious, such as working hours, rates of pay, security of tenure of employment, the provision of pension and sick benefit funds and opportunities for recreation. These most potent factors are often overlooked when the health of the worker in industry is being discussed and it is our place to see that they are given adequate attention.

Careful selection of the supervisory staff is also of vital importance. Faulty supervision in any department will be reflected in poor, nervous health of its workers and in high sickness absence.

I would add in conclusion that we also have a full-time dentist, and an optician who attends two whole days each week, as we regard the care of the teeth and the integrity of the eyesight as indispensable contributions to the maintaining of good health.

Amongst recent or impending retirements are those of Dr. P. Stanley Blaker (M.O.H., Dudley C.B.), Dr. H. E. Watkins (M.O.H., Newton-in-Makerfield U.D.) and Dr. A. M. Watts (M.O.H., East Kent No. 1 United District). All of these will carry with them the good wishes of their colleagues for a pleasant retirement after many years of useful work.

A USEFUL A.R.P. DEVICE.—Notwithstanding the official view that A.R.P. personnel should take cover during the actual progress of air-raids, many medical officers and others concerned with casualty service organisation have realised that personnel may have to run the risk of working in the open while shrapnel at least is still falling. The Ace of Spades Petroleum Co., Ltd. (Great West Road, Hounslow, Middlesex) are offering a car and ambulance shield which is in the form of a steel sheet and can be very quickly mounted even by untrained persons on the roof of a vehicle which might have to be travelling while an anti-aircraft barrage is in operation. The appropriate shield for a medium-size car weighs approximately 100 lbs. and costs £4 15s. It has been demonstrated to representatives of Government departments.

An application for recognition of this device as eligible for grant is under consideration. In the meantime, it is understood that the initiative should come from local authorities which may wish to purchase supplies for protection of their A.R.P. personnel.

DIPHTHERIA PROPHYLAXIS: A STUDY OF CERTAIN FACTORS THAT INFLUENCE ATTENDANCE AT IMMUNISATION CLINICS

By J. TUDOR LEWIS, M.D. (LOND.), D.P.H.,

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(*From the Health Department of the County Borough of Croydon. Dr. O. M. Holden, Medical Officer of Health.*)

It seems at first glance that one of the least auspicious attainments of the public health service of this country is, that while means are available for the prevention of diphtheria, which in other places are being actively harnessed in the common weal, in most towns in these Islands the disease still takes its annual toll of life and morbidity. Those not intimately acquainted with the problems of the administrator can only vaguely appreciate the difficulties involved in the mass inoculation of the child population. Not the least of these has been the multiplicity of preparations and the methods of applying them, with the consequent reticence of the authorities to advocate one for general use. There can be little doubt that the preparation of choice is alum precipitated toxoid, introduced by Glenny (1926, 1931). The best method of giving it may still not have been determined, and although further investigation may show that slight modifications may be desirable, that first used by Chesney (1936) and Parish (1936) by two well spaced doses will give immediately good results. The more immediate problem is, therefore, that of persuading the populace to have its children protected. The organisation of any successful scheme must have as its basis those considerations that are most likely to be especially conducive to large attendances, and of prime importance to anyone responsible for its administration is an exact knowledge of these factors. The concern of this paper is to determine which of several components exert the greatest influence in attracting people to immunisation clinics.

Methods and Materials

The subject matter here presented consists of data collected and abstracted from the material provided by nearly five years immunisation work in the County Borough of Croydon. In the schools of this town the number of children who have been treated are not evenly distributed; in some the response to offers of immunisation has been good, in others poor. It is necessary to point out that the service is essentially a personal one, no attempt ever having been made at a campaign. The schools have been formed into three groups according to the response that offers of immunisation have produced. The groups are :—

I. Schools where the response was satisfactory.
II. " " " indifferent.
III. " " " poor.

When assigning a school to a group the criteria adopted are partly, but not entirely, the actual number treated from each school, irrespective of the school population. Thus, Group I consists of schools with more than 350 children treated, except one school, with only 160 pupils, practically all of whom have been immunised. Group II, of schools with between 100 and 200, and Group III with less than 100 children treated. A more accurate method would be, of course, to use the percentage of immunised children in the school, but there are various difficulties that render this undesirable or impossible. For instance, the population of a school is not fixed and there are frequent movements of scholars from one school to another.

These three groups of schools, differing fairly markedly in the numbers from each that have been immunised, provide a basis for this enquiry. It is a problem that does not lend itself well to a deductive method of investigation, and it will be necessary, in part, to argue from the particular to the general; keeping in mind, of course, the dangers inherent in this form of reasoning. There are certain factors that few would deny, exert a large influence in the attendance at clinics. They are :—

(*a*) The accessibility of the clinic to the school or home.
(*b*) The attitude of the head teacher.
(*c*) The diphtheria incidence in the school or area.
(*d*) Propaganda—its type and intensity.
(*e*) The type of parent sending children to the school.

Each of these will, obviously, vary in different schools and localities. The process adopted in this enquiry is to define grades of the above variables, which can be done with reasonable accuracy, and then to allot to each school, the particular grade of the variable that most appropriately applies. It will then be possible to construct tables for analysis.

It is not feasible, even were it desirable, to use numerical indices to represent the different grades of the above factors; nevertheless some fairly rigid scale is an essential, and this must, as a preliminary, be laid down.

(*a*) *Accessibility of the Clinic.*—From a knowledge of the topography of the area, and by means of maps, one can state with some accuracy how accessible a particular clinic is to the schools it serves. Three grades of accessibility have been defined; they are :—

(1) *Easy.*—When the treatment is conducted on the school premises or within very short walking distance.

(2) *Moderate.*—When the treatment is conducted at a clinic within one mile of the school, with adequate transport facilities.

(3) *Difficult.*—Where the clinic is more than one mile from the school and transport facilities poor.

(*b*) *Attitude of the Head Teacher.*—A questionnaire was issued by Dr. O. M. Holden, Medical Officer of Health for Croydon, to the head teachers of Croydon schools. In addition, some sixty head teachers were interviewed by medical officers of the Croydon Health Department when certain specific information was sought. As a result it is possible to define three main types of head teacher, so far as their attitude to diphtheria immunisation is concerned. These are :—

(1) *The actively enthusiastic.*—The head teacher puts every convenience at the disposal of the medical staff and takes an active part himself in persuading parents to have their children treated. He is anxious to have all his school protected.

(2) *The co-operative.*—While anxious to co-operate in every way with the Health Department the head teacher will take no active part himself in furthering the claims of immunisation.

(3) *The indifferent.*—As the name implies, the head teacher, while not necessarily obstructive, is entirely indifferent to the benefits of immunisation, and hardly troubles to be co-operative.

(*c*) *Diphtheria incidence in the school.*—The annual reports of Dr. Holden contain details of the diphtheria incidence of the schools of the Borough. From these reports the following scales can be defined.

(1) *A high incidence.*—Over ten cases per 1,000 per annum of the school population or a localised epidemic.

(2) *A medium incidence.*—Over six but under ten cases per 1,000 per annum.

(3) *A low incidence.*—Less than six cases per 1,000 per annum.

(*d*) *Propaganda.*—There has never been in Croydon any extensive advertising campaign such as some boroughs have staged. All the propaganda undertaken for the purpose of persuading people to attend the clinics is carried out during the routine performance of other health work. In this borough, therefore, this component may be described as :—

(1) *Ordinary.*—The usual methods carried out by health visitors and school nurses, consisting for the most part of personal talks at infant welfare centres, school inspections and during routine visiting, augmented by distribution of leaflets.

(2) *Energetic.*—An increase in the intensity of "ordinary" propaganda, including talks by medical officers at parents' meetings, special activity on the part of some head teachers, the more energetic distribution of leaflets and personal talks.

(*e*) *Type of Parent.*—Croydon is a town embracing a wide variety of social class and standard of living. Different grades in the social scale tend to inhabit particular areas of the borough, so that it is possible, from a knowledge of the locality, to state fairly precisely the status of the people living in that locality. Children attending a school will thus in the aggregate come from homes of a stereotyped class, and so it is possible to allocate to each school, its situation being known, the type of parent sending its children to the school. The types are for the purposes of this paper :—

(1) *Better class type*—mainly the black coated worker.

(2) *Artisan type*—largely inhabitants of Corporation housing estates.

(3) *Lower type*—a poor standard of living.

Construction of Tables and Examination of Data

The position so far is this. It has been pointed out that schools do not all respond equally to offers of immunisation against diphtheria ; they can consequently be formed into groups depending on the response produced in each school. Certain factors likely to influence the response have been postulated, and it has been indicated that these factors are not constants but variables, having different values in different schools. Accordingly, grades have been laid down for these variable components. It remains now to assign to each school the particular grade of the above factors, that investigation of the general circumstances of the school has shown to be most appropriate. This is done in Tables I, II and III. In the discussion on these Tables percentages are used for purposes of comparison between the groups ; in brackets after the percentages are given the actual number of schools, of the particular group, in which the grade in question occurred.

Group I.—Schools where Response was Satisfactory.

A consideration of Table I shows, that in schools of Group I where the response to offers of immunisation was satisfactory 80 per cent. (4) were easily accessible to the clinic and 20 per cent. (1) moderately so ; in no school was accessibility difficult. In 100 per cent. (5) of schools the propaganda carried out was of the energetic variety. Forty per cent. (2) of the head teachers were actively enthusiastic and 60 per cent. (3) co-operative ; none were indifferent. Diphtheria incidence was high in 40 per cent. (2), medium in 40 per cent. (2) and low in 20 per cent. (1). The parents belonged to Type I in 40 per cent. (2), to Type II in 20 per cent. (1) and to Type III in 40 per cent. (2) of the schools. It is apparent that the only factor common to all the schools was an energetic type of propaganda, although accessibility of the clinic was only in one school not easy. On the contrary, the grades that have been laid down for the other components are more evenly distributed over the schools. It will not be without benefit to describe briefly the course of events in the individual schools. Schools *D.W.* and *Kin.* had experienced for some time a high endemic diphtheria incidence, that, suddenly attaining the proportions of a small epidemic, undoubtedly served to focus attention on the dangers of diphtheria. Co-operative, but not enthusiastic, head teachers enabled energetic propaganda to be carried out. In schools *Wint.* and *S.G.* there was no high incidence of diphtheria ; but in both these schools the head teachers were themselves sufficiently enthusiastic to "push" immunisation and to carry out vigorous and enthusiastic propaganda themselves ; both were exceedingly anxious that a very high proportion of their scholars should be protected. School *Wint.* has a head teacher of unusually enlightened views ; the result is that in her department practically all the children to the number of over 400 have been treated. School *E.C.C.* with a medium diphtheria incidence and co-operative head teachers experienced a distressing example of the ravages of the disease. A brother and sister, the only children of a mother who had been sterilised, succumbed after a few days' illness, a tragic happening that received an ironic, if unwonted, advertisement in the school and environs. It, nevertheless, provided the school nurse with a powerful instrument of propaganda and nearly 500 applications for immunisation were received.

From the foregoing it is tolerably clear that the most potent influences predisposing in this group of schools to relatively good results are easy accessibility of the clinic and energetic propaganda. Of undeniable consequence are the attitude of the head teacher and the diphtheria incidence but it seems their functions are subsidiary, and of significance only so far as they exert a profound influence on propaganda. The type of parent is also, it would appear, of secondary importance. These facts will be more clearly brought out when the other groups are considered.

Group II.—Schools where Response was Indifferent.

Examination of Table II, which shows Group II schools, brings out the following points. In only 12·5 per cent. (1) of schools was accessibility easy ; in 25 per cent. (2) it was moderate and in 62·5 per cent. (5) it was difficult ; this, it will be noted, is a marked contrast to Group I (see Table IV) where no school was difficult of accessibility. Likewise, the propaganda in this group was only energetic in 25 per cent. (2) and was ordinary in 75 per cent. (6). These differences emphasise the importance of the position of the clinic and the type of propaganda. Not unexpectedly this variation in the intensity of propaganda between Groups I and II is associated with differences in those influences which it was suggested above affect the type of propaganda. Thus, in only 12·5 per cent. (1) of the schools of Group II was the head teacher enthusiastic ; in 12·5 per cent. (1) he was indifferent and in 75 per cent. (6) co-operative. Similarly, diphtheria incidence was low in 75 per cent. (6) of the schools as compared with 20 per cent. (1) in Group I. In spite of this the response to offers of immunisation was moderate and this may be coupled with the fact that in some 50 per cent. (4) of the schools the parents were of Type I and of Type III in only 25 per cent. (2). School *Whi.* might have given a satisfactory response, for the accessibility was easy, the diphtheria incidence high and the propaganda energetic. The only adverse factor was the class of parent—Type III—for this school is situated in a notoriously "difficult" area. The effect of the accessibility of the clinic is further demonstrated by School *All.* which only differs from School *Wint.*, referred to above, in that its accessibility was difficult. The head teacher of this school is convinced that had it been possible to carry out the treatment on the premises, practically the whole school would have attended.

Group III.—Schools where the Response was Poor.

The schools of Group III all responded poorly to offers of immunisation. It is not, therefore, surprising that certain differences are encountered in Table III when it is compared with Tables I and II. In 60 per cent (15) of schools the accessibility was difficult and not one school in this group was easily accessible. In no school was propaganda energetic. The correlation between attitude of the head teacher and the type of propaganda that was suggested by Groups I and II becomes more manifest in the schools of Group III ; for none of the heads of these schools were enthusiastic ; they were co-operative in 76 per cent. (19) and indifferent in 24 per cent. (6). There was comparatively little difference between the diphtheria incidence of this group and that of Group I. It will be observed that the parents were of Type III in 60 per cent. (15).

The last eight schools listed in Table III are all schools where the diphtheria incidence is described as "high," where there, in fact, occurred more than 10 cases per 1,000 school population per annum. In most of these the cases arose sporadically and were for the most part mild, only one school exhibiting anything that approached an outbreak. In three of these schools the heads were indifferent and in seven the parents were of Type III. A high diphtheria incidence, as the term is used here, is not necessarily a factor in producing a good response to offers of immunisation. In this connection

Table I.
Showing Component Grades present in each School of Group I.

School.	Accessibility of the Clinic.	Attitude of the Head Teacher.	Diphtheria Incidence.	Propaganda.	Type of Parent.
D.W.	Easy	Co-operative	High	Energetic	3
E.C.C.	,,	,,	Medium	,,	1
Kin.	Moderate	,,	High	,,	3
S.G.	Easy	Enthusiastic	Medium	,,	2
Wint.	,,	,,	Low	,,	1

Table II.
Showing Component Grades present in each School of Group II.

School.	Accessibility of the Clinic.	Attitude of the Head Teacher.	Diphtheria Incidence	Propaganda.	Type of Parent.
Ash.	Moderate	Co-operative	Low	Ordinary	1
Beu.	Difficult	,,	Medium	,,	2
All.	,,	Enthusiastic	Low	Energetic	1
Ken.	,,	Indifferent	,,	Ordinary	1
Gon.	Moderate	Co-operative	,,	,,	3
Nor.	Difficult	,,	,,	,,	1
Whi.	Easy	,,	High	Energetic	3
Woo.	Difficult	,,	,,	Ordinary	2

TABLE III.
SHOWING COMPONENT GRADES PRESENT IN EACH SCHOOL OF GROUP III.

School.	Accessibility of the Clinic.	Attitude of the Head Teacher.	Diphtheria Incidence.	Propaganda.	Type of Parent.
Ben.	Difficult	Co-operative	Low	Ordinary	1
Dav.	,,	,,	,,	,,	3
How.	,,	,,	,,	,,	2
Ing.	,,	,,	Medium	,,	3
Lan.	,,	Indifferent	Low	,,	3
Por.	Moderate	,,	Medium	,,	2
Pur.	Difficult	Co-operative	,,	,,	2
Cyp.	Medium	,,	Low	,,	1
Tav.	,,	,,	Moderate	,,	3
Hol.	,,	Indifferent	Low	,,	2
P.Ch.	Difficult	Co-operative	Medium	,,	3
Sta.	,,	,,	,,	,,	3
Stk.	Moderate	,,	,,	,,	2
Str.	,,	,,	,,	,,	3
St.P.	Difficult	,,	Low	,,	3
Shi.	,,	,,	,,	,,	1
Mon.	,,	,,	,,	,,	1
Elm.	Moderate	Indifferent	High	,,	3
Ova.	Difficult	Co-operative	,,	,,	3
Roc.	,,	,,	,,	,,	3
Sno.	,,	,,	,,	,,	2
Syd.	Moderate	Indifferent	,,	,,	3
W.Th.	Difficult	,,	,,	,,	3
Chc.	Moderate	Co-operative	,,	,,	3
Sfs.	,,	,,	,,	,,	3

it must be pointed out that the term "high" is a relative one, and it is very possible for mild cases to occur frequently in a school without attracting undue attention. A diphtheria incidence may be "high" from the administrative point of view, but unless it produces some disquiet in the public mind, and unless other factors such as enthusiastic or co-operative head teachers or the better class of parents are present, it may exert little influence on the response of a school to offers of treatment.

Discussion

From the foregoing unavoidably tiring recital certain general conclusions can be drawn. It is true that the data are not suitable for exact analysis; it is equally true that in quoting happenings in individual schools, and assuming their universal relevancy, one is reasoning from the particular to the general. Yet, as the present subject is less scientific than administrative, a certain licence in these matters may be conceded. Table IV has been prepared for comparison and convenience; it shows the percentage of each grade of component occurring in the three school groups.

A study of Table IV will demonstrate more clearly some facts that have been alluded to earlier. It is apparent that between Group I and the other groups there is a marked contrast in accessibility of clinics to schools and type of propaganda. To recapitulate, in 80 per cent. of schools of Group I it was easy, but only in 12·5 per cent. of Group II and in none of Group III; similarly, in 100 per cent. of schools of Group I propaganda was energetic, but only in 25 per cent. of Group II and in none of Group III. Equally evident is the observation that no grade of the other components predominates amongst any of the groups. The first inference is, that easy accessibility of the clinic and energetic propaganda contributed more than the other attributes to the satisfactory results of Group I. Probably, if good responses are to be obtained, both these must be present; for instance, to quote a particular case, in School *All.* all was in favour of good results except the difficult situation of the clinic. Easy accessibility and energetic propaganda are, thus, largely complementary; they are to be regarded as the *sine qua non* of immunisation schemes. Yet, their employment is no guarantee of success, for in school *Whi.* (Group II) propaganda was energetic and accessibility easy but the response was still indifferent, an occurrence that may be associated with the position of the school in a particularly apathetic area. The second inference is that the effect of the attitude of the head teacher, the diphtheria incidence, and the type of parent, are subordinate and that they are largely interdependent and reciprocal. Energetic propaganda is one of the primary essentials, without which no good results should be anticipated; but good results may well be obtained, even though diphtheria incidence be low, amongst each social class, and even in the absence of an enthusiastic head teacher.

From a knowledge of the events in the schools of Group I it is clear that diphtheria incidence and the attitude of the head teacher are only of importance in proportion to the influence they exert on propaganda. If this is active and energetic in their absence, gratifying results may be expected. Nevertheless an indifferent

TABLE IV.
SHOWING THE PERCENTAGE OF EACH GRADE OF CERTAIN COMPONENTS OCCURRING IN THREE SCHOOL GROUPS, WHICH DIFFER IN THEIR RESPONSE TO OFFERS OF DIPHTHERIA IMMUNISATION.

School Group.	Percentage of Schools where accessibility of Clinic is :—			Percentage of Schools where attitude of Head Teacher is :—			Percentage of Schools where Diphtheria Incidence is :—			Percentage of Schools where propaganda is:—		Percentage of Schools where Type of Parent is of :—		
	Easy.	Moderate.	Difficult.	Enthusiastic.	Co-operative.	Indifferent.	High.	Medium.	Low.	Energetic.	Ordinary.	Class 1	Class 2	Class 3
Group I	80	20	0	40	60	0	40	40	20	100	0	40	20	40
,, II	12·5	25	62·5	12·5	75	12·5	12·5	12·5	75	25	75	50	25	25
,, III	0	40	60	0	76	24	32	32	36	0	100	16	24	60

head teacher would undoubtedly be an impediment, for it would be an arduous task to make headway in a school where the head teacher was not at least co-operative; for example, all the indifferent head teachers except one, were in charge of schools of Group III. The type of parent is also of secondary consequence. In Group III 60 per cent. (15) of schools drew their children from homes of Type III, so that, generally speaking, the response is likely to be more disappointing in schools occupied by the poorer classes; School *Whi.* (Group II) confirms this. Yet as Table I shows, satisfactory results can be obtained even among this class.

Conclusion

Of the components cited at the commencement as probably influencing attendance at diphtheria immunisation clinics, two, namely, easy accessibility to the clinic and energetic propaganda, are of paramount importance. These are the primary indispensables; in the absence of either the response will be indifferent or poor, although their presence is no guarantee of success. Of secondary importance are diphtheria incidence and the attitude of the head teacher, which are of importance only in proportion to their influence on propaganda. In this respect an enthusiastic head teacher is of great moment, and, because it is a partly controllable factor, likely to play a large part in producing good results. Diphtheria incidence is thus very subsidiary to the attitude of the head teacher. The type of parent is also of less significance, and although results are not likely to be so good in a poor class area, this in itself does not preclude success.

One further thing must be made clear. This study has been carried out exclusively on school children but this does not mean that the importance of immunisation to the pre-school group has been lost sight of; on the contrary. But obviously the school population is much more under control and far more satisfactory for enquiries of this type than any other.

Summary

(1) Three school groups are described which have varied in their response to offers of immunisation against diphtheria.

(2) Five variable components likely to influence attendance at clinics have been defined, and grades to cover their variability laid down.

(3) Tables constructed from these attributes provide data for analysis from which certain conclusions are drawn.

(4) Easy accessibility of clinics to schools and energetic propaganda are the primary essentials governing the responses obtained. The attitude of the head teacher and the diphtheria incidence of the school are secondary factors, of importance only in proportion to their effect on propaganda. The attitude of the head teacher is the more important of these two. While social class is also of secondary importance and may in certain circumstances prevent good results from being obtained, in itself it is not a bar to success.

I wish to record my thanks to Dr. O. M. Holden and Dr. D. D. Payne, Medical Officer of Health and Deputy respectively of Croydon, for help in the preparation of this paper, and to the former for permission to publish it.

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The Royal Sanitary Institute and the R.S.I. and Sanitary Inspectors' Examination Joint Board have decided that classes of instruction and examinations must be discontinued until further notice.

The British Social Hygiene Council have issued two 4-page leaflets, "Women in War Time" and "Facts on Sex for Men," which give warning of the dangers of V.D. infection arising from casual or promiscuous sexual intercourse and urge the importance of early treatment. A limited supply of these leaflets is available free of charge and further copies will be supplied at the price of 1s. per 100 on application to the B.S.H.C., Tavistock House South, London, W.C.1.

THE PREVENTION OF FOOT DEFORMITIES IN CHILDREN*

Dr. Margaret Emslie quoted statistics of cases referred for orthopædic advice from a foot clinic† and statistics of toddling children (aged two to four) examined by herself in a routine inspection clinic to show that there was a correspondence in the disabilities found, the major pathological complexes such as hallux valgus being present in the children in incipient or minor form. Such deformities were not present in the first year of life. Certain important factors were concerned in their production, including external factors plus the inherent "weakness" of the young foot, in the sense of the non-ossification up till the age of two or more years of the scaphoid and three cuneiform bones on which all the weight coming forward to the inner half of the foot through the astragalus impinged. In contrast, all the other bones of the tarsus and metatarsus were at this stage already ossified. The gap between the scaphoid and the sustentaculum occupied by the subastragaloid ligament (which soft structure was in effect the keystone of the inner longitudinal arch) was demonstrated. Anything which caused strain on this weak inner section of the foot in the young child must cause weakness and deformity, though the structures as a rule yielded without pain. Such results occurred irrespective of the fact that in the foot of the newborn child (unexposed to external influences) the characters of the future bony arches were already well established.

Dr. Emslie described a deflection outwards of the terminal phalanx of the great toe in 80 per cent. of her cases, with or without bruising and blistering of the soft tissues or involution of the inner border of the great toe-nail, a condition which could only be produced by external pressure. The displacement of long flexor and extensor tendons which must follow this bony deviation was explained and the progressive character and consequences of such displacement. To this original factor Dr. Emslie ascribed the production of hallux valgus, hammer-toe, and other toe deformities in logical sequence, and the particular ill effects of interference with the flexor longus hallucis tendon were pointed out. Separation of the metatarsal heads, and in particular, of the first and second external was further described, while pressure on the terminal phalanx of the great toe end on could not but be conveyed into the anatomically and physiologically conjoint structures, namely into the inner section of the longitudinal arch and must necessitate cramping and weakening of everything taking part in the functioning of that region.

Shoes with rounded toes, too short shoes, shoes with unblocked toes and soles yielding upwards at their outer edges were associated by the lecturer with the production of deformities cited in Mr. Creer's and in her own list. No foot could withstand the effect of ill-designed, ill-fitting shoes and the conditions evident in adult feet were produced in early childhood by this simple and probably single cause. The true facts appeared so far to have escaped the orthopædic surgeons. There was one further and most important consideration and that was the building of British shoes almost universally on a straight last. The normal foot was swung in in front and its axis curved: in young children the all-important great toe was even further swung in and separated from its fellows. If a child's foot was forced to occupy a "straight" shoe there was, apart from the big toe, immediate and continuous strain on the scaphoid, cuneiform and subastragaloid articulations —the part of the foot least designed at that stage to bear it. Wholesale deflection outwards of the forepart of the foot must once more result in weakening and dropping of the inner longitudinal arch. Children's (and adults') shoes must be designed with a swung-in axis to overcome this universal difficulty. This was almost the most urgent indication at present in connection with foot gear. Since children ran constantly on tiptoe and in that position the foot *should* be adducted at the mid-tarsal joint the ill effects of constant forcible abduction were greatly aggravated in the young foot, but the same factor was of more than ordinary importance in regard to the higher-heeled shoes favoured by women.

Socks must be long enough, wide enough, and correctly shaped as well as shoes, and walking barefoot should be encouraged wherever possible. Other factors in promoting the full and normal use of the foot were not discussed on this occasion, though the foot demanded many other qualities in the shoe than those which bore directly on deformities.

The lecture was illustrated by plates, drawings, and a variety of shoes.

*Summary of an Address by Dr. Margaret Emslie to the week-end Course for Maternity and Child Welfare Medical Officers, June 25th, 1939

†Creer, W Sayle. (1938). *Brit Med. J*, **2**, 5.

THE EMERGENCY PUBLIC HEALTH LABORATORY SERVICE.

For the convenience of our readers, we reproduce below the letter of September 5th addressed by the Chief Medical Officer of the Ministry of Health to medical officers of health and the appended details of the above service.

MINISTRY OF HEALTH,
WHITEHALL, S.W.1.
R.A.
September 5th, 1939.

DEAR SIR,

EMERGENCY PUBLIC HEALTH LABORATORY SERVICE.

An Emergency Laboratory Service has been organised by the Medical Research Council, in consultation with the Ministry of Health, to augment the existing facilities for bacteriological diagnostic work required for public health purposes. It is anticipated that the demand for such work may be considerably increased in some parts of the country under war conditions, and also that many of the usual arrangements may cease to be effective. It is not intended, however, that the scheme should interfere in any way with the operation of normal services where these can be maintained.

A list of the Emergency Laboratories is given below. The assistance which they can give will, for appropriate purposes, be freely at the disposal of the Medical Officers of Health—and the medical services generally, both civil and military—within convenient reach of the respective situations. The general function which this Service will perform is the rapid diagnosis of outbreaks of infective disease and the distribution of vaccines and sera to prevent their spread. It is not proposed that the Emergency Service should undertake pathological work of other kinds, such as that done in ordinary hospital laboratories.

The pathological laboratories of the Ministry of Health have been amalgamated for the time being with the Emergency Service. Its staff and functions have been transferred from London to the central laboratories of the Emergency Service at Oxford and Cambridge.

The ten Emergency Public Health Laboratories in the Greater London area are attached to the several Hospital sectors. Elsewhere in England and Wales they are directly administered by the Medical Research Council. A similar scheme is directed by the Department of Health for Scotland.

Yours faithfully,
ARTHUR S. MACNALTY,
Chief Medical Officer.
The Medical Officer of Health.

South of England (excluding Greater London).

Emergency laboratories have been established at the following places, the first two being central laboratories and the remainder subsidiary :—

Place.	*Institution.*	*Officer-in-Charge.*
Oxford	School of Pathology	Dr. W. M. Scott.
Cambridge	Department of Pathology	Dr. F. Griffith.
Stamford	Stamford School	Dr. R. Knox.
Holt	Gresham's School	Dr. A. Q. Wells.
Colchester	Royal Eastern Counties' Institution, Ltd.	Dr. P. H. Martin.
Canterbury	King's School	Dr. A. M. McFarlan.
Horsham	Christ's Hospital	Dr. J. Cruickshank.
Winchester	Winchester College	Dr. J. T. Duncan.
Sherborne	School for Girls	Dr. E. P. Hicks.
Gloucester	County Mental Hospital, No. 2, Coney Hill	Dr. R. M. Fry.
Tavistock	Kelly Cottage	Dr. C. H. Andrewes (Dr. Edith Straker, (temporarily.)

Midlands and North of England.

Emergency laboratories have been established at the following places :—

Place.	*Institution.*	*Officer-in-Charge.*
Barnard Castle	Barnard Castle School	Dr. S. H. Warren.
Kirkby Lonsdale	Queen Elizabeth Grammar School	Dr. J. W. Orr.
Pocklington	Pocklington School	Dr. W. Goldie.
Wellington	Wrekin College	Dr. R. E. Jones.
Lincoln	Technical College	Dr. J. M. Croll.

These subsidiary laboratories—and also the one in North Wales—are being staffed and equipped by arrangement with the following departments, which will themselves continue to provide the same services as in normal times :—

Place.	*Institution.*	*Officer-in-Charge.*
Newcastle	Bacteriology Department, Medical School, King's College	Prof. E. M. Dunlop.
Leeds	Bacteriology Department, Medical School	Prof. J. W. McLeod.
Sheffield	Bacteriology Department, The University	Prof. Wilson Smith.
Manchester	Bacteriology Department, The University	Prof. H. B. Maitland.
Liverpool	City Laboratories, Mount Pleasant	Prof. H. D. Wright.
Birmingham	Bacteriology Department, Medical School	Prof. J. F. D. Shrewsbury.

Wales.

Emergency laboratories have been established at the following places, the first being central and the other two subsidiary :—

Place.	*Institution.*	*Officer-in-Charge.*
Cardiff	Welsh National School of Medicine, The Parade	Dr. V. D. Allison. (Dr. L. Colebrook, temporarily.)
Aberystwyth	Dairy Research Institute, University College	Dr. A. C. Jones.
Conway	Fisheries Experiment Station	Dr. D. T. Robinson.

Greater London.

An emergency laboratory for public health work has been established in each of the Hospital Sectors, as follows :—

Place.	*Institution.*	*Officer-in-Charge.*
Brentwood	Brentwood School	Dr. A. B. Rosher.
Hertford	Haileybury College	Dr. A. W. Downie.
Harpenden	Rothamsted Experimental Section	Dr. J. M. Alston.
Watford	Peace Memorial Hospital	Dr. A. R. Berrie.
Northwood	Merchant Taylors' School	Dr. C. J. C. Britton.
Ealing	King Edward Memorial Hospital (adjoining)	Dr. A. B. Porteous.
Slough	Messrs. Horlicks, Ltd.	Dr. G. W. Goodhart.
Guildford	County Secondary School for Girls	Dr. R. F. L. Hewlett.
Epsom	Epsom College	Dr. T. Stamp.
Downe, Kent	Buckston Browne Laboratories	Dr. J. C. Colbeck.

REGIONAL HOSPITAL AND MEDICAL OFFICERS, MINISTRY OF HEALTH

By reason of the National Emergency, the regionalisation of the Ministry of Health staff has been made on rather different lines from the original proposal of which details were given in the May issue of PUBLIC HEALTH. The regions now correspond with those of the Regional Commissioners appointed by the Government. The areas mentioned include all types of local authorities.

The regions and the names of Hospital and Medical Officers attached thereto are now as follows :—

No. 1.—NORTHERN REGION. (Counties of Northumberland, Durham and Yorks, North Riding.)

Headquarters of Ministry of Health Regional Staff.
Clarendon House, Clayton Street West, Newcastle-on-Tyne, 1.
Telephone : Newcastle-on-Tyne 25672-3-4.

Hospital Officer	Col. H. T. Bates, O.B E., B.A., M.B., CH.B., T.A.
Assistant Hospital Officers	A. Stewart, M.B.
	L. Hislop, M.D.
Medical Officer	N. R. Beattie, M.D.
Lay Assistant to Hospital Officer	H. J. Williamson.

No. 2.—NORTH-EASTERN REGION. (Counties of Yorks, East and West Ridings.)

Headquarters of Ministry of Health Regional Staff.
8, The Headrow, Leeds 1. (Temporary to December.)
Telephone : Leeds 21635.
[Century House, South Parade, Leeds, will be the permanent address.]

Principal Medical Officer	T. S. McIntosh, M.D., F.R.C.P.
Hospital Officer	C. F. Good, M.R.C.S., L.R.C.P.
Assistant Hospital Officers	B. E. Jerwood, M.D.
	R. G. Chase, M.B.
	J. Aitken, M.B.
Medical Officers ...	Miss D. M. Taylor, M.D.
	J. H. Albinson, M.B.
	A. W. T. Whitworth, M.B.
Lay Assistant to Hospital Officer	A. Mackay.

No. 3.—NORTH MIDLAND REGION. (Counties of Derbyshire—less Glossop M.B., Buxton M.B., New Mills, Whaley Bridge U.D. and Chapel-en-le-Frith R.D.—Leicestershire, Lincolnshire, Northants, Notts, Rutland, Soke of Peterborough.)

Headquarters of Ministry of Health Regional Staff.
28A, Regent Street, Nottingham. (Temporary.)
Telephone : Nottingham 42373.
[Ministry of Health Regional Office, Weekday Cross, Nottingham (Permanent).]

Hospital Officer	G. C. Kelly, M.D.
Assistant Hospital Officers	D. L. MacKenna, M.B.
	A. A. Forty, M.R.C.S.
Medical Officers... ...	G. E. Godber, M.D., M.R.C.P.
	A. V. Poyser, M.D.
Lay Assistant to Hospital Officer	W. H. Arthur.

No. 4.—EASTERN REGION. (Counties of Beds, Cambs, Huntingdon, Norfolk, Suffolk, Isle of Ely, Essex and Herts—less the portions in No. 5 Region.)

Headquarters of Ministry of Health Regional Staff.
12, Queen Anne Terrace, Cambridge.
Telephone : Cambridge 3497-8-9.
(Emergency Hospital Services, Tennis Court Road, Cambridge. Telephone : Cambridge 54401-5.)

Hospital Officer	A. L. Banks, M.D., M.R.C.P.
Assistant Hospital Officers	W. McKendrick, M.B.
	F. Challans, M.D.
Medical Officer	C. J. Donelan, M.B.
Lay Assistant to Hospital Officer	S. H. Thomas.

No. 5.—LONDON REGION. (Includes Counties of London and Middlesex, and the parts of Essex, Kent, Surrey and Herts in Greater London area, Croydon C.B., East and West Ham C.B.s, etc.)

Headquarters of Ministry of Health Regional Staff.
21, Cromwell Road, S.W.7.
Telephone : Kensington 3471 and Sloane 9601.

Principal Medical Officer	Sir Weldon Dalrymple-Champneys, Bart., M.D.
Hospital Officers... ...	J. Nairn Dobbie, M.B.
	Col. T. H. Scott, D.S.O., M.B., CH.B.
	Wing-Cmdr. A. G. Brown, D.S.O., M.R.C.S., L.R.C.P.
Assistant Hospital Officers	J. G. Johnstone, O.B.E., M.B.
	Miss G. Ward, M.D., M.R.C.P.
	C. H. Lindsay, C.M.G., D.S.O., M.D.
Ambulance Officer ...	Capt. A. E. Reed.
Medical Officers... ...	A. L. Hallinan, M.C., M.B.
	G. L. Adeney, M.B., F.R.C.S.
	W. O. Sankey, M.D.
	H. S. Beadles, M.R.C.S.
	W. J. G. Steel, M.R.C.S.

No. 6.—SOUTHERN REGION. (Counties of Berks, Bucks, part of Dorset (Poole M.B., Wimborne and Cranborne R.D.s and Wimborne Minster U.D.) Hampshire, Oxon, Surrey (less portion of No. 5 Region), Isle of Wight.)

Headquarters of Ministry of Health Regional Staff.
17, Bath Road, Reading.
Telephone : Reading 60481-6.

Principal Medical Officer	E. Donaldson, M.D.
Hospital Officer	A. L. Dykes, M.D.
Assistant Hospital Officers	W. G. McKenzie, M.C., M.R.C.S.
	G. F. Oldershaw, M.D.
Medical Officers... ...	D. J. Williamson, M.D.
	Miss C. Sims, M.B.
	F. J. Blackley, M.D.
Lay Assistant to Hospital Officer	A. E. Goddard.

No. 7.—SOUTH-WESTERN REGION. (Counties of Cornwall, Devon, Dorset (less portion in No. 6 Region) Gloucester, Somerset and Wilts.)

Headquarters of Ministry of Health Regional Staff.
3, Woodland Road, Tyndalls Park, Bristol.
Telephone : Bristol 35031.

Hospital Officer	C. R. N. Nicholson, M.R.C.S., L.R.C.P.
Deputy Hospital Officer...	A. R. Doyle, M.R.C.S.
Assistant Hospital Officers	F. W. Poole, M.B.
	G. F. Randall, M.R.C.S.
Medical Officer	W. D. T. Brunyate, M.D.
Lay Assistant to Hospital Officer	E. E. Goate, M.B.E.

No. 8.—WALES REGION. (Wales and Monmouth.)

Headquarters of Ministry of Health Regional Staff.
Welsh Board of Health, Cathays Park, Cardiff.
Telephone : Cardiff 5120.

Medical Officer	T. W. Wade, M.D.
Hospital Officer	A. Trevor Jones, M.D.
Assistant Hospital Officers	H. Colin Davies, M.D.
	T. Stenner Evans, M.B.
Lay Assistant to Hospital Officer	G. Beckwith.

No. 9.—MIDLAND REGION. (Counties of Hereford, Shropshire, Staffs, Warwick and Worcester.)

Headquarters of Ministry of Health Regional Staff.
139, Hagley Road, Edgbaston, Birmingham, 16.
Telephone : Edgbaston 0932-7.

Principal Medical Officer	C. T. Maitland, M.D.
Hospital Officers... ...	Col. A. B. Ward, C.B.E., D.S.O., M.B.
	A. E. Tudor Hart, M.R.C.S., L.R.C.P.
Assistant Hospital Officers	F. Collar, M.R.C.S.
	H. Carson, M.B.
	B. G. Ives, M.B.
	C. G. Brentnall, M.C., M.B.
Medical Officers	Miss G. I. Brodie, M.B.
	C. J. Bartholomew, M.C., M.B.
Lay Assistant to Hospital Officer	R. C. Smith.

No. 10.—NORTH-WESTERN REGION. (Counties of Cheshire, Cumberland, part of Derby (Buxton M.B., Glossop M.B., New Mills and Whaley Bridge U.D.s and Chapel-en-le-Frith R.D.) Lancashire and Westmorland.)

Headquarters of Ministry of Health Regional Staff.
Sunlight House, Quay Street, Manchester.
Telephone : Deansgate 5277-8-9 ; Blackfriars 3753.

Principal Medical Officer	A. E. Quine, M.B., F.R.C.S.
Hospital Officers... ...	W. H. C. Patrick, M.D.
	Lt.-Col. C. L. Dunn, C.I.E., I.M.S., L.R.C.P.
Assistant Hospital Officers	P. F. Bishop, M.B.
	P. K. Muspratt, M.B.
	R. E. Ford, M.D., M.R.C.P.
Medical Officers	J. C. Winteler, M.D., M.R.C.S., M.R.C.P.
	H. A. Raeburn, M.D., M.R.C.P.
	F. N. Marshall, M.D.
Lay Assistant to Hospital Officer	A. J. Taylor.

No. 11.—SCOTLAND (Administered by the Department of Health for Scotland).

No. 12.—SOUTH-EASTERN REGION. (Counties of Kent (less portion in No. 5 Region) and Sussex.)

Headquarters of Ministry of Health Regional Staff.
The Chestnuts, Grove Hill Road, Tunbridge Wells.
Telephone : Tunbridge Wells 3410-3415.

Hospital Officer	W. S. M. Craig, M.D.
Assistant Hospital Officer	T. F. Wilson, M.B.
Medical Officer	E. T. Conybeare, M.D., M.R.C.P.
Lay Assistant to Hospital Officer	E. S. Reeve.

APPOINTMENTS IN THE DEFENCE SERVICES

Many members of the Society who hold commissions in the Royal Navy or Army Reserves or in the R.N.V.R. or T.A. have already been called up for service with their units. We report below the appointments of which we have been informed, together with one or two special appointments under the Civil Defence scheme.

ALLIN, S. F. (Senior D.O., Oxford C.B.); Major, Army Reserve.

BATES, H. TUNSTALL, Col., O.B.E., T.D., K.H.P. (formerly M.O.H., Ilkley U.D. and Burley-in-Wharfedale U.D.); Hospital Officer, Ministry of Health, Northern Region.

CHESNEY, G. (Dep. M.O.H., Poole M.B.); Captain, R.A.M.C., D.A.D.H., Southern Command.

CLARK, A. B. (A.S.M.O., Notts C.C.); Surg. Capt., R.N., Naval Medical Transport Officer, Rosyth.

COHEN, J., T.D. (Dep. Regional M.O., Ministry of Health); Major, R.A.M.C.

GUNN, W. C., T.D. (Sen. A.M.O.H., City of Glasgow); Lt.-Col., R.A.M.C., M.O., 52nd Lowland Divisional Royal Engineers.

HAY, C. P. (Dep. M.O.H., Kensington Met. B.); Surg.-Lieut., R.N.V.R.

MCNAB, D. J. N. (A.M.O.H., Hants C.C.); Surg.-Lieut., R.N.V.R., H.M.S. "Newcastle."

MARTINE, W. R., M.B.E. (Sen. A.M.O.H., Birmingham C.B.); Major R.A.M.C., Sen. M.O., 32nd A.A. Brigade.

RUSSELL, Sir A. J. H., K.B.E., O.B.E. (formerly P.H. Commissioner with Government of India); O. i/c Casualty Bureau, Oxfordshire C.C.

STEVENSON, A. C. (Dep. M.O.H., Wakefield C.B.); Capt. R.A.M.C., O.C., No. 3 Field Hygiene Section.

WILLIAMSON, A. B. (M.O.H., Portsmouth C.B.); Lt.-Col., R.A.M.C., C.O., 130th Field Ambulance (T.A.), 43rd Wessex Division.

WOOD, J. L. M. (First A.C.M.O.H., Essex C.C.); Surg.-Lieut., R.N.V.R., H.M.S. "Suffolk."

WOODHEAD, E. C. (Dent.-Surg. Lambeth Hospital and Sutton Training Centre); Lt. Col., R.A.M.C., O. i/c Surgical Division 1st (1st County of London) General Hospital (T.A.).

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointment.

BLYTH B.C. : A.M.O.H., Dr. Cyril Bainbridge.

BURY C.B. : Dep. M.O.H., Dr. Norman A. M. McKinnon (A.M.O.H., Darlington C.B.). Salary £750 p.a., rising by annual increments of £25 to £850.

DARTMOUTH M.B. AND PAIGNTON AND BRIXHAM U.D. COMB. DIST.: M.O.H., Dr. Andrew Dick (M.O.H., Chelmsford M.B.).

DERBY C.B.: A.M.O.H., Dr. E. L. M. Millar.
DUNFERMLINE B.C.: A.M.O.H., Dr. Robert Young.
NOTTINGHAM, CITY ISOLATION HOSPITAL AND SANATORIUM: R.M.O., Dr. H. C. Carter-Locke.
SWANSEA C.B.: S.M.O., Major C. V. Falvey, I.M.S.
SALOP C.C.: A.M.O. (M. & C.W., & S.M.O.), Dr. B. Ormond Moore. Salary £600, rising by annual increases of £25 to £700 p.a.
STOCKTON-ON-TEES M.B.: Acting M.O.H., Dr. E. H. T. Nash (formerly M.O.H., Heston and Isleworth M.B.).

WAR-TIME ADDRESSES OF SOCIETIES AND ASSOCIATIONS

The following changes of address have been reported since the outbreak of the war:—

British Dental Journal:
5, Westleigh Road, Barton Seagrave, Kettering. (Telephone: Kettering 2268.)
(For the time being the Association's office remains at 13, Hill Street, London, W.1.

Central Council for the Care of Cripples:
Sandford Park, Sandford St. Martin, Oxford. (Telephone: Great Tew 38.)

Central Midwives Board:
New Government Buildings, Whitehall, London, S.W.1. (Telephone: Whitehall 4300, Extensions 497 and 609.)

Chartered Society of Massage and Medical Gymnastics:
Mount Lodge, Chesham Road, Amersham, Bucks. (Telephone: Amersham 219.)

Child Guidance Council:
28, Queen Square, Bath. (Telephone: Bath 2390.)

Medical Defence Union:
"Bonnington," Edgware, Middlesex. (Telephone: Edgware 1373.)

Medical Women's Federation:
73, Bourne Way, Hayes, Bromley, Kent. (Telephone: Hurstway 1904.)

Midwives' Institute:
20, Selwood Road, Croydon, Surrey.

National Association of M. & C.W. Centres and for the Prevention of Infant Mortality:
7, Pembridge Square, London, W.2. (Telephone: Bayswater 1151.)

National Baby Week Council:
Gordon House, 29, Gordon Square, London, W.C.1 (Telephone: Euston 4733, Extension 16.)

National Smoke Abatement Society:
94, Manor Green Road, Epsom, Surrey. (Telephone: Epsom 1867.)

National Society of Day Nurseries:
c/o Women's Voluntary Services, 41, Tothill Street, S.W.1.

Nursery School Association:
c/o Mrs. Garnett, The Cearne, Edenbridge, Kent.

Women Public Health Officers' Association:
20, Clarence Avenue, Castle View Estate, Littlehampton. (Telephone: Littlehampton 772.)

Book Reviews

Synopsis of Pulmonary Tuberculosis. By Jacob Segal, M.D., Physician in charge of Fordham Hospital Tuberculosis Clinic, New York, U.S.A. 1939. London: Oxford University Press. pp. 148+xii, 31 illustrations. Price 10s. 6d. net.

This book is neither more nor less than its title claims and is subject both to the advantages and limitations of this class of textbook. In an attempt to encompass the whole subject of pulmonary tuberculosis in so small a space it is unavoidable that only fundamental points can receive more than cursory treatment, and many important points must be omitted or mentioned only in a few words.

The style in which the book is written is inclined to be rather dogmatic, but this is perhaps a good thing as it renders the information more easily acquired and more readily remembered. The matters dealt with have special appeal to the student taking his final examinations or the busy general practitioner.

Perhaps the best part of the book is that devoted to treatment, with the exception that in the section on B.C.G. the reference made to the Lübeck tragedy takes no account of the explanation offered by Professor Guérin himself. The description of the operation of artificial pneumothorax induction will interest British readers as it differs in some respects from the technique commonly used in this country. The parts played by therapeutic rest under Sanatorium conditions, and the various surgical measures in common use, are clearly and fairly stated.

Thirty-eight out of the one hundred and forty-eight pages are occupied by diagrams and reproductions of skiagrams of an excellence rarely found in textbooks. The cases themselves are well chosen to illustrate the points the author wishes to make, and the actual printing of them is of a high standard.

The book is one which can be recommended to any reader who wishes to obtain a concise impression of an American view of pulmonary tuberculosis.

Model Building Byelaws Illustrated. By G. Eric Mitchell, M.INST.M. & CY.E., A.R.I.B.A., M.R.SAN.I. 1939. London: B. T. Batsford. pp. 160+xii, Super Royal 8vo. Price 10s. 6d. net.

This is an excellent book in which the revised Model Byelaws, Series IV, Buildings, are set out, explained, and illustrated by diagrams showing what, in the opinion of the author, is the intention and meaning of the various clauses. A model specification for a typical dwelling house framed to incorporate the requirements of the byelaws is appended.

The laborious task undertaken by the author has been thoroughly well done. The book can be recommended to all to whom the administration of building byelaws is in any way entrusted.

CAMBERWELL RESEARCH LABORATORIES.—Dr. Guy Bousfield (Director) states that the bacteriological and pathological work of the laboratories will continue in their present quarters, 134, Denmark Hill, London, S.E.5, until further notice.

The Society of Medical Officers of Health

The Society in War-Time

We hope that the Society's circular of September 14th safely reached all members and that the decision to continue activities as far as circumstances allow has met with general approval. For the time being it has been impossible to hold a meeting of the Council owing to the preoccupation of its members with other matters; but it is intended to arrange a meeting as early as possible in the new session to regularise the current affairs of the Society and to settle procedure for the duration of the war. Fortunately the Council at its last meeting before the summer recess gave authority for the formation of a small emergency committee to act until the larger body could itself reassemble.

No doubt the Branches and Groups of the Society will find later on that a resumption of their meetings will be advantageous, for war-time problems of public health will certainly need discussion. The programme of "refresher" courses for 1939-40 must be regarded as in abeyance. The decision at least to postpone publication of the Roll of Members was to allow of its revision up to about the end of the year, by which time many members will have found their war-time posts. Members who have already been called up for active service will carry with them the very best wishes of all their colleagues.

PUBLIC HEALTH may become somewhat attenuated owing to the need for economy in paper and to diminution of the ordinary revenue, but we hope that it will not be starved of material. Now that the regular supply of papers read to meetings is temporarily cut off, we suggest that the opportunity has arrived for our members who have original contributions to offer—the more concise the better.

Branch and Group Elections: Session 1939-40.

METROPOLITAN BRANCH.

President	Dr. A. G. G. Thompson.
Vice-Presidents	Dr. A. M. Hewat.
	Dr. W. A. Young.
Hon. Treasurer	Dr. J. Macmillan.
Hon. Secretary	Dr. Vynne Borland.
Representatives on Council	*Dr. Vynne Borland.*
	Dr. A. G. G. Thompson.
	Dr. W. A. Young.

SCOTTISH BRANCH.

President	Dr. A. S. M. Macgregor.
Hon. Secretary	Dr. W. G. Clark.
Representative on Council	Dr. A. S. M. Macgregor.

WELSH BRANCH.

President	Dr. A. E. Williams.
Hon. Secretary and Treasurer and Representative on Council ...	Dr. H. W. Catto.

EAST ANGLIAN BRANCH.

President	Dr. V. F. Soothill.
Hon. Treasurer	Dr. D. E. P. Jolly.
Hon. Secretary and Representative on Council ...	*Dr. J. W. Hunter.*

EAST MIDLAND BRANCH.

President	Dr. J. Ferguson.
Vice-President	Dr. A. A. E. Newth.
Hon. Secretary and Treasurer and Representative on Council	Dr. J. A. Stirling.

HOME COUNTIES BRANCH.

President	Dr. E. W. Caryl Thomas.
Hon. Treasurer	Dr. K. E. Tapper.
Hon. Secretary	Dr. C. E. E. Herington.
Representatives on Council	Dr. C. E. E. Herington.
	Dr. A. T. W. Powell.
	Dr. E. W. Caryl Thomas.

MIDLAND BRANCH.

President	Dr. C. W. Sharpley.
Vice-Presidents	Dr. G. A. Auden.
	Dr. E. H. Snell.
	Dr. E. S. Robinson.
	Dr. A. Massey.
	Dr. H. Paul.
Hon. Treasurer	Dr. E. H. Snell.
Hon. Secretary	Dr. R. H. H. Jolly.
Representatives on Council	Dr. H. Gibbons Ward.
	Dr. R. H. H. Jolly.

NORTHERN BRANCH.

President	Dr. A. E. Raine.
Vice-President	Dr. James Grant.
Hon. Secretary, Treasurer and Representative on Council	Dr. J. A. Charles.

NORTH-WESTERN BRANCH.

President	Dr. G. Jessel.
Vice-President	Dr. R. M. Galloway.
Hon. Treasurer	Dr. F. T. H. Wood.
Hon. Secretary	Dr. J. E. Spence.

NORTH-WESTERN BRANCH (*continued*).

Representatives on Council	Dr. G. Jessel.
	Dr. F. A. Sharpe.
	Dr. J. E. Spence.

SOUTHERN BRANCH.

President	Dr. I. M. MacLachan.
Hon. Treasurer	Dr. H. L. Cronk.
Hon. Secretary	Dr. J. T. N. McNab.
Representative on Council	Dr. H. D. Kelf.

WEST OF ENGLAND BRANCH.

President	Dr. B. A. Peters.
Vice-President	Dr. P. H. Stirk.
Hon. Treasurer	Dr. J. F. Blackett.
Hon. Secretary and Representative on Council ...	Dr. P. H. Stirk (*pro tem.*).

YORKSHIRE BRANCH.

President	Dr. J. Sharpe.
Vice-Presidents	Dr. P. R. McNaught.
	Dr. J. M. Gibson.
Hon. Secretary and Treasurer	Dr. J. Mair.
Representatives on Council	Dr. J. Mair.
	Dr. J. Johnstone Jervis.

COUNTY BOROUGH M.O.H. GROUP.

President	Dr. R. H. Parry.
Vice-President	Dr. J. Johnstone Jervis.
Hon. Secretary, Treasurer and Representative on Council	Dr. Gordon Lilico.

COUNTY DISTRICT GROUP.

President	Dr. H. E. Marsden.
Vice-President	Dr. A. W. Forrest.
Hon. Secretary	Dr. A. W. Johns.
Representative on Council	Dr. A. W. Johns.

FEVER HOSPITAL MEDICAL SERVICE GROUP.

President	Dr. A. Joe.
Vice-Presidents	Dr. J. A. H. Brincker.
	Dr. E. H. R. Harries.
	Dr. H. S. Banks.
	Dr. D. Sage Sutherland.
Hon. Secretary, Editor and Representative on Council	Dr. J. S. Anderson.

MATERNITY AND CHILD WELFARE GROUP.

President	Dr. Agnes Young.
Past-President	Dr. Muriel Radford.
Vice-Presidents	Dr. Victor Freeman.
	Dr. Virginia Saunders-Jacobs.
	Dr. Isobel Wright.
Hon. Secretary	Dr. Katherine M. Hirst.
Hon. Assistant Secretary...	Dr. Frances Smith.
Representative on Council	Dr. Catherine Morris Jones.

SCHOOL MEDICAL OFFICERS' GROUP.
Elections pending.

TUBERCULOSIS GROUP.

President	Dr. T. R. Elliott.
Vice-Presidents	Dr. N. Tattersall.
	Dr. E. Ward.
Hon. Secretary	Dr. R. L. Midgley.
Representative on Council	Dr. E. Ward.

DENTAL OFFICERS' GROUP.
(Nominations.)

President	Mr. Quentin A. Davies.
Hon. Treasurer	Mr. J. F. Pilbeam.
Hon. Secretary	Mr. A. Gordon Taylor.
Hon. Assistant Secretary...	Mr. C. R. Wilshaw.
Hon. Dental Editor ...	Mr. K. C. B. Webster.
Representative on Council	Mr. A. Gordon Taylor.

Branch & Group Meetings

HOME COUNTIES BRANCH.

President (1938-9): Dr. A. T. W. Powell, (M.O.H., Walthamstow M.B.).
Hon. Secretary: Dr. C. E. E. Herington (M.O.H., Dagenham U.D.).

A meeting of this Branch was held at Tavistock House South, Tavistock Square, London, W.C.1, on Friday, July 21st, 1939, at 3.30 p.m.

Present.—The President was in the chair and 14 members attended.

The minutes of the meeting held on May 12th, 1939, and a visit paid on June 2nd, 1939, were read, confirmed and signed.

The President welcomed Dr. E. H. T. Nash after his recent illness.

Election of Officers and Representatives of the Branch for the Session 1939-40.

President.—Dr. E. W. Caryl Thomas.
Hon. Treasurer.—Dr. K. E. Tapper.
Hon. Secretary.—Dr. C. E. E. Herington.
Representatives on Council of Society.—Drs. C. E. E. Herington, A. T. W. Powell and E. W. Caryl Thomas.
Representatives on T.B. Group Committee.—Drs. Olliver Bruce, T. R. Dobson and A. Cameron Renwick.
Representatives on Kent Branch of B.M.A.—Drs. G. L. Brocklehurst and A. W. Johns.

An interesting open discussion on "The Administration of the Food and Drugs Act, 1938" then took place in which many members took part including Drs. F. A. Belam, Olliver Bruce, James Fenton, D. H. Geffen, C. E. E. Herington, E. H. T. Nash and C. L. Williams.

NORTHERN BRANCH.

President (1938-9): Dr. A. I. Messer (Asst. M.O.H., Northumberland C.C.)
Hon. Secretary: Dr. J. A. Charles (M.O.H., City of Newcastle-on-Tyne.)

A meeting of the Branch was held at the Medical Institute, 7, Windsor Terrace, Jesmond, Newcastle-upon-Tyne, on Friday, February 3rd, 1939.

The President was in the chair and there were also present 24 other members.

The minutes of the meeting held on December 16th, 1938, were read, confirmed and signed by the Chairman.

B.M.A. Scheme for a General Medical Service for the Nation.—The above scheme was referred to Branch Council for consideration and report.

The following were elected as members of the Branch: Drs. Kathleen Bates (A.M.O.H., Gateshead C.B.); John R. Hetherington (A.S.M.O., Durham C.C.); Ian McCracken (C.M.O.H., Durham C.C.); Janet H. MacKay (A.M.O., M. & C.W., Durham C.C.); Iris M. Pratt (A.M.O.H., Gateshead C.B.); William Stephenson (M.O.H., Newbiggin-by-the-Sea U.D.).

Professor J. Johnstone Jervis (M.O.H., Leeds C.B.) opened a discussion on: "Air Raid Precautions Work as it Concerns Medical Officers of Health."

Professor Jervis stated that in his opinion all personnel (Medical, Nursing, Ambulance Drivers, First Aid Posts) required for A.R.P. Services should be regarded as permanent and should form a separate section of the Health Department under the control of the Medical Officer of Health.

He dealt with in detail the provision of hospitals, including underground operating theatres, first aid posts and ambulance services.

The following took part in the discussion, which had to be curtailed owing to the early departure of Prof. Jervis and Drs. Hebblethwaite, Grant and Neilan.

On the motion of the Chairman, Professor Jervis was accorded a hearty vote of thanks for his informative address.

A meeting of the Northern Branch was held at the Newcastle General Hospital, Westgate Road, on Friday, June 9th, 1939. The President was in the Chair and 27 other members were present.

The minutes of the meeting held on Friday, February 3rd, 1939, were read, confirmed and signed by the Chairman.

A letter from Dr. C. Metcalfe Brown, thanking the Branch for its expression of sympathy during his recent illness was read.

Presidency of the Society, 1939-40.—The Honorary Secretary intimated that a letter had been received from the North-Western Branch asking this Branch to support their nomination of Dr. F. T. H. Wood, O.B.E., for the Presidency of the Society for 1939-40, and that since the letter had been received, Dr. Wood had been elected.

Presidency of the Society, 1940-41.—A letter from the Honorary Secretary of the Scottish Branch intimating their intention of nominating Dr. A. S. M. Macgregor for the Presidency for 1940-41 was read.

Election of Members.—The following were elected as members of the Branch:—

Forrest, J. A.—Medical Officer of Health, Hebburn U.D.C.

Peters, H. J.—Assistant Medical Officer of Health, Gateshead.

Stokoe, John—Medical Officer of Health, Blyth (transfer from East Midland Branch).

Trail, J. D.—Deputy Medical Officer of Health, Chester-le-Street U.D.C.

Walker, John—Deputy County Medical Officer of Health, Durham C.C.

Compulsory Purchase Orders.—The Honorary Secretary read a letter from Dr. R. McLeod, Hetton U.D.C., with regard to an attempt by a property owner to have a Compulsory Purchase Order rescinded by the local council after it had been submitted to the Ministry of Health. After Dr. McLeod had outlined the circumstances the opinions of the members was asked for and the Chairman, Drs. Charles, Grant and Dawson took part in the discussion, and suggested line of action for Dr. McLeod's consideration.

Visit of Inspection.—The members then visited the recent extensions at the Newcastle General Hospital and were shown the new Children's Block, the Deep X-Ray Therapy Department and the Department of Prostatic Surgery.

Air Raid Precautions.—Dr. J. Grant (M.O.H., Gateshead) opened a discussion on "*The Present Position of Air Raid Precautions.*" He sketched the steady growth of Air Raid Precautions Schemes and the unfair burden which they placed upon Medical Officers of Health. Drs. Charles, Raine, Dawson, Tilley and Morrison gave instances of the difficulties they had encountered in dealing with the Ministry of Health and the Home Office and on the motion of Dr. Grant, seconded by Dr. Dawson-Walker, the following resolution was agreed to:—

> "The relationship of the Medical Officer of Health to Air Raid Precautions should be considered by the Council of the Society in the light of the response to the recent Birkenhead questionnaire."

On a motion by the Chairman a vote of thanks to the Newcastle Health Committee for their hospitality and to Dr. G. P. Harlan for making the necessary arrangements was passed.

The Annual Summer Meeting of the Branch was held at the Hexham Hydro Hotel, Hexham, on Saturday, July 22nd, 1939. Dr. George Wilson took the Chair in the absence of the President, who was away on holiday, and there were also present nine other members.

The minutes of the meeting held on June 19th, 1939, were taken as read and signed by the Chairman.

On the motion of the Chairman it was agreed that the Honorary Secretary convey to Dr. M'Gonigle the members' wishes for a speedy return to good health.

Royal Sanitary Institute. Sessional Meeting—Sunderland, October 13th and 14th, 1939.—The Honorary Secretary read a letter from Dr. A. S. Hebblethwaite regarding the above meeting in which it was suggested that it be held in conjunction with the Northern Branch.

On the motion of the Chairman the suggestion was agreed.

Presidency of the Branch, 1939-40.—The Chairman proposed, and Dr. Dickinson seconded, and it was unanimously agreed that Dr. A. E. Raine, Public Assistance Medical Officer and Deputy Director of Medical Services, Durham County Council, be nominated President of the Branch for the Session 1939-40.

Vice-Presidency of the Branch, 1939-40.—On the motion of Dr. Raine, seconded by Dr. Charles, it was unanimously agreed that Dr. James Grant, M.O.H., Gateshead, be Vice-President for the Session 1939-40.

Honorary Secretary and Treasurer, 1939-40.—Dr. J. A. Charles was unanimously re-elected as Honorary Secretary and Treasurer for next session.

Branch Representatives on the Council of the Society.—Dr. G. C. M. M'Gonigle was re-elected as the Branch Representative on the Council of the Society.

It was also agreed that the Honorary Secretary be appointed Deputy Branch Representative.

Representatives on the British Medical Association, 1939-40.—(1) Drs. W. H. Dickinson and James Grant were elected as the direct public health representatives on the Council of the North of England Branch of the British Medical Association.

(2) Drs. E. F. Dawson-Walker and J. B. Tilley were re-elected as the Branch Representatives on the Executive Committee of the Newcastle-upon-Tyne Division of the British Medical Association.

Representative of the North of England Branch of the British Medical Association on the Council of the Northern Branch of the Society of Medical Officers of Health.—It was decided to invite the North of England Branch of the British Medical Association to elect a general practitioner representative to serve on the Northern Branch Council of the Society of Medical Officers of Health.

The Honorary Secretary was instructed to suggest to the North of England Branch of the British Medical Association that Dr. James Hudson, who had been their representative for many years with great benefit to both Societies, should continue to serve.

COUNTY DISTRICT GROUP.

President: Dr. E. W. Caryl Thomas (M.O.H., Harrow U.D.C.).

Hon. Secretary: Dr. A. W. Johns (M.O.H., Erith U.D.).

The Annual Meeting of the Group was held at Scarborough on Friday, July 7th, 1939, at 10.30 p.m.

The President took the chair, and 48 other members were also present.

The minutes of the meeting held on July 14th, 1938, were read, approved and confirmed.

The following Officers were elected for the year 1939-40:—

President.—Dr. H. E. Marsden.
Vice-President.—Dr. A. W. Forrest.
Hon. Secretary.—Dr. A. W. Johns.
Representative on the Council.—Dr. A. W. Johns.
Executive Committee.—Drs. A. F. Adamson, G. F. Buchan, C. E. E. Herington, J. C. Sleigh, K. E. Tapper and E. W. Caryl Thomas.

Sub-Groups.

The following were elected as Hon. Secretaries of the Sub-Groups:—

East Midland.—Dr. Barker.
Midland.—Dr. Horsburgh.
Northern.—Dr. M'Gonigle.
North-Western.—Dr. Marsden.
Welsh.—Dr. Pritchard.
West of England.—Dr. Wilson.
Yorkshire.—Dr. Mair.
Eastern.—Referred to Branch.

Accounts amounting to £2 14s. 10½d. were submitted and approved for payment.

"*The Public Health Department in Time of War.*"—A most interesting discussion on the subject was opened by Dr. George F. Bramley (M.O.H., Bexley M.B.), who said that although many of those present would probably be tired of A.R.P., the opportunities for meeting during emergency periods would definitely be lost, so that exchange of ideas now would be helpful.

As the every day work of Public Health Departments would undoubtedly be changed, and would also depend on whether the particular district was evacuation, neutral or reception, he intended to deal broadly with the problems that he thought might arise in connection with each of the sections of a Public Health Department.

Dr. Bramley pointed out that such activities as Maternity and Child Welfare and Infectious Disease Prevention could not be entirely discontinued because of war. He put forward certain constructive points of view with regard to the need of retention of at least an ante-natal session in each area each week; the need for continuously carrying on the sale of dried milks, instead of sessionally as at present; co-operation between Maternity Homes in various districts, as far as availability of staff is concerned; the vital necessity of cutting down of general irrelevant clerical and statistical work, owing to lack of personnel; and with regard to the Sanitary Inspector, the need for discontinuing such work as Housing, and concentrating on other inspections.

He said that this, of course, was merely a quick glance at some of our Departments' work, and referred the meeting to the Memorandum of the Joint Tuberculosis Council, which, he said, would act as an admirable guide in arranging other necessary services.

One other point made was the question of disinfection after Infectious Disease, and he reminded those who have been timid of discontinuing this function, that serious consideration would have to be given as to whether or not it was going to be abandoned, wholly or in part, in view of depleted staffs.

Dr. Bramley concluded by saying "I maintain that if we pause sufficiently now and again to see where we are getting to we should be able to rationalise our outlook and get down to essentials, and these *must* control the activities of our departments in time of war."

The following contributed to the discussion: Drs. Adamson, Downer, Hartston, Horsburgh, Kershaw, Lindsay, Marsden, Sleigh, Symons, Tapper and Caryl Thomas.

Dr. Bramley then replied to the points raised, and the meeting closed with a vote of thanks to the President of the Group.

NOTICE.

DENTAL OFFICERS' GROUP

The Annual General Meeting of the Dental Officers' Group will be held at the rooms of the Society, Tavistock House South, Tavistock Square, W.C.1, on Saturday, October 28th, 1939, at 1.30 p.m.

A Council Meeting will be held at 10.30 a.m.

Members will note that the Refresher Course announced for October 17th to 20th is in abeyance. Any subsequent decision as to the holding of this Course in 1940 will be announced as quickly as possible.

A. GORDON TAYLOR,
Hon. Secretary.

28, Battlefield Road,
St. Albans, Herts.

PUBLIC HEALTH

THE JOURNAL OF
THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

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Telephone: Euston 3923. Telegrams: Epidauros, Westcent.

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Editorial

The Evacuees

Disturbing accounts of the state of women and children evacuated from the large cities which have been made in the Press and in Parliament receive confirmation in an article by Dr. R. C. Webster, appearing on page 33. The evacuated children appear to be even more poorly nourished than those in a receiving area which has suffered from trade depression for years. The dietetic and other habits of the women and children leave much to be desired. The prevalence of pediculosis, scabies and impetigo appears to be high. Already, too, there are signs that the mixing of the bacteriological flora of town and country is having its anticipated effects.

It is too soon to generalise from the experience of a few areas. Possibly some of them, including Darwen, have been exceptionally unfortunate in the type of family they have received. We should welcome communications like Dr. Webster's from other areas, and all the more if they were able to tell a brighter tale. In all recording of pediculosis it is desirable that a clear distinction should be drawn between infestation with body and head lice. The former is a true measure of neglect and degradation. The eradication of the head louse from girls is a much more difficult problem and indicates particular rather than general negligence, however reprehensible it may be.

When the school medical service began 30 years ago, one of its first pre-occupations was uncleanliness and the diseases which are consequent upon it. Before this many school teachers, especially women, had exercised their influence on children and parents with a good deal of success, but they acted without clearly defined power. The activities of school nurses were soon reflected in a signal improvement in the parental care of children and sources of infective skin diseases were quickly reduced by vigorous treatment at minor ailment clinics and exclusion from school. A certain hard core of the verminous and unclean, however, has remained, and its magnitude may turn out to be greater than we expected, if the experience of other areas resembles that of Darwen. It must be remembered not only that the exodus from large

cities took place at the end of a vacation, but also that all the normal services of health departments in the evacuation areas had been disorganised for months beforehand by preparations for civil defence. This is an aspect of the situation which critics of local authorities should not be allowed to overlook, and one which has been the subject of much concern to the public health service itself.

Nevertheless, when all due allowances are made, evacuation has brought into the open a state of affairs which many members of the public had not realised, because it had hitherto been segregated. The revelation is quite a useful corrective to a certain complacency which has crept into official reports and to somewhat equivocal deductions drawn from the medical examination of militiamen.

Provided that money is forthcoming during and after the war to strengthen the social services—a big proviso—the outlook as to the ultimate effects of juvenile malnutrition may not be quite so gloomy as Dr. Webster thinks, when he suggests that the initial handicap must continue to affect the child adversely in later years. A study of Dr. Georg Wolff, formerly school medical officer in Berlin,* indicated that the ability of the child to overcome similar handicaps from war deprivation or economic crises is remarkable. His work deserves to be remembered in view of what may happen in this country during or after a prolonged war.

Retirement of Sir Frederick Menzies

The retirement of the medical officer of health and school medical officer for the world's greatest municipal and hospital authority would in any event be a matter of note, and it is particularly so in respect of Sir Frederick Menzies, whose resignation as from October 30th, 1939, one year before he reaches the usual age-limit, has been announced. Sir Frederick requested his release at this time on health grounds, but it will be readily understood that the main reason that led him to his decision was the outbreak of war and the resulting stoppage of so much of the normal work to which he had devoted his great abilities.

Sir Frederick succeeded in October, 1925, to the post previously held by two distinguished precessors, Sir Shirley Murphy and Sir William Hamer. Murphy, as the first M.O.H. of the London County Council, had been mainly concerned with urgent sanitary reforms; Hamer brought great gifts to bear on epidemiological problems; Menzies' main contribution has been the organisation, administration and improvement of the vast heterogeneous hospital system which the Local Government Act, 1929, brought within the scope of the L.C.C. Any present observer of the high standard of equipment and of treatment in the county council hospitals would find it difficult to credit the transformation from the state of some at least of the 76 hospitals and institutions which were taken over from no less than 26 different authorities only nine years ago. The infectious diseases hospitals of the Metropolitan Asylums Board had already a high reputation, but the standards of the general hospitals taken over from the old Boards of Guardians showed very wide variations. In 1930, therefore, the L.C.C. became responsible for some 40,000 beds, providing for all types of disease, with a staff of about 19,000, and it was due to Sir Frederick's five years of preparatory work and to his gift for constructive administration that this mass of material rapidly took shape and grew into the great unified system of to-day, whose progress has unfortunately been interrupted by war requirements. London has indeed set a fine example to other authorities in its hospital policy. The method of "appropriation" was early used in regard to the transferred hospitals so that they became true public health hospitals under unified control; accommodation and equipment were modernised; and conditions of service for medical and nursing staffs have been notably improved. In all these points Sir Frederick has given a lead.

We have singled out one aspect of Sir Frederick's work, but in his earlier years of service with the L.C.C., which he joined as assistant medical officer in 1911, he played a conspicuous part in shaping the school medical service, the schemes for diagnosis and treatment of tuberculosis and venereal disease and the supervision of midwives.

Apart from his official work for the London County Council, Sir Frederick's services have been in great demand for Government Departmental and other Committees and for medical and voluntary bodies. He received the honour of the K.B.E. in 1932 and was appointed to be one of the King's Honorary Physicians in 1937. We wish him a pleasant retirement, during which we hope that his experience may still be available for the solution of public health problems.

The appointment of Dr. W. Allen Daley to succeed Sir Frederick as medical officer of health will be received with general pleasure by his colleagues. Before joining the staff of the London County Council as a principal medical officer in 1929, Dr. Daley was successively medical officer of health for the county boroughs of Bootle (where he succeeded his father), Blackburn and the City of Hull. In London he was immediately responsible under his chief for the general administration

*Increased Bodily Growth of School Children since the War. By Georg Wolff, M.D. *Lancet* (1935), 1, 1006.

of public health work, and the value of his services was recognised by his promotion to the rank of deputy last year. We wish him all success and the opportunity to bring about yet further advances in London's health in time of peace.

The Maintenance of Tuberculosis Services in War-time

A feature of the preparation of hospital accommodation for possible air-raid casualties which has caused disquiet has been the virtual emptying of many sanatoria and the discharge of infective cases who would, in unsuitable surroundings, both deteriorate as to their own condition and also be a real danger to others. The National Association for the Prevention of Tuberculosis recently gave expression to this anxiety in a letter which appeared in *The Times* of October 20th and as a result the Minister of Health invited them to send representatives of the Association and of the Joint Tuberculosis Council and the Tuberculosis Association to discuss the position with him. Subsequently the Society of Medical Officers of Health and the London County Council were asked to send representatives also.

The deputation attended at the Ministry of Health on Friday, October 27th, and various spokesmen, including Sir Percival Hartley, Sir Henry Gauvain, Professor Lyle Cummins, Dr. Lissant Cox, Dr. S. Vere Pearson and Dr. G. T. Hebert for the associations, Drs. James Ferguson and P. L. T. Bennett for the Society and Dr. W. Allen Daley for the L.C.C. put forward the collective view that the maintenance and possibly the extension of tuberculosis schemes is an essential part of national defence and that sanatorium accommodation should not be allocated for casualty purposes without careful consideration. Other points in regard to the importance of notification, the placing of tuberculous evacuees and the mass radiological examination of recruits for the Services were also put forward.

The Minister, in his reply, outlined the steps taken to ensure the continued treatment of tuberculous patients whilst keeping an adequate reserve of beds for casualties, and concurred in the view that anti-tuberculosis services should be maintained. He said that about two-thirds of the 28,000 beds for tuberculosis remained available for their normal purpose; and that if, through misunderstanding, actively infectious cases had been discharged they should be sought out and brought back for treatment. Recently steps had been taken to enable many smaller tuberculosis institutions originally included in the casualty scheme to return to their normal functions and this had made available some 5,000 more beds. As more hutted annexes to hospitals were completed so more beds now allotted to casualties would be released. He thought that dispensary services after initial difficulties were resuming almost pre-war activity.

Mr. Elliot's final suggestion that the bodies represented at the meeting should form a liaison committee to report to him on developments in due course will be welcomed and will afford a channel for any future representations on this very important aspect of the public health in time of war.

Papworth, 1938

It is pleasant in these anxious times to read these two publications* which contain no word of any war except that waged against tuberculosis.

In his report the Medical Director describes briefly the aims underlying the foundation of the Village Settlement, and how some of the initial and subsequent difficulties have been overcome. There can be no doubt that Papworth is an institution which admirably provides for the tuberculous sub-standard worker those conditions of living most conducive to sustained health with all that that means in security of employment, financial stability and family well-being.

To maintain and expand its activities, however, Papworth requires more capital and an appeal for funds has had to be made. It is gratifying to learn that the response has been generous, and we feel sure that so long as the means permit such appeals will not go unanswered. But is not this basis of income rather an insecure one for so large and important an institution as Papworth? The Committee of Management might be well advised to consider some such proposition as that suggested in the Medical Director's Report.

The Research Bulletin contains papers of clinical and scientific interest, but perhaps the most interesting contributions are those in what is called the realm of Social Medicine. New applications of physiological and psychological methods are described which aim at finding for the sub-standard worker that place in the industrial system where he can best employ his talents. There are wide variations, mental and physical, even amongst standard workers, so that it is possible that these methods may prove useful in a wider field.

If the regular increase in the size of the *Bulletin* is any criterion, we may safely say that there is alongside the Sanatorium and Village Settlement a very flourishing Research Department, whose work may be expected to throw light on some of the many obscure problems which still abound in the study of tuberculosis.

*Papworth Annual Report for 1938, and the *Sims-Woodhead Memorial Laboratory Research Bulletin*.

A Mobile Hygiene Laboratory in Flanders, 1917*

By P. R. McNaught, M.D., D.Sc. (P.H.), D.P.H.

Medical Officer of Health, City of York.

The Laboratory

The mobile laboratory built on a three-ton Daimler motor chassis was fitted out with all the equipment necessary for routine chemical and bacteriological examinations, the combined weight being five tons. Photographs of the exterior and the interior of a mobile laboratory may be seen on pages 11 and 12 of Volume I, Hygiene of the War, in the official "History of the Great War Medical Services."

Taken over in London by the writer in November, 1916, the laboratory was shipped with three others of a similar type to Rouen. The laboratories were parked temporarily at the Convalescent Depôt south of the city until required for service, and from time to time as the need arose they were despatched to various destinations in France, this laboratory (No. 23 Hygiene) being the last to receive orders to move.

The morning of June 19th, 1917, saw us setting out for Abbeville, the next day St. Omer was reached and the journey ended on the 21st when the laboratory was parked in the yard of a school in the Rue du Bassin, Poperinghe, to the west of Ypres. The area to be worked from Poperinghe comprised the portions of Belgium and France occupied by the Fifth British Army commanded by General Gough. There followed a strenuous week occupied in unpacking, making up media and fitting up a room in the school as a workplace.

The Work of the Laboratory

From June 19th until December 17th, when the laboratory was ordered to join the British Forces in Italy, a succession of water samples collected personally, or forwarded, were dealt with, varied by such miscellaneous tasks as the examination of two samples of tea, thought to contain an excessive amount of tannin and hence believed to be the cause of constipation amongst the troops (only 6 per cent. in one sample and 8·4 in the other was found, both being within the normal 6 to 12 per cent. tannin), rice, which proved to be overgrown with aspergillus and other moulds, lime juice to calculate the amount of sugar and water to be added to render palatable, tinned herring in tomato sauce, also pork and beans (tins blown—numerous organisms present on culture), a soda water which was satisfactory on chemical examination but had been made from a water impure bacteriologically, and tablets found at a well in the forward area. The latter (possibly of German origin) appeared to consist of acid sodium sulphate with an aromatic flavouring substance suggesting a pine oil derivative and were reported on as probably water sterilising tablets.

Another sample was that of green camouflage material which had been used to cover water tanks in the forward area. After soaking in water, the green colouring matter detached was examined, but was not found to contain any poisonous metals. It was advised that the material should not be allowed to dip into the tanks. A white powder submitted proved to be only sodium bicarbonate. Lastly, a tin of "Pure Cream Butter—extra choice variety" was forwarded as the contents appeared rather waxy and had a peculiar taste and odour like tallow. Analysis gave the figures water 9·5 per cent., fat 8·21, curd 1·5, ash 3·7, salt 2·7, and as only 0·27 per cent. of boron compounds was found, together with a Reichert-Wollny figure of 25·4 per cent., the butter was pronounced to be apparently free from chemical adulteration. Its taste and odour were ascribed to the presence of (*a*) a small Gram-negative bacillus (which did not ferment sugars) and grew aerobically on agar at 37° Cent., and (*b*) a short stout Gram-positive bacillus, which grew scantily on agar in anaerobic culture at 22° Cent., but more plentifully at 37° Cent.

The chemical and bacteriological methods employed were those in common use in 1914, so far as suitable for a laboratory working in the field. For water analysis Thresh's "Water and Water Supplies" was the standard reference book.

On July 30th, 1917, a sample of water drawn from the moat at Ypres was obtained for examination as it was stated that there was a "mustard" or "greenhouse" odour perceptible in the vicinity, and it was suggested that gas might be dissolved in the water. On inquiry it was learned that on July 12th-13th gas shells had been used by the Germans and that analysis of the liquid filling had shown the presence of 70 to 80 per cent. dichlorethylsulphide, with small amounts of hydrocyanic acid and carbon disulphide. No evidence of these was found in the sample of water from the moat.

This was our first introduction to the "blister" gases. With the use of chlorine, phosgene and tear gases in the forward areas we had already become familiar. Now we found there would be others to deal with and were accordingly on the look out for new ones, with amusing results. Soon after a shell burst in a part of the town near the laboratory and the explosion was followed by the most abominable and persistent stench. Respirators were hastily donned and investigation of the "new gas" was set afoot. The mystery was solved when it was discovered that a large and well-filled cesspool in the neighbourhood of the laboratory had been blown up and the decomposing contents scattered far and wide.

On another occasion a complaint was received from the inhabitants of the village of Buysscheure that certain wells had been poisoned. On taking a sample I found that the water on standing showed at the surface an oily film smelling of cresol. Disinfectant had been poured down the drains of some of the houses by troops billeted in them and the cesspools had leaked into the wells and disinfected the village water supplies.

Water Samples

Examination of water samples formed the bulk of the work. These were obtained from (*a*) shallow wells, (*b*) deep wells, and (*c*) streams over a strip of country extending from the forward trenches occupied by the troops attacking the Passchendaele ridge, through the devastated region of mud and water-filled shell holes encircling Ypres to the less disturbed country in the vicinity of Poperinghe, back to the district of St. Omer.

Weather conditions, speaking generally, were fine until the end of July, when there came a change with heavy rain. This coincided with the opening of the British push towards Passchendaele and an advance to the Steenbeek. The forward area quickly became a quagmire. The autumn also brought much rain. Earlier samples were thus taken under dry conditions, but later in wet weather.

Geology of the area.—The predominating feature of the area is the very thick "Ypresien" deposit of clays corresponding in age to the London clay and thus of lower Eocene age. Beneath are sandy "Landenien" deposits, the equivalent of the English Thanet beds. These in Belgium are of the greensand or glauconitic type and were reached in the wells at four to five hundred feet depth.

Results of Analysis.

Shallow Wells of Ypres or Forward Area.

Nine samples from the area lying to the north-east of Ypres, between the Yser Canal and the Steenbeek, were examined. The soil had been thoroughly churned up by three years of bombardment and in many places was a morass of sticky mud reminding one of an uncooked Christmas pudding, in which the bodies of men, animals, unexploded shells, and other miscellaneous débris took the place of fruit and formed the only stepping stones by which access could be gained to the wells. Pools of muddy and filthy water were all around and as one would expect there was pollution of the wells to an extreme degree.

To the naked eye most samples presented a more or less turbid appearance, the colour varying from "almost colourless" and "pale straw" to "dark brown."

An offensive odour was detected in the water from Civilisation Farm, and a microscopic examination of the sediment showed the presence of macerated organic matter in which cotton fibres could be recognised. Excluding this sample which gave the extraordinary figure of three parts per 100,000 free and saline ammonia, the average was 0·458 parts or one hundred times the figure for a fairly satisfactory water.

Albuminoid ammonia ranged from 0·018 (well in a mine tunnel) to 0·5, the average being 0·173 parts per 100,000, seventeen times more than found in peaty waters. Oxygen absorbed from potassium permanganate in two hours varied from 11·2, an average figure for crude sewage, to 1·2. Total solids reached the highest at Below Farm, 400 per 100,000.

Chlorine in parts per 100,000 averaged 27·4 and varied from 65 to 2·5. Nitrates reached 20 per 100,000 at Below Farm, possibly due to pollution by the decomposition products of an explosive: at Venheule Farm 12 parts were recorded. Iron 2·2 parts were found in one sample. Considerable amounts of magnesium salts were present in one sample, sulphates being recorded as 21 parts.

Bacteriological examination showed lactose fermenters absent in 0·1 ml. and 0·2 ml. but present in 0·5 ml. and higher amounts in one sample from Houthoulst Forest. In all the other samples lactose fermenters were present in 0·1 ml. and larger quantities.

In the vicinity of Ypres most samples were turbid or opalescent: one showing a deposit, not only of quartz, mica and vegetable débris, but also of glauconite. Magnesium and other sulphates reached 32 and 33 parts in two specimens, with chlorine figures of 44 and 22 and total solids of 280 and 210, hardness of 54 and 44, suggesting

*Summary of Dr. McNaught's Presidential address to the Yorkshire Branch, 1938-9. This paper will be of particular interest now, when many of our members may soon find themselves engaged in work similar to that described by Dr. McNaught.

origin from London Clay deposits (Ypresien). Nitrates or nitrites were present in every sample.

In all cases bacteriological findings were unfavourable, lactose fermenters being found constantly in 0·1 ml. To the east and south-east of Ypres samples were taken in dug-outs, the fourth specimen being from a steel-lined well about 90 feet deep in Larch Wood. These were apparently less polluted than specimens from the more northern sectors.

Chlorine figures were comparatively low, only 4·8 at Fosse Wood. The oxygen absorbed reached only 0·072 at Railway Wood. The presence of iron was noted in proportions of 1 to 2 parts per 100,000.

All the specimens gave similar results bacteriologically, lactose fermenters in 0·1 ml. and larger amounts.

AVERAGES FOR YPRES SERIES (18 SAMPLES).

Ammonia (free and saline) ...	0·246
Ammonia (albuminoid) ...	0·126
Oxygen absorbed	1·07
Solids (total)	150
Hardness (total)	27·6
Chlorine (as chlorides) ...	21·7

Let us compare certain of the foregoing figures with those which have been suggested as standards for a "good sewage effluent."

	Ypres Wells.	"Good Sewage Effluent."
Free and saline ammonia ...	0·246	1·50
Albuminoid ammonia ...	0·126	0·15
Oxygen absorbed	1·07	1·50
Chlorine	21·7	10·0

Certain figures (ammonia and oxygen absorbed) for Ypres waters are rather better than those for a good sewage effluent; on the other hand chlorine is doubled. Little can be said in their favour as potable waters.

The sample from Civilisation Farm can be compared only with average figures for "crude sewage."

	Civilisation Farm water.	"Crude Sewage."
Free and saline ammonia ...	3·0	6·5
Albuminoid ammonia ...	0·5	1·5
Oxygen absorbed	11·2	10·0
Chlorine	55·0	10·0

Note that its chlorine figure is five-and-a-half times that of crude sewage.

Shallow Wells of Poperinghe or Mid-Area.

The waters of the second or Poperinghe group may be arranged under three heads; (1) three samples from Vlamertinghe, east of the town on the road to Ypres, (2) four from the districts to the north and east, and (3) five from the town itself.

(1) The appearance varied from clear and bright to slightly turbid, free and saline ammonia from 0·0008 to 0·06, albumoid ammonia 0·028 to 0·105, oxygen absorbed 0·09 to 0·26, total solids 26 to 50. The water from the Chateau had been treated by a water-sterilising plant and no lactose fermenters were found in 50 ml. of the water. The number of organisms on gelatine was 480, on agar 37.

(2) The chemical results of the samples showed less wide variations than met with in general. The bacteriological results of one set of samples were similar and good—no lactose fermenters in 50 ml., while others showed fermenters present in 0·1 ml. and upwards.

(3) Of five samples from Poperinghe itself, two were clear, one opalescent, one turbid with whitish deposit, and one had a violet tinge, which proved to be pigment in a growth of algae.

Free and saline ammonia ranged from 0·01 to 0·08, albuminoid from 0·015 to 0·06, oxygen absorbed from a low figure of 0·003 to 0·58.

Nitrates or nitrites were found in several samples. Lactose fermenters were present in amounts of 0·1 ml. upwards, except in the twelve foot deep well to the south-west of Poperinghe where the findings were, absent in 0·1, 0·2, and 0·5 ml. but present in 1 ml. upwards.

AVERAGES FOR POPERINGHE SERIES.

Ammonia (free and saline) ...	0·026
Ammonia (albuminoid) ...	0·045
Oxygen absorbed	0·23
Solids (total)	65
Hardness (total)	17·2
Chlorine as chlorides	9·5

Shallow Wells of St. Omer, Western or Base Area.

The Western group may be divided into three sets, namely, (1) three from the district to the west of Poperinghe, (2) six from the area round the north of Cassel, and (3) five samples taken from wells north-west of St. Omer.

(1) The samples did not differ greatly in certain respects, free and saline ammonia ranging from 0·001 to 0·003, albuminoid from 0·012 to 0·025, oxygen absorbed from 0·26 to 0·37.

Chlorine, however, varied from 1·6 to 8. One well showed lactose fermenters absent in 50 ml. though the growth on gelatine gave 22,400 per ml. and on agar 8,000 per ml.

Two samples showed lactose fermenters present from 0·1 ml. upwards.

(2) Of the six specimens from Cassel district one was that smelling of cresol as previously related. Its ammonia and oxygen absorbed figures were high; bacteriologically it was bad—285,000 organisms on gelatine and 153,600 on agar. Vegetable débris was present in three samples and specimens of cyclops in two.

(3) The last group of samples from St. Omer neighbourhood contained one which was turbid with vegetable débris and fair numbers of cyclops.

Free and saline ammonia varied from nil to 0·029, albuminoid from 0·004 to 0·22, oxygen absorbed from 0·02 to 0·33. The lowest chlorine figure was 4·5; the highest 9 parts per 100,000.

Some waters contained lactose fermenters in 0·1 ml. upwards, while others showed these absent in amounts below 10 ml. One sample gave only 2,400 organisms on gelatine and 400 on agar.

Omitting the Buysscheure specimen contaminated with cresol we get the following figures:

AVERAGES FOR ST. OMER OR BASE SERIES.

Ammonia (free and saline) ...	0·019
Ammonia (albuminoid) ...	0·036
Oxygen absorbed	0·16
Solids (total)	53
Hardness (total)	15·0
Chlorine as chlorides	5·3

Deep Well Waters.

So far these notes have related to shallow wells. There was also dealt with one sample from a well at Houkerque, sunk through superficial strata and Ypresien clay, striking the Landenien greensand at 370 feet and of a total depth of 399 feet.

This specimen though taken from the settling tank was still turbid, the deposit giving evidence of the presence of glauconite. Its free and saline ammonia was low, 0·003, while albuminoid ammonia reached 0·01. Oxygen absorbed was high at 0·6. Total solids figures was 110. The water was not hard, only 5·8 and chlorine 17·6, was typical of a greensand water. No nitrates or nitrites were found.

Pollution of the tank by dust was probable, the number of organisms on agar being 4,700 and on gelatine 40,000. Lactose fermenters were found in 10 ml. and upwards but not in 1 ml. or smaller amounts.

During the period September 12th to November 24th, nine samples were taken at the Laiterie, Poperinghe, from "Gough's Well," about 500 feet deep and sunk to the greensand.

Specimens taken direct from the freshly pumped water before settling were opalescent or turbid. On settling they became clear and bright and a grey-green deposit of quartz, ferro-magnesian minerals and glauconite was thrown down.

Free and saline ammonia varied from 0·018 to 0·06, albuminoid from 0·0004 to 0·07, an extraordinary range in amount. Oxygen absorbed highest figure was 0·25 and lowest 0·008. The figure for total solids lay usually in the region of 110 to 120, but on one occasion it fell to 40 and on another rose to 130. Hardness was from 2 to 8. Chlorine was very constant between 26·5 and 28. Only a trace of nitrates was found on one occasion. The residue contained much sodium carbonate.

Bacteriologically the worst specimen showed the presence of lactose fermenters in 0·1 ml. upwards and the best, absence in 0·1 ml., 0·2 ml., 0·5 ml., and 1·0 ml., presence in 10 ml. upwards. Averages worked out for the series of nine tests:

Ammonia (free and saline) ...	0·039
Ammonia (albuminoid) ...	0·019
Oxygen absorbed	0·09
Solids (total)	110
Hardness (total)	3·6
Chlorine as chlorides	27·3

Water samples from Streams, Rivers, Canals and Lakes.

These samples were taken over the area extending from the Steenbeek sector to the east of Ypres, occupied by the front line troops to the Canal de la Colme and the Canal de l'Aa, north of St. Omer at the base.

After the period of heavy rainfall which held up the British offensive in August, the water from the Steenbeek was very turbid and threw down a clayey deposit. There was a moderately high free ammonia 0·01, while albuminoid reached 0·25 and oxygen absorbed was very high at 2·3. Chlorine figure was 3·6. Note that iron was present 12 parts per 100,000, possibly due to the enormous amount of metal débris from exploded shells and other war material.

Two samples from Bellewards Lake gave 0·35 and 0·248 parts free ammonia, albuminoid 0·097 and 0·136.

Next comes a series of water samples from the moat surrounding Ypres and from the Yser Canal to the north of the town. Some were fairly clear, others opalescent or turbid and brownish in colour. Averages for the series worked out as follows:

Ammonia (free and saline) ...	0·069
Ammonia (albuminoid) ...	0·099
Oxygen absorbed	0·48
Solids (total)	48
Hardness (total)	8·7
Chlorine	8·1

Further west four samples were taken from Dickebusch Lake and one from its effluent stream the Dickebuschbeck near the Ypres laundry. The average of the four lake tests is here set out in contrast with the result of analysis of the stream:—

	Lake.	Stream.
Free and saline ammonia ...	0·032	0·006
Albuminoid ammonia ...	0·087	0·068
Oxygen absorbed	0·69	0·69
Solids (total)	20	20
Hardness (total)	6·4	7·0
Chlorine	2·9	1·6

The stream, in addition to the outflow from the lake, received water of obviously purer character from streamlets and springs. The lake was used as a source of supply by the British forces; the water was chlorinated before use for drinking.

Two samples from the neighbourhood of Poperinghe illustrate clearly pollution derived by the water in its passages through a populous place from which surface washings have entered:—

	Vleterbeek.	Canal.
Free and saline ammonia ...	0·04	0·27
Albuminoid ammonia ...	0·032	0·17
Oxygen absorbed	0·38	0·79
Solids (total)	40	50
Hardness (total)	12·5	11·5
Chlorine	3·3	5·2

The Eybecque, the boundary stream between France and Belgium, had been used as a source of drinking water for horses, and this supply was suspected to have produced colic in these animals.

With free and saline ammonia 1·0 part per 100,000, albuminoid 0·1 part, oxygen absorbed 2 parts and chlorine 5·4, it gave a result approximately equivalent to a mixture of 2 parts of sewage to 1 part of pure river water. One therefore did not rule it out as a possible source of colic!

Last of all are the two samples from the Canal de l'Aa, St. Momelin, and the Canal de la Colme at Schapstadt, north-west of St. Omer.

These canal waters were relatively pure, 0·006 and 0·004 part of free and saline ammonia and only in the Canal de la Colme was the albuminoid figure high. Oxygen absorbed was not excessive, 0·42 and 0·38.

Note also, nitrate, 0·01, in the Aa, chlorine was only 2·5 and 2·6. Bacteriological results were, lactose fermenters absent in 0·1, 0·2, 0·5 ml., present in 1 ml. (Colme) and absent in 0·1, 0·2, 0·5, 1·0 ml., present in 10 ml. (Aa).

Compare the averages for:—

(*a*) these two fairly pure canal waters,
(*b*) the Vleterbeek stream at Poperinghe,
(*c*) the Ypres moats and Yser canal.

Rivers and streams.	Canals, Colme and Aa.	Vleterbeek, Poperinghe.	Ypres moats and Yser Canal.
Free and saline ammonia	0·005	0·04	0·069
Albuminoid ammonia ...	0·023	0·032	0·099
Oxygen absorbed ...	0·40	0·38	0·48
Chlorine	2·45	3·3	8·1

Let us now turn from the demonstration of the increasing pollution of rivers, canals and streams as we pass from the base to the forward area, and compare the results with a summary of those previously obtained from the examination of shallow well waters, again using the three divisions, West (St. Omer), Mid (Poperinghe), and East (Ypres), or respectively, base, intermediate and forward areas.

Shallow Wells.	West or St. Omer Area. (Average of 18 samples.)	Mid or Poperinghe Area. (Average of 12 samples.)	East or Ypres Area. (Average of 14 samples.)
Free ammonia	0·019	0·026	0·246
Albuminoid ammonia ...	0·036	0·045	0·126
Oxygen absorbed ...	0·16	0·23	1·07
Total solids	53	65	150
Total hardness	15·0	17·2	27·6
Chlorine as chlorides ...	5·3	9·5	21·7

This table demonstrates clearly the increasing pollution of shallow wells as we pass from the comparatively undisturbed base area near St. Omer to the devastated area in front of and around Ypres, the scene of so many struggles between opposing armies that the soil had become saturated with decomposing organic material.

It is the hope of the writer that in compiling these notes and adding his comments he may have made some slight contribution to the study of the water supply problems which confront us in peace no less than in war.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

It has been decided that the office and certain departments of the London School of Hygiene and Tropical Medicine shall remain for the present at the School building in Keppel Street, Gower Street. Although courses normally lasting an academic year have necessarily had to be discontinued for the time being, it is hoped in the near future to provide short courses of instruction in tropical medicine and hygiene. The School library will be open between the hours of 10 a.m. and 5 p.m. (Saturdays 10 a.m. and 12 noon) and the librarian will be glad to answer inquiries by post or telephone.

Examinations for Sanitary Inspectors' Certificates.—The difficulties involved in holding evening classes at the present time are accentuated in the case of student sanitary inspectors by the small number who live near the institutes holding approved courses; also students have to travel much greater distances to their classes than is the case of most other evening students. The Royal Sanitary Institute and Sanitary Inspectors' Examination Joint Board have therefore reluctantly decided that it is impossible in present circumstances to insist on attendance at an approved course and have temporarily suspended Regulation 3 for the Sanitary Inspectors' Examination. The standard required from candidates and the scope of the examination will be unaltered, and candidates should attend a course if possible.

The Public Health Department in Time of War*

By G. F. BRAMLEY, M.D., D.P.H.
Medical Officer of Health, Borough of Bexley.

For many months now we have been inundated with A.R.P. circulars and memoranda from various Government Departments with regard to our civil defence functions, but very little collective thought appears to have been given to departmental activities under war conditions except by the North of England Obstetrical Society in connection with maternity hospitals and by the Joint Tuberculosis Council with reference to the Tuberculosis Service. In this paper the A.R.P. or civil defence aspects will not be stressed. I trust that discussion will show us what are essentials, as with a curtailed staff and limited capital and current expenditure under conditions of stress we shall have no time for continuation of old fads and foibles. Any public service absorbing money and personnel needed for the war and not essential for winning it would naturally have to suffer contraction of its activities. Let us consider whether we do any work which is not essential or which at least will not show fairly immediate useful results.

The everyday work of our departments will of course be changed, and will also depend on whether we are in evacuation, neutral or reception areas. Medical Officers of reception areas have probably the most urgent problems facing them, but I can only speak for a neutral area in a danger zone. A certain amount of our present day work will have to be shelved, and a good deal will need to continue.

We shall need to consider whether any of our present services are competitive and whether the energies and staff directed thereto should be drafted to more urgently required work. As an example in many areas there are both voluntary and municipal midwives, neither fully occupied. A further general point emerges at this stage, namely, that where we lose personnel the use of volunteers might be considered and if they are to be used the volunteers should receive some training now. To overcome this dilution the best experienced of our staffs must be retained. In view of extensive recent experience of volunteer services some of you may not be enamoured of this expedient.

I propose to deal shortly with a few of our services (although not necessarily from the competitive point of view).

*Paper read in opening discussion at a meeting of the County District Group, Society of Medical Officers of Health, Scarborough, July 7th, 1939.

Maternity and Child Welfare

The number of births will, it is expected, decrease with a prolonged war, but ante-natal care cannot be relinquished, so we shall need to retain at least one ante-natal centre in each area, and, where there is a maternity home or hospital, that would appear to be the appropriate place. The midwives' own homes will also be appropriate. Some clinics will be being used for other purposes, and in any case fixed sessions such as we have now will only lead to congregation of women, which must be discouraged. Ante-natal supervision could be given to all, or to certain cases referred by midwives, by the medical officer being at a given place over the whole of one or several days per week, using a system of timed appointments. The depleted number of general practitioners will not help, so we must retain as much of our Maternity and Child Welfare medical staff as possible.

I propose to discontinue child welfare sessions [(*a*) to prevent congregation of mothers and children, and (*b*) because centres will be required for other duties], and to put Health Visitors' time to continuous visiting, and by this means to reduce the period between visits to at least half that at present obtaining. Each Health Visitor will thus be required to pick out the cases to be referred to a central clinic to see a doctor, again using timed appointments.

The sale of dried milks will need to be carried on continuously instead of sessionally, and the use of the health offices or an arrangement for local shops to handle the food would get over any difficulty here. Auxiliary services such as dental, orthopaedic, etc., and the Home Help service will need to continue, the professional services varied according to demand and personnel.

Maternity Homes and Hospitals

To some extent our normal booking procedure may be modified. One area may need to take normal or difficult cases from another area.

With general loss and movement of midwives both domiciliary and institutional we shall no doubt need to draw on our Health Visitors as midwives from time to time.

School Medical Service

I can only speak as an observer, but the Kent County Council's proposed scheme does appear to get down to essentials with the discarding of routine medical inspection, and in it I see an

advance at least in the mental stimulation of the school medical inspector. School nurses will make frequent visits and with the co-operation of parents and teachers pick out cases for reference to school clinics with timed appointments, such additional school clinic sessions being arranged as necessary. The school medical officers will also make occasional visits to schools. As for special services, such as tuberculosis, venereal diseases, dental, etc., one anticipates that these will carry on in the ordinary way with the necessary adjustments from time to time as made necessary by demand or availability of staff.

The Tuberculosis Service

I would refer you to the memorandum* of the Joint Tuberculosis Council, even where you may not be directly concerned with the tuberculosis service. The memorandum deals not only with general principles but with details, and will act as an admirable guide in arranging other services. There is much in the memorandum which almost appears however to require legislation. Those who drew up the memorandum took into account the number of medical personnel not available in the Great War for their service and estimated now a probable loss of 20 to 25 per cent. The question of dilution of the staff by bringing in practitioners not trained for special duties and by administrative medical officers doing clinical work is dealt with, which comes back to the old essential debatable principle—is a professional man the ideal administrator or is he wasting his training and knowledge? I know that I am not here to discuss this, but I did set out to look for essentials.

Infectious Disease

Our attitude here will no doubt depend upon availability of hospital beds, diseases existing and medical personnel available. But one or two things do stand out; to be consistent and to be economical of effort, time and money, either scarlet fever should no longer be notifiable, or all streptococcal diseases should be made notifiable forthwith; scarlet fever cases should be admitted to hospital only if severe, complicated or if home conditions allow of no nursing facilities, etc.; of the notifiability we, locally, have no control, but we can control admission to hospital.

Those of us who have been timid of discontinuing disinfection or have retained it because of other considerations will need to consider now whether we should abandon it wholly or in part in war-time, in view of depleted staffs.

In our immunisation schemes we should not stop, and we shall have to keep a close eye on notifications to be ready to start further types of inoculation, etc., where diseases or possibilities of spread of disease indicate their use..

Office and Sanitary Inspectors' Work

Much of this will necessarily need to be temporarily abandoned, the former especially, where relating to records and statistics, and all records will need to be simplified and kept to a minimum, and should be planned in advance. The inspection and housing work in general will no doubt come to a standstill; it is obvious that our housing work, which is now almost a routine matter, will cease, the lack of personnel and diversion of capital will control that. There will be many essentials taking up the available staff, *e.g.*, food inspection and cleanliness, dealing with nuisances and so on. Some might consider whether routine meat inspection is such a vital and necessary activity that it might not be discontinued in part at least.

I have taken merely a quick glance of some of our departments' work, and one is aware of many important matters unmentioned. One could think of the new epidemiological features of reception and evacuation areas, with infectious disease possibilities, overcrowding, new diseases associated with diet changes, and deficiency diseases possible during a long war. The influenza epidemic of 1918 and the sleeping sickness and cerebrospinal outbreaks associated with massing of troops of those years give us food for thought, but with the general elasticity of our services we should be able to do something to prevent a few of the conditions with the new weapons which we now possess. We may expect occasionally to be late, but ours is a preventive service, so we must be prepared to put into instant action the knowledge we have (*e.g.*, chlorination of water supplies on the slightest doubt). We should, therefore, be able to do something to withstand the full shock of some new development. With other contingencies the knowledge of our futilities will stimulate us to reconsider our fundamental principles. I am reminded here that during the war 1914-18, surgeons working under new conditions and facing new tasks did not achieve the good results which were later obtained until they went back to the fundamental principles of Lister and the early aseptologists.

Lord Horder has referred to the accelerating influence of war on the advance of medicine and opportunities for large scale experiments do present themselves in the field of preventive medicine under such conditions. Without going further into the arguments for and against this attitude of mind, I maintain that if we pause sufficiently now and again to see where we are getting we should be able to rationalise our outlook and get down to essentials, and these *must* control the activities of our departments in time of war.

*Summarised in *Public Health*, June, 1939, p. 288.

Some Public Health Aspects of the Evacuation Scheme.

By R. C. WEBSTER, M.D., D.P.H.
Medical Officer of Health, Borough of Darwen.

The Evacuation Scheme has, apart from its regrettable importance in the sphere of international politics, many points of unique interest for the Medical Officer of Health. Its effects on administration are obvious, the shift of population from one area to another has necessitated corresponding transfers of staffs and many financial adjustments between Local Authorities. Considered as a large scale biological experiment on man, this mass movement of individuals has very great importance in relation to public health. The fact that the majority of those involved are children gives added importance to this aspect.

Immediate and Remote Effects of Evacuation

For the Medical Officer of Health there are immediate and remote effects to be considered. An opportunity is afforded for direct comparisons between the child population of large cities and those of smaller urban and rural areas in respect of nutrition, cleanliness, social adaptation, and intelligence. In the future it will be possible to assess the effect of the environmental changes produced on the children, and to some extent on the adults who have been transferred. The marked changes in "herd immunity" which must result should afford useful information for epidemiological studies.

Town v. Country Standards of Nutrition

In the matter of nutrition, it has, in this area been very clear that the average in the evacuated children, coming from the poorer and more crowded parts of a large city is below that of our local children. Since Darwen itself has suffered very severely from the prolonged depression in the cotton trade it seems fair to argue that poverty *per se* is not the controlling factor. This agrees with impressions already formed at Child Welfare Centres and School Medical Inspections; while it is true in general that the poorer children are less well nourished this is not always the case. Unsuitable feeding is a factor of the greatest importance. The majority of our local mothers do not breast feed their infants, but the proportion among the evacuated population appears to be even less. Those who have applied at the Welfare Centre for food at reduced cost demand dried foods in preference to liquid milk, even for older children up to the age limit of the clinic (5 years). The results are obviously inferior to those of our local children who have, at any rate from 1 year and upwards, had liquid milk. The use of grossly improper food, irregular feeding, the exclusion of sources of vitamins from the diet of the infants is only too common. It is reasonable to suppose that the initial handicap imposed by poor development in infancy, together with impairment of the processes of digestion, must continue to affect the child adversely in later years. In one instance, a woman who was well provided with money considered one pint of milk daily adequate for herself, and four children aged 8 years, 6 years, 3 years and 10 weeks! Although fresh fruit was cheap and abundant the children are in many instances given the more expensive tinned fruits in preference. The use of the "dummy" is rare in Darwen; among the city children, even up to 4 and 5 years old it is so common as to be a ready means of distinguishing them with considerable accuracy from the local children. Even the poorer children of small urban and rural areas have the advantage of fresher air and sunshine, and this has perhaps a general dynamic action on the nutrition and vitality of the child. It must be admitted that in dealing with possibly indifferent mothers living in an unsatisfactory environment the supply of dried foods may be necessary as a safeguard against dangerous methods of using fresh milk. One noted the apathetic or frankly contemptuous attitude of many of the mothers to advice given at Welfare Centres, their obvious belief that "Child Welfare" was a synonym for the distribution of dried foods at a clinic. One may seriously question whether present-day school curricula are not gravely lacking; it is surely essential that schoolgirls, the majority of whom are to be the mothers of the future, should be instructed in the elements of infant care.

The Problem of Enuresis

The frequency of enuresis, in many cases diurnal, has been remarkable. The supposition, at first sight plausible, that this is due to the emotional upheaval of removal and war-time anxiety, is negatived by the admissions of older children, or of parents, that the condition is of long standing. One may speculate how far this is the result of defective training, how far a real neurosis due to the stress of life in crowded city

areas, and the possible influence of unsatisfactory or inaccessible sanitary arrangements in slum dwellings. The disposal of these children is a problem of some difficulty. They do not appear to be mentally defective, indeed some are of high intelligence; the smaller authorities have no *premises to accommodate* them, and the practical difficulty of providing staff to care for them is very great. It is also probable that their parents would resist attempts at any kind of institutional treatment.

"Dirt" Diseases

"Dirt" diseases are astonishingly prevalent; of school children examined in this area 36 per cent. have some degree of verminous infestation, actual lice being detected in 13 per cent. It is true that the children were sent at the end of a school holiday period, and under circumstances of great haste; this does not alter the fact that a sample of the [illegible] population of a large city area shows [illegible]an one in every three is verminous. [illegible]es a poor standard of parental care [illegible]h bad environment. Scabies and [illegible]e also common. The indifference of [illegible]s in a few cases of vulvo-vaginitis is another [illegible]ex of this. It is clear that public health measures have still to make headway against much ignorance, apathy and criminal neglect.

Psychological Aspects

The effects of evacuation on the psychology of the children will be very complex. In some instances separation from parents and other members of the family will produce profound emotional stresses. The disciplinary changes involved will be important, on the one hand firmer, but kindly control and the example of higher standards of cleanliness and social conduct by hosts may be permanently beneficial to the children, and perhaps even to some of the adult evacuees; on the other hand the fact that the authority of hosts is ill defined and difficult of enforcement may lead to lack of effective control and supervision, especially of the older children, and thus juvenile delinquency may increase. Of this there are already some indications, *e.g.*, destructiveness, staying out at nights, etc. It is to be feared that unwelcome increases in illegitimacy and the spread of venereal disease may be among the results.

The present situation affords unique opportunities for comparative surveys of intelligence quotients in the two groups of children now in reception areas; it is to be hoped that these will be undertaken.

Epidemiological Possibilities

For the epidemiologist this mass movement is of the greatest theoretical and practical importance. The "herd immunity" of children from crowded city areas must be very different from that of children in reception areas; evacuation must also mean the introduction of strains of infecting organisms which are foreign to the district. These conditions are analogous to well-known procedures which have been adopted in experimental work on epizootics. Systematic study of the returns of infectious disease from the areas concerned should afford much useful information. The possibilities of the situation are illustrated by the fact that already in one semi-rural area sending patients to the Darwen Isolation Hospital, the arrival of the evacuees was soon followed by an outbreak of an unusually severe type of diphtheria. Prompt isolation, and the scattered nature of the population in that area fortunately kept the outbreak within small limits. In another neighbouring area an extensive outbreak of chickenpox occurred. It will be remembered that during the war of 1914-18 serious outbreaks of measles occurred among soldiers from isolated rural areas who were transferred to more urban surroundings. In the matter of evacuation we have the converse process.

APPOINTMENTS IN THE DEFENCE SERVICES

Many members of the Society who hold commissions in the Royal Navy or Army Reserves or in the R.N.V.R. or T.A., have already been called up for service with their units. We report below the appointments of which we have been informed.

BURNS, HENRY, O.B.E. (A.M.O.H. & S.M.O., Nuneaton M.B.), Surg.-Commander, R.N.

COLVILLE, E. T. (M.O.H., Bridlington M.B.), Lieut., R.A.M.C., D.A.D.H., Northumbrian Area.

FERGUSON, WM. (Sen. A.M.O., City San. & A.T.O., Birmingham C.B.), Lieut., R.A.M.C.

GREENFIELD, C. R. M. (Sen. A.M.O., I.D. Service, L.C.C.), Lieut. R.A.M.C., 7th Field Hygiene Section.

LINDSAY, J. CRAIG (M.O.H., Aldershot M.B.), Capt., R.A.M.C.

MCCOULL, G. (M.O.H., Prudhoe-on-Tyne U.D.), Surg.-Commander, R.N.V.R., H.M.S. *Calliope*.

MATTHEWS, J. N. (Dep. C.M.O.H. & S.M.O., Cambridgeshire C.C.), Surg.-Commander, R.N.V.R., H.M.S. *Norfolk*.

NASH, W. R. (A.M.O.H., Caerphilly U.D.), Capt., R.A.M.C., D.D.H., Welsh Area.

PARKINSON, G. S., D.S.O. (Assistant Director, Public Health Division, London School of Hygiene), Lieut.-Col., R.A.M.C., A.D.H., Eastern Command.

TOLEMAN, R. J. (Deputy M.O.H., Oxford C.B.), Lieut. R.A.M.C., D.A.D.H., West Lancashire Area.

TOMB, J. A. (A.M.O.H. & A.S.M.O., Lancs C.C.), Capt. R.A.M.C., D.A.D.H., Aldershot Command.

WILDMAN, W. W. (District M.O.H. & A.M.O., Norfolk C.C.), Surg.-Lieut., R.N.V.R.

TRAINING AND CONDITIONS OF SERVICE OF HEALTH VISITORS AND OTHER NURSES IN THE PUBLIC HEALTH SERVICE *

Basic Training.

1. The Society of Medical Officers of Health is of opinion that for all nurses engaged in public health services, involving domiciliary work or personal contact with the people in their everyday lives, the best basic training is that of a general trained nurse with the additional qualification of the Health Visitor's Certificate. The nurses whom they have in mind are those commonly described as health visitors, school nurses and tuberculosis visitors.

The various bodies associated with the training of, or representative of, health visitors have urged that a greater emphasis should be placed upon the elements of domestic and social science in the health visitor's work. In the view of the Society, the health visitor has a special value as a teacher because she is generally known to be a fully trained nurse, and this ensures the confidence of the mothers whom she visits in the soundness of her advice on the care of infants and young children. Moreover, nursing training is likely to instil in the health visitor herself the gift of sympathetic personal contact with individuals in their homes. Therefore, while recognising the importance of training and developing the health visitor's capacities as a teacher of personal hygiene and mothercraft, we believe that the essential factor in securing and maintaining the confidence of the public is the nursing training of the future health visitor.

There is practical evidence in support of the opinion expressed above, inasmuch as the great majority of local authorities require their health visitors to possess the general nursing training, and the alternative method of entry under the Board of Education (Health Visitors' Training) Regulations, 1919, is not looked upon with favour by local authorities.

Preliminary Training.

2. We think that this subject has been most adequately dealt with in the interim report of the Inter-Departmental Committee and support the suggestions put forward therein.

Improvement of Present Nursing Training.

3. The view expressed above does not mean that we are completely satisfied with the present training of the hospital nurse. In the Society's evidence previously presented to the Inter-Departmental Committee (para. 56)† we urged that the preventive outlook should be given a much bigger place in the training and examinations for nursing.

We note that the present recommendations made by the Joint Consultative Committee of Institutions for the Training of Health Visitors and by the organisations representing health visitors envisage a system by which the future health visitor would undergo a rather specialised course of general nursing training followed by training for the C.M.B. Part I examination, and a lengthened course for the Health Visitor's certificate. We are satisfied that the general course of nursing training would be adequate for the intending health visitor if it were made more preventive in outlook. With regard to the importance of other forms of nursing experience, we would refer the Committee to paragraphs 47 and 50 of our previous memorandum of evidence in which we drew attention to the value of experience in fever nursing and children's nursing.

Another point to be borne in mind in connection with the suggested specialised nursing course for future public health service nurses is that we doubt whether entrants as probationers for nursing training have, at that early stage, decided to which particular type of nursing they will eventually turn as a career.

Special Training.

4. With regard to the special training of the health visitor which follows her qualification as a nurse, we agree that the passing of the C.M.B. Part I examination is sufficient for the requirements of a health visitor, since the whole-time midwife will in future take a fuller part in ante-natal work under local authorities.

Regarding the training for the Health Visitor's Certificate, we think it unnecessary to extend the present six months to three terms or nine months. In our view the present syllabus contains subjects which should have already been covered by earlier training; for example, anatomy and physiology should have been covered during the general nursing training, and subjects relating to ante-natal and maternity work should be covered by Part I of the C.M.B. Course. It is our opinion that by the removal of such subjects from the syllabus or a reduction of them, time could be thus provided without extending the length of the course for a more extended study of other subjects or for new subjects of study if these be deemed necessary. We think that it should be made a condition that entrants for the Health Visitors' Course should already hold the State Registered Nurse Certificate and have passed the Part I C.M.B. Examination.

In regard to the examination for the Health Visitor's Certificate, the Society views with some concern a recent tendency to make questions of public health law and social legislation call for a detailed knowledge of these subjects. It is appreciated that a general knowledge of public health law and social enactments is essential for the health visitor, but such knowledge should not be made a major requirement in the examination.

Public Health Nurses in Rural Areas.

5. We note the recommendation made by the Women Public Health Officers' Association that the practice of delegating health visiting and school nursing work to county nursing associations is not desirable.

We agree that where practicable these services should be separate from district nursing, and in most areas, with modern transport facilities, there should not be any difficulty in keeping a whole-time health visitor and school nurse fully occupied, even where the population

* Memorandum submitted by the Society of Medical Officers of Health to the Inter-departmental Committee on the Nursing Services.

† *Public Health* (July, 1938) **51**, 305.

is scattered. In really sparsely populated areas, where there are practical difficulties in employing whole-time officers, we suggest that the grant made by the county council to the nursing association in respect of public health work carried out by its nurses should be dependent upon the nurses so employed holding the H.V.Certificate.

Salaries.

6. We agree with the recommendations that national scales of salary for health visitors, school nurses and tuberculosis visitors should be introduced on a basis similar to the Burnham scales for school teachers. The present salaries paid vary widely, even in the same areas. While we do not wish to commit ourselves to recommending any particular scale we would say that in our view the present salaries cannot be attractive to possible entrants into health visiting. The general level of such salaries should be materially improved.

Opportunities for Promotion.

7. Recommendations have been made that the number of appointments of superintendent health visitors should be increased, but it is clearly impossible in this service to create more than a limited number of such senior posts. The introduction of adequate scales might also mitigate the complaints now made about the lack of opportunities for promotion.

Other Conditions of Service.

8. Other points relating to conditions of service such as increments in respect of previous service, a uniform standard of holidays, and travelling allowances might properly be considered by a committee similar to the Burnham Committee for the teaching profession.

Security of Tenure.

9. We note that a recommendation to obtain security of tenure for health visitors has been placed before the Inter - Departmental Committee. The measure of security of tenure which is given to certain local government officers is designed to protect them against the odium which may attach to certain of their statutory duties. We are not aware of such conditions attaching to the duties of health visitors, and we think that specific evidence should be produced of the grounds for their claim for special protection.

Mastery of Midwifery of the Society of Apothecaries of London (M.M.S.A.).—In view of the present unsettled conditions, the Examination for the Mastery will not be held in November this year. The Examination next May will be held as usual if circumstances permit.

Regulations and forms of application for admission to the Examination may be obtained from: The Registrar, The Society of Apothecaries of London, Water Lane, Queen Victoria Street, E.C.4.

WARRINGTON C.B.: General Hospital and Whitecross Institution: R.M.O., Dr. M. H. Baillie.

WESTMORLAND C.C.: C.M.O.H., Dr. Wm. Alcock (Dep. M.O.H. & T.O., Greenwich Met. B.). Salary, £800 p.a.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointment.

ACCRINGTON M.B.: A.M.O.H., Dr. Marie S. Sutherland.

ALDERSHOT M.B.: Acting M.O.H., Dr. E. W. Routley in the absence of Dr. J. Craig Lindsay on military service.

AXBRIDGE R.D.: M.O.H., Dr. T. L. Scott.

BARROW-IN-FURNESS C.B.: Temp. A.M.O. for A.R.P., Dr. J. D. Mackay.

BIRKENHEAD C.B.: A.M.O. (Civil Defence—Medical Service), Lt.-Col. T. F. Ritchie, D.S.O., R.A.M.C. (ret.). Salary, £600 p.a.

BLAYDON, WHICKHAM & RYTON U.D.'s: M.O.H., Dr. T. M. Clayton (A.M.O.H., Barking M.B.). Salary, £800 p.a. and £75 p.a. for travelling and other expenses.

BOOTLE C.B.: A.M.O.H. & A.S.M.O., Dr. W. Fielding.

CAERNARVON C.C.: A.C.M.O.H., Dr. Margaret Jones Roberts.

DAGENHAM M.B.: Dep. M.O.H., Dr. J. A. C. Franklin. Salary, £600 rising by annual increments of £25 to £750.

DENTON & AUDENSHAW U.D.'s: M.O.H., Dr. Marshall Ross (A.M.O.H., Derbyshire). Salary, £800 rising by annual increments of £100 to £1,000 p.a.

EAST HAM C.B.: A.M.O.H., Dr. J. Twelly-Rees. Salary, £500 p.a., rising by annual increments of £25 to £700 p.a.

EAST KENT (No. 1) UNITED DISTRICT: Acting M.O.H., Dr. Clement Dunscombe (formerly M.O.H., Canterbury C.B.).

LEIGH M.B.: M.O.H., Dr. H. J. Peters (A.M.O.H., Gateshead C.B.).

LINDSEY (LINCS.) C.C.: Temp. A.T.O. & A.S.M.O., Dr. C. N. Faith.

LONDON COUNTY COUNCIL: M.O.H. & S.M.O., Dr. W. Allen Daley (Principal M.O., L.C.C.). Salary, £2,750 rising to 3,000 p.a.

NEWTON-LE-WILLOWS & GOLBORNE U.D.: M.O.H., Dr. H. S. Davies (A.T.O., Salford C.B.).

NORTH TIPPERARY C.C.: C.M.O.H., Dr. J. B. O'Regan.

PETERBOROUGH, SOKE OF, M.B.: M.O., Air Raid and War Emergency Services, Dr. W. Hanley Hawes. Salary, £600 p.a.

PLYMOUTH C.B.: Dep. M.O.H., Dr. W. N. McKay Mason (A.M.O.H., City of Kingston-on-Hull). Salary, £750 rising to £988 p.a.

PRESTON C.B.: A.M.O., M. & C.W., Dr. Miriam K. McAllum. Salary, £575 p.a. rising to £750.

ROSS C.C.: C.M.O.H., Dr. J. L. Horne (A.C.M.O.H., Stirlingshire C.C.). Salary £800 rising by £25 annually to £900 p.a.

SEAHAM U.D.: M.O.H., Dr. J. Roland Hetherington (A.S.M.O., Durham C.C.).

(Continued at foot of previous column)

8. *Work of the Council and Committees.*

During the session there were held three meetings of the Council (the usual fourth meeting in September having been postponed owing to the outbreak of war); five of the General Purposes Committee; one of the Trustees and three of the Accounts Sub-Committee; four of the Journal Committee; two of the Refresher Courses Committee; three of the special Committee on Air Raid Precautions and one of the special Committee on the Nursing Services. The proceedings of the Council and the recommendations of the various committees have been fully reported in PUBLIC HEALTH but the chief matters dealt with are here reported in order to remind members of the work which has been carried out on their behalf.

Matters on which our views were submitted to the Ministry of Health were :—

(1) Responsibility of Medical Officers of Health in regard to Air Raid Precautions (see paragraph 9).
(2) The Cancer Bill (see PUBLIC HEALTH, March, p. 184).
(3) The Milk Industry Bill (see PUBLIC HEALTH, March, pp. 181 and 185). We nominated two representatives (Sir Wm. Savage and Dr. Thos. Orr) to accompany a powerful deputation of the medical profession, which urged upon the Minister that abandonment of the proposals for giving adoptive powers to compel pasteurisation of urban milk supplies would be contrary to the interests of public health.
(4) Rag Flock Acts, 1911 and 1928. Evidence was submitted by the Society to the Departmental Committee which had the revision of these Acts under consideration, and recommendations were made in regard to standards of cleanliness of filling materials for furniture and bedding (see PUBLIC HEALTH, December, 1938, p. 68).
(5) Terminal Disinfection and School Closure. Representations were made that a revision of the memorandum issued by the Ministry and the Board of Education in 1927 was now due for consideration. Subsequently a special committee was appointed to examine and report on the existing memorandum (see PUBLIC HEALTH, December, 1938, p. 77 and March, 1939, p. 183).
(6) Regionalisation of the Ministry's Medical Staff (see PUBLIC HEALTH, May, 1939, p. 223, and June, p. 278).

We decided to publish in the journal (see March issue, pp. 181 and 187) a statement from the Medical Women's Federation, arising from a discussion between representatives of that body and the General Purposes Committee of the Society on the position of medical women in the public health service.

Recommendations made by the Dental Officers' Group as to the status of Chief Dental Officers were adopted with slight amendments by the Council (see PUBLIC HEALTH, December, 1938, p. 77). A proposed scale of salaries for Whole-Time Public Dental Officers was issued by the British Dental Association and on this your Council proffered certain observations (see PUBLIC HEALTH, June, p. 279).

Evidence was submitted to the Inter-Departmental Committee on the Nursing Services in regard to the training, salaries and conditions of service of health visitors and school nurses. Regarding the training and examination of sanitary inspectors, observations were sent to the R.S.I. and Sanitary Inspectors' Examination Joint Board, which had received recommendations on these subjects from a special committee.

Some disquiet having been felt in regard to the National Health Campaign, which was carried out by the Central Council for Health Education, a conference was held between representatives of the Society and the Central Council, and a statement in regard to health educational policy and the liaison between the two bodies was adopted by both Councils (see PUBLIC HEALTH, June, 1939, pp. 277).

9. *The Responsibility of Medical Officers of Health in regard to Air Raid Precautions.*

The position of the public health service, and particularly of medical officers of health, in relation to civil defence services was a subject which gave much concern to our members during the past year. A special committee representative of the various types of local authorities was set up with power to consult with the A.R.P. departments of the Government mainly on matters of hospital and casualty services and evacuation. This Committee, whose meetings were attended by observers from the Ministry of Health and the Home Office A.R.P. Department, presented a report to the Council at its February meeting, together with a lengthy memorandum in which the considered views of the Society on the organisation of casualty and hospital services and on the scheme for evacuation of mothers and children were put forward; emphasis was placed on the great additional burden of work and responsibility which has fallen upon medical officers of health in this respect. We approved the memorandum and it was submitted forthwith to the Lord Privy Seal, the Ministry of Health and the Home Office. It was decided not to print the memorandum in PUBLIC HEALTH in order to avoid any confusion with the documents which were at that time being issued by the Government departments. Many of the recommendations put forward by the Society have since been implemented.

10. *Co-operation with the British Medical Association.*

At its meeting of November, 1938, the Council accepted, with slight modifications, the recommendations of the conference between representatives of the Society and of the B.M.A. for the revision of the agreement reached in 1923 regarding co-operation between the two bodies on medico-political matters (see PUBLIC HEALTH, December, 1938, p. 78). An editorial in the January, 1939, issue of PUBLIC HEALTH, p. 89, set out the reasons for which we considered that the new terms of agreement were less restrictive on the freedom of action of the Society than were those of 1923; attention was also drawn to the advantages obtained by co-operation with the B.M.A. The revised agreement has since been adopted by the Association's Representative Body.

The Branches and Groups of the Society have considered the B.M.A. Scheme for a General Medical Service for the Nation and, as a result, an expression of opinion has been formulated by the General Purposes

Committee and has been adopted by the Council at its October meeting (see page 44).

No other matter has arisen during the past year on which special consultation has been called for between the Society and the Association.

We nominated Dr. James Fenton to act as the Society's representative on the Central Emergency Committee for the Medical Profession.

11. *Salaries of Public Health Medical Officers.*

During the past session the Branches and Groups were asked to consider whether the Society should request the British Medical Association to seek rediscussion of the salary scales laid down by the present Askwith Memorandum. The majority opinion was that, while several amendments in the existing scales were desirable, the time was not opportune for seeking revision. The Council concurred in this view and the Association was informed of it.

The position appears to be that, as a result of the combined efforts of the B.M.A., the Society and the medical Press, local authorities almost without exception have implemented the recommendations of the Memorandum. There are instances of Medical Officers of Health receiving no increments above the minimum commencing figure laid down and of senior medical officers whose salaries have not been placed upon the appropriate scale, but these diminish in number from year to year.

12. *Admission or Readmission of Former Offenders against the Salaries Policy.*

Another matter of great domestic interest to the Society was discussed by Branches and Groups during the session. This was the question whether those who had at some time applied for or obtained posts which were the subject of Important Notices in the *British Medical Journal* on the ground that they were not in accordance with the Askwith Memorandum should be considered suitable for admission or readmission to the Society after a given period of years. Although eight Branches and Groups appeared to be in favour of some change in the present policy of permanent exclusion, whereas five urged that there should be no change, the Council after long discussion of this difficult question decided to reaffirm the attitude that offenders against the declared salaries policy should at no time be considered eligible for membership.

13. *Refresher Courses.*

This was the second session during which the Society has undertaken the organisation of refresher courses. The year's programme was as follows :—

(*a*) Course for School Medical Officers, in Birmingham, February 21st to 24th, 1939. In collaboration with the Birmingham Education Committee (Dr. J. R. Mitchell, S.M.O.). Attended by 12 participants.

(*b*) Course for Medical Officers of Health, in Nottingham, April 25th to 28th, 1939. In collaboration with the Nottingham City Council (Dr. Cyril Banks, M.O.H.) and the Nottinghamshire County Council (Dr. A. C. Tibbits, C.M.O.H.). Attended by 22 participants.

(*c*) Course for Medical Officers of Isolation Hospitals, in London, April 25th to 28th, 1939. In collaboration with the London County Council, Public Health Department (Sir Frederick Menzies, M.O.H.). Attended by 22 participants.

(*d*) Course for Maternity and Child Welfare Medical Officers, in Edinburgh, May 9th to 12th, 1939. In collaboration with the Edinburgh City Council (Dr. W. G. Clark, M.O.H., Dr. T. Y. Finlay, M. & C.W. M.O.). Attended by 29 participants.

During the session 85 members of the public health service attended the courses. All expressed great appreciation of the value of this educational scheme. The Council accepted a proposal made by the Dental Officers' Group that a course for public health dental officers should be instituted during the session 1939-40. This was to have been held mainly at the Eastman Dental Clinic, in October, but the outbreak of war has unfortunately caused the indefinite postponement of this and the other courses announced for the coming session.

14. *Housing of the Society.*

On March 25th, 1939, there came to an end the Society's 34-year occupancy of the house at No. 1, Upper Montague Street (latterly known as Thornhaugh Street), Russell Square, and the move was made to temporary quarters in Tavistock House South, Tavistock Square, the property of the British Medical Association. Thanks to the negotiating ability of the Hon. Treasurer, the liability for cost of dilapidations due to the landlord was settled at a not unreasonable figure and it will be seen from the Revenue Account that this item and the cost of the actual move were discharged out of income without causing a deficit on the year's accounts. Details of the permanent quarters which it was decided that the Society should occupy in the third floor of the new South extension to Tavistock House were given in PUBLIC HEALTH, December, 1938, pp. 79 and 80. Later it was decided (see PUBLIC HEALTH, March, 1939, p. 185) to come to an arrangement with the Medical Defence Union, who would eventually be the Society's next-door neighbours in Tavistock House, for the joint use as a Council meeting room of a space between the two future sets of offices.

15. "*Public Health*," *Vol.* 52.

The Journal Committee have continued at their meetings to exercise general supervision of the contents and format of PUBLIC HEALTH. Financially the year has been a satisfactory one and the net cost of the journal to the Society is the lowest yet recorded. The outbreak of war will possibly diminish the size of the monthly issues but it is hoped that PUBLIC HEALTH will be the most effective means of keeping contact with members during a difficult period.

16. *The Retiring President.*

We congratulate Dr. Elwin H. T. Nash on his successful year of office. Dr. Nash retired from his post as Medical Officer of Health of Hendon and Isleworth during his Presidential year; knowing his energetic nature, we believe that his return to duty as acting M.O.H. for Stockton-on-Tees during the war period will not be unwelcome to him. He presided over a successful Annual Dinner and General and Council Meetings in a manner which showed that the choice of him for the chief office in the Society was well made.

17. *Other Officers and Retiring Members of the Council.*

This year a special expression of gratitude is due to Dr. George F. Buchan, our Hon. Treasurer. As mentioned above, the removal of the Society to new quarters involved extraordinary expenditure and it is therefore greatly to Dr. Buchan's credit that the Society's accounts for the year show a credit balance. Once again also thanks are due to Dr. F. T. H. Wood, our new President, and to Professor R. M. F. Picken for their services as Chairmen of the General Purposes and Journal Committee respectively.

The annual interchange of Branch and Group representatives on the Council involves the retirement of Drs. Louisa C. Adam, R. M. Galloway, A. Joe, H. C. Maurice Williams and C. Leonard Williams to whom the Society's thanks are due.

18. *Mrs. W. T. Swain.*

Mrs. Swain, the widow of our late esteemed caretaker, continued her husband's work for the 16 months between his death and the Society's removal from Thornhaugh Street, when her employment had to be terminated. In recognition of the long years of service given by her husband and herself to the Society, we decided to pay Mrs. Swain a gratuity of £25 to help her to settle into her new home, and a weekly pension of 10s. during her lifetime.

19. *The Consultant and Executive Secretaries.*

Capt. G. S. Elliston, M.P., has continued to act as Consultant Secretary during the past year, and his services both as a member of the Council and as a representative of the views of the public health service in the House of Commons have been much appreciated. We record also our high appreciation of the work of the Executive Secretary.

REPORT OF THE HONORARY TREASURER FOR THE SESSION 1938-39

I have pleasure in submitting my report for the year ended September 30th, 1939.

Revenue Account.

During the year certain extraordinary expenditure occurred relating to Pensions Schemes and the Removal of the Society from 1, Thornhaugh Street to Tavistock House South. Altogether expenses under these heads amount to £661 10s. 3d. In spite of this, it is satisfactory to record that the Society ended the year with an excess of income over expenditure amounting to £42 12s. 9d.

It has been possible to meet these special items out of the revenue account because of certain favourable conditions during the year. The income from Subscriptions has been £139 4s. 1d. more and the income from the Journal £124 10s. 5d. more than last year. On the other hand, the Society's income from Rent has been £98 11s. 0d. less than last year.

Expenditure in certain items has been considerably reduced. Notably the expenditure on the upkeep of the headquarters of the Society has been £95 9s. 1d. less than last year. There has also been a diminished expenditure in respect of travelling expenses amounting to £67 10s. 8d. On the other hand, there has been an increase in the Central Office expenditure of £59 11s. 10d. These various items indicate a saving over last year of £268 11s. 5d., and as last year the credit balance was £451 9s. 8d., it will be apparent that the current year has been highly satisfactory.

Balance Sheet.

The balance sheet discloses that the Society possesses investments which cost £7,834 19s. 7d. Last year the market price of these investments was £7,488 16s. 6d. It has to be noted that this year there has been a considerable fall in the value of these investments to £5,970 16s. 3d. This fall is, of course, due to present war conditions and it is hoped that the value of the investments will increase again when the war is over.

I desire again to record my gratitude to Mr. G. L. C. Elliston, the Executive Secretary, who has assisted me greatly in the careful keeping of the accounts and in judicious expenditure on behalf of the Society.

GEORGE F. BUCHAN,
October 30th, 1939. *Hon. Treasurer.*

REPORT OF THE EDITOR OF "PUBLIC HEALTH" FOR THE SESSION 1938-39

I beg to report that Volume LII of the Society's journal (the twelve issues from October, 1938, to September, 1939, inclusive) comprised 358 editorial pages, *plus* a special supplement of 24 pages reporting the Annual Conference on Health Education, as compared with 370 pages, *plus* a supplement of 16 pages in Volume LI. Whilst the total amount of editorial space was almost the same in both years, the revenue from advertisements notably improved during the year 1938-39, and if this progress had continued, it should have been possible to give members of the Society a larger journal and to introduce new features.

The war has postponed these hopes, but it has at the same time placed upon the Journal Committee and the Editor the important responsibility of making PUBLIC HEALTH as useful a link as possible between members whose normal exchanges of opinion at Branch and Group meetings are likely to be restricted.

In this connection it is of interest to note that during the past year, out of 42 special articles published in PUBLIC HEALTH, 11 were papers submitted directly to the journal by the authors; in the previous year nine out of 35 articles were so submitted. The factor of original contributions will be an important one at a time when Presidential addresses and other papers cannot be presented as usual through the Branches and Groups. Moreover, the Journal Committee have welcomed such original contributions because they reflect the standing of PUBLIC HEALTH as a medium for opinion and discussion.

Finally, I beg to record my appreciation of the guidance given to me by the Journal Committee and especially by the Chairman, Professor R. M. F. Picken, towards making PUBLIC HEALTH a live and representative organ of the Society, and to thank our printers, Messrs. H. R. Grubb, Ltd., for their continued co-operation.

G. L. C. ELLISTON,
October 27th, 1939. *Editor of* PUBLIC HEALTH.

Society of Medical Officers of Health.

BALANCE SHEET

At 30th September, 1939 (with comparative figures of previous year),

LIABILITIES.

1938. £ s. d.		£ s. d.	1939. £ s. d.
	CAPITAL ACCOUNT—		
4000 0 0	Mr. Berridge's Bequest ...	4000 0 0	
150 0 0	Dr. Neech's Gift	150 0 0	
4150 0 0			4150 0 0
	ACCUMULATED BALANCES—		
4028 4 9	Resulting from accrued sums being excess of income over Expenditure	4479 14 5	
451 9 8	*Add* Excess of Income over Expenditure, 1938/39 ...	42 12 9	
4479 14 5			4522 7 2
451 10 0	Furniture and Library... ...		451 10 0
25 0 0	Provision for Doubtful Debtors		25 0 0
44 14 0	Sundry Creditors		48 17 4
9150 18 5		9197 14 6	9197 14 6

ASSETS.

1938. £ s. d.		£ s. d.	1939. £ s. d.
	*INVESTMENTS AT COST—		
4000 0 0	£4099 17s. 5d. India 3% Consolidated Stock... ...	4000 0 0	
500 0 0	£514 16s. 0d. Metropolitan 2½% Consolidated Stock ...	500 0 0	
659 9 6	£650 3½% War Loan	659 9 6	
250 0 0	£320 16s. 7d. 2½% Consols ...	250 0 0	
511 13 3	£500 3½% Conversion Stock ...	511 13 3	
921 3 10	£1,000 Local Loans 3% Stock	921 3 10	
483 3 6	£500 Manchester Corpn. 3% Stock...	483 3 6	
509 9 6	£500 Birmingham 3% Stock ...	509 9 6	
7834 19 7			7834 19 7
165 0 0	Furniture and Library ...		165 0 0
1 0 0	Telephone: payment in advance...		1 0 0
52 5 8	Purchase of Lease		– – –
	SUNDRY DEBTORS—		
35 14 11	Dividends accrued	35 10 7	
89 17 6	Advertising	137 19 6	
7 3 3	Reprints	3 5 6	
31 10 6	Lettings...	34 18 6	
16 1 0	Miscellaneous	26 15 4	
180 7 2			238 9 5
	CASH BALANCE—		
1522 8 7	At Bank	1145 7 8	
1 3 5	*Less* Petty Cash overspent ...	– – –	
1521 5 2		1145 7 8	
603 19 2	*Less* Cheques Outstanding ...	219 16 2	
917 6 0		925 11 6	
	Add Petty Cash Underspent ...	32 14 0	
			958 5 6
9150 18 5			9197 14 6

*Note.—The market price last year and at the present time.

1938. £ s. d.		1939. £ s. d.
3792 10 0	£4099 17s. 5d. India 3% Stock at 92¼ and 66¾	2736 15 0
491 16 6	£514 16s. 0d. Metropolitan 2½% Stock at 95½ and 92	473 16 0
648 7 6	£650 3½% War Loan at 99¾ and 88¾	576 17 6
311 2 6	£320 16s. 7d. 2½% Consols at 96¾ and 63¾	204 12 9
497 10 0	£500 3½% Conversion Stock at 99½ and 87¾	438 15 0
850 0 0	£1000 3% Local Loans at 85 and 74½	745 0 0
417 10 0	£500 Manchester 3% Stock at 83½ and 73	365 0 0
475 0 0	£500 Birmingham 3% Stock at 95 and 86	430 0 0
7483 16 6		5970 16 3

I hereby certify that I have audited the several accounts of which the foregoing is the Balance Sheet, and have verified the Capital Investments and cash balances set forth above.

The entries appear to be complete and correct, and to present a true record of the financial position of the Society.

Dated this 24th day of October, 1939.

(Signed) J. T. HARRIS,
Auditor.

REVENUE ACCOUNT

Year ended 30th September, 1939 (with comparative figures of previous year).

EXPENDITURE.

1938. £ s. d.		£ s. d.	1939. £ s. d.
105 0 0	*To* Ground Rent	152 10 0	
93 2 8	„ Rates, Taxes, etc.... ...	74 19 6	
157 3 0	„ Redemption of Lease ...	52 3 8	
5 15 6	„ Repairs and Decorations ...	7 18 6	
90 11 6	„ Fuel and Lighting ...	60 17 6	
14 0 10	„ Maintenance	21 15 3	
465 13 6			370 4 5
	„ SALARIES—		
475 0 0	Executive Secretary ...	500 0 0	
149 8 0	Caretaker (to March 25th, 1939)	74 2 0	
624 8 0			574 2 0
	„ JOURNAL ACCOUNT—		
578 12 2	Printing	585 2 9	
21 13 9	Reprints	22 15 2	
150 0 0	Salary of Editor	150 0 0	
40 17 9	Editorial	40 11 6	
75 15 0	Clerical Assistance ...	79 10 0	
19 17 6	Libel Insurance... ...	18 8 6	
166 9 6	Postages	171 9 4	
1053 5 8			1067 17 3
130 8 9	„ ROLL OF MEMBERS PRINTING		123 11 0
46 15 10	„ GENERAL PRINTING ...		52 0 8
136 5 8	„ STATIONERY		152 9 8
	„ CENTRAL OFFICE—		
85 12 3	Postages	79 19 9	
21 9 8	Telephone	21 19 0	
352 15 0	Clerical Assistance ...	423 15 0	
45 15 10	Miscellaneous	63 0 11	
20 9 6	Library	12 12 2	
17 6 9	Office Equipment ...	1 14 0	
543 9 0			603 0 10
21 0 0	„ Auditor's Fee		21 0 0
72 14 2	„ Dinner Account		65 15 8
308 10 9	„ Travelling Expenses ...		241 0 1
5 5 0	„ Neech Prize		5 5 0
	„ PROPORTION OF SUBSCRIPTIONS DUE TO BRANCHES—		
41 10 0	Dental Group	42 5 0	
5 10 0	Eastern Branch	6 5 0	
12 12 6	East Midland Branch ...	12 5 0	
42 17 6	Home Counties Branch	43 12 6	
32 12 6	Metropolitan Branch ...	32 0 0	
19 2 6	Midland Branch ...	18 10 0	
27 12 6	North Western Branch	27 15 0	
13 5 0	Northern Branch ...	13 5 0	
11 17 6	Scottish Branch... ...	12 15 0	
9 7 6	Southern Branch ...	9 10 0	
11 15 0	Welsh Branch	11 10 0	
10 10 0	West of England Branch	11 7 6	
22 0 0	Yorkshire	21 2 6	
260 12 6			262 2 6
30 0 9	„ BRANCH AND GROUP MEETING EXPENSES		24 6 11
	„ PENSION SCHEMES—		
	Executive Secretary ...	38 16 3	
	Caretaker: Gratuity ...	25 0 0	
	Weekly Pension ...	13 12 4	
			77 8 7
	„ REMOVAL EXPENSES—		
	Dilapidations	450 0 0	
	Equipment and Alterations	127 6 8	
	Sundry Expenses ...	6 15 0	
			584 1 8
451 9 8	„ *Balance*: being excess of Income over Expenditure ...		42 12 9
4149 19 3			4266 19 0

INCOME.

1938. £ s. d.		£ s. d.	1939. £ s. d.
3008 13 4	*By* SUBSCRIPTIONS		3147 17 5
	„ INCOME FROM INVESTMENTS—		
90 14 2	Dividends on £4,099 17s. 5d. India 3% Consolidated Stock	89 3 4	
9 9 10	On £514 16s. 0d. Metropolitan 2½% Consolidated Stock	9 6 8	
14 0 0	On £650 3½% War Loan	22 15 0	
5 18 4	On £320 16s. 7d. 2½% Consols	5 16 4	
13 2 6	On £500 3½% Conversion Stock	12 13 10	
19 6 3	Interest on £1,000 Local Loans at 3%	21 15 0	
11 1 3	On £500 Manchester Corporation Stock at 3%...	10 17 6	
11 1 3	On £500 Birmingham Corporation Stock at 3%...	10 17 6	
7 14 2	On £500 West Ham B C. 3% Mortgage... ...	– – –	
182 7 9			183 5 2
53 7 0	„ REFRESHER COURSE: Balance		14 17 0
	„ RENT—		
175 0 0	Maisonette	87 10 0	
41 10 6	Sundry Lettings ...	30 9 6	
216 10 6			117 19 6
	„ JOURNAL ACCOUNT—		
43 11 7	Sales	54 2 11	
114 18 9	Subscriptions	114 13 2	
30 15 8	Reprints	23 4 8	
458 17 0	Advertising	580 12 8	
648 3 0			772 13 5
40 17 8	„ ROLL OF MEMBERS ADVERTISING		30 6 6
4149 19 3			4266 19 0

COUNCIL MEETING.

A meeting of the Council was held in the Council Chamber at the Council House, Birmingham (by the kind courtesy of the Birmingham Corporation) on Friday, October 20th, 1939, at 2 p.m. The retiring President (Dr. E. H. T. Nash) was in the chair and there were also present Dr. F. T. H. Wood (President-elect), Drs. J. S. Anderson, H. Stanley Banks, Capt. G. S. Elliston, M.P., Sir Wilson Jameson, Drs. G. Jessel, R. H. H. Jolly, Catherine Morris Jones, G. Lilico, Prof. R. M. F. Picken, Drs. T. N. V. Potts, F. A. Sharpe, J. E. Spence, J. A. Stirling, Mr. A. Gordon Taylor, Drs. Ernest Ward and H. Gibbons Ward.

Apologies for absence were received from Drs. Cyril Banks, Vynne Borland, G. F. Buchan, J. J. Buchan, James Fenton, Sir Francis Fremantle, M.P., Drs. C. Herington, J. J. Jervis, A. Joe, James Mair, Thomas Orr, A. T. W. Powell, T. P. Puddicombe, Muriel Radford, Sir William Savage, Caryl Thomas and A. G. G. Thompson.

The minutes of the meeting held on May 19th last (published in PUBLIC HEALTH, June, 1939, pages 277 to 284), were confirmed.

INSTALLATION OF THE PRESIDENT.—The retiring President installed into the chair Dr. F. T. H. Wood, the President of the Society for the session 1939-40, wishing him a successful year of office despite the difficult circumstances with which we were faced; he promised Dr. Wood the unstinted support of all members of the Society. The President briefly returned thanks.

WELCOME TO NEW MEMBERS.—The President welcomed Drs. George Jessel and J. E. Spence on the occasion of their first attendance at a Council meeting.

REPORT OF THE GENERAL PURPOSES COMMITTEE.—The President withdrew from the Chair to present the following report of the General Purposes Committee :—

1. A meeting of the General Purposes Committee was held at Tavistock House on Thursday, June 15th, 1939, at 2 p.m.

PRESENT.—Dr. F. T. H. Wood (Chairman), Drs. J. S. Anderson, Cyril Banks, Vynne Borland, G. F. Buchan, J. J. Buchan, James Fenton, R. H. H. Jolly, Catherine Morris Jones, Ernest Ward and H. Gibbons Ward.

Minutes of the meeting held on March 17th were confirmed and signed by the Chairman.

STANDARD OF ACCOMMODATION UNDER THE HOUSING ACT, 1936. (Arising from Minute 73.)—The Committee considered a proposition put forward by Dr. J. J. Buchan that in any future amendment of the present overcrowding standard, the annex to the Fifth Schedule of the Housing Act, 1936, should be altered to read as follows :—

(*a*) *One Room.*—If this room has a floor area of more than 160 square feet, the permitted number should be two. If less than 160 square feet and more than 120 square feet the permitted number should be one. Under 120 square feet, none.

(*b*) *Two Rooms.*—Where the two rooms jointly contain more than 220 square feet, three. Where they contain more than 160 square feet, two, and less than 160 square feet, one.

(*c*) *Three Rooms.*—One of the rooms shall be regarded as a living-room and the permitted number to occupy the house shall be determined by the floor area of the remaining two rooms as shown in Table II.

(*d*) *Four Rooms.*—One of the rooms shall be regarded as a living-room and the permitted number to occupy the house shall be determined by the floor area of the other three rooms as shown in Table II.

(*e*) *Five Rooms or More.*—Two of the rooms shall be regarded as living-rooms and the permitted number to occupy the house shall be determined by the floor area of the other rooms as shown in Table II.

The Committee decided to RECOMMEND the Council to inform the National Housing and Town Planning Council that in view of the Society the above standard might be put forward at an opportune time as an amendment of the present standard.

3. SALARIES OF WHOLE-TIME DENTAL OFFICERS. (Arising from Minute 74.)—The Committee further considered the scale of salaries for Public Health Dental Officers (interleaved) formulated by the British Dental Association. The following comment was received from the Dental Officers' Group :—

> "The Group considered the matter of the B.D.A. memorandum on salaries on May 13th and came to the conclusion that the minimum salary for chief dental officers should be £650. This is a logical conclusion when it is stated that the chief dental officer should not be in receipt of a salary below that of his assistants and when it is also stated that the salary of the assistant dental officers should rise to £650. In general it was felt that no good purpose would be served by making extensive alterations."

The Committee agreed with the view of the Group that the suggested commencing figure for a senior dental officer might lead to anomalies. It was decided to inform the British Dental Association that the Committee had in mind to recommend the Council of the Society to support a scale of £650 rising by annual increments of £50 to £800 for the chief or senior dental officers. It might then be possible to discuss the scale further with the Association before making a recommendation to the Council.

4. BRITISH MEDICAL ASSOCIATION SCHEME FOR A GENERAL MEDICAL SERVICE SCHEME FOR THE NATION.—It was reported that following the Committee's decision at their meeting on December 16th to request the observations of the Branches and Groups on the B.M.A. scheme, replies have now been received from eight Branches and two Groups (interleaved).

After discussion, the Committee decided to RECOMMEND the adoption by the Council of the following resolution :—

> "That the Society of Medical Officers of Health, while welcoming the proposals of the British Medical Association for a General Medical Service for the nation as a contribution to the wider medical needs of the people, nevertheless regards as inadequate the provision for correlating services locally and centrally administered, and for linking hospital and other institutional care with domiciliary services and treatment; and is not satisfied that the changes suggested in paragraphs 80 to 83 inclusive would preserve for the public the benefits now afforded them through public health departments."

5. AIR RAID PRECAUTIONS.

(*i*) *Memorandum from Dr. Morley Mathieson* (M.O.H., Birkenhead C.B.) on the position of Medical Officers of Health in the administration of medical services associated with civilian air defence, and summary of replies received from M.O.sH. of county boroughs in regard to extra staff allocated for A.R.P work was considered. After discussion it was decided to defer a decision on this matter until the September meeting of the Committee.

(*ii*) *Resolutions from the East Midland Branch.*—The Committee considered the following resolutions :—

> (*i*) After fairly long experience in trying to work and organise a Casualty Service of A.R.P. on a voluntary basis, the East Midland Branch are definitely of the opinion that the voluntary basis of the organisation of the A.R.P. Casualty Service (exclusive of hospital services) as at present constituted is definitely unlikely to result in a workable service in time of war, and that all Volunteers in A.R.P. should be under definite obligations similar to those in force in the Territorial Army."

The Committee decided to refer the Branch to the expression of opinion already put forward by the Society to the Lord Privy Seal and Government departments in paragraph VI of the memorandum prepared by the A.R.P. Committee, where it was stated that (*a*) without some form of contractual obligation be undertaken by recruits the task of organisation of casualty services would be impossible; (*b*) the lack of definite conditions of service has proved to be a serious impediment in the recruitment and training of personnel.

> (*ii*) With reference to Section 11 of the Board of Education Circular 1469 on A.R.P. Section 11 states that if possible, evacuating authorities, when sending large numbers of school children to receiving authorities, should send the necessary Medical and Nursing Staff with them, but there is nothing definite about this, and, in fact, one of our members said that in conversation with Medical Officers of certain authorities, that they did not see how it would be possible to send such staff.
>
> The Branch at its meeting last Thursday, therefore, decided to ask the General Purposes Committee to consider whether it would be advisable to take this matter up with the Board of Education or the Ministry of Health, and get some definite ruling that where large numbers of children are sent into an area, the requisite number of Medical and Nursing Staff shall be definitely provided for them.

On this point the Committee decided to reply that in their view the recommendation already made by the Board of Education would be amplified in time of emergency, but that it is unlikely that any more definite instructions could be given at present.

(*iii*) *Cremation in Time of War.*—The Committee considered a further letter from Mr. H. Piggott relating to the Society's decision on his memorandum.

The Committee decided that while the Society was anxious to give all possible support to the advancement of cremation, the practical difficulties of this method of the disposal of the dead in time of war were such that they could not recommend the Society to support this particular scheme.

(*iv*) *Position of the Society in Time of War.*—The Committee felt that arrangements to be made for continuing the work of the Society in the event of war would best be left in the hands of a small committee with executive powers, to consist of the President, Hon. Treasurer, Chairman of the General Purposes Committee and the Chairman of the Journal Committee.

The Council decided that executive authority should be vested in the General Purposes Committee and that the smaller Emergency Committee be not reappointed for the time being.

6. CENTRAL COUNCIL FOR HEALTH EDUCATION.

(*i*) *Proposed Booklets.*—The Committee considered the proposals on which the Central Council desired the observations of the Society as to the need for certain booklets which might be published by the Central Council for distribution to local authorities where requested.

The Committee discussed the question whether a standard booklet could be produced which would meet the requirements of individual local authorities. They finally thought it desirable that the Committee should see at their next meeting samples of booklets issued by one or two local authorities, and it was also pointed out that the Central Council would be responsible during the next month or so for the distribution of the booklet entitled, "Health of Mother and Child," produced for the Empire Exhibition, Glasgow, and that the experience with this publication might be some guide as to the demand for other similar publications. The matter was, therefore, deferred for the September meeting.

(*ii*) *Current and Contemplated Work of the Central Council.*—The Executive Secretary, in accordance with the terms of the agreement reached at the meeting of representatives on April 19th and since confirmed by the Council of the Society and the Central Council for Health Education, submitted a report (interleaved) on the present activities of the Central Council and on the proposed changes to the constitution.

The Committee decided to await a formal request from the Central Council for its views of the alteration of the constitution.

With regard to the Central Council's proposal to make a trial Civil Defence Exhibit, the Committee instructed the Executive Secretary to advise the Central Council that in their view the production of such an exhibit was outside its true sphere and that it would be preferable to keep to exhibitions as before strictly in relation to public health and hygiene.

Regarding the method of liaison between the Society and the Central Council, the Executive Secretary stated that he had sent copies of his short report to all members of the Society's representatives on the Central Council, so that if any of them considered any other matters of importance they would be able to draw attention to them.

[At the Council meeting it was reported that the Central Council for Health Education proposed to continue work on a reduced scale and to submit proposals to the Ministry of Health for leaflets, posters and films suitable for present needs.]

7. ROLL OF ASSISTANT NURSES.—The Committee had referred to them with power to act, a letter dated May 10th, from the Ministry of Health enquiring as to the Society's views on the recommendation of the Inter-Departmental Committee of the Nursing Services for the establishment by the General Nursing Council, under certain conditions and safeguards, of a Roll of Assistant Nurses.

Dr. Cyril Banks informed the Committee that the Society's special committee on the Nursing Services at its meeting that morning had been generally in favour of the establishment of a Roll of Assistant Nurses but were concerned at the freedom which would be given to the untrained nurse to do domiciliary nursing without supervision by a trained nurse.

The Committee decided to inform the Inter-Departmental Committee that the Society was in favour of the establishment of a Roll of Assistant Nurses with the proviso that the General Nursing Council should be given power to prescribe by rules the functions and duties of such nurses.

8. TRAINING AND CONDITIONS OF SERVICE OF HEALTH VISITORS.—Dr. Cyril Banks reported that the Society's Committee on the Nursing Services had that morning prepared a draft memorandum of evidence, supplementary to the previous evidence, for submission to the Inter-Departmental Committee.

In view of the fact that this evidence regarding Health Visitors and other public health nurses had been requested in February, Dr. Banks asked the General Purposes Committee to approve the submission of the statement forthwith without waiting for the Council meeting which would not be held until September. The General Purposes Committee agreed with this course. [The statement is published on p. 35 of this issue.]

9. ANALGESIA.—The Committee took note of the following resolution passed by the Annual Meeting of the National Federation of Women's Institutes :—

> "This meeting urges the Executive Committee to take all possible steps to get the new methods of analgesia made available for all countrywomen in childbirth in their own homes provided that there are adequate safeguards."

The Committee sympathised with the Federation's wishes but their attention was drawn to the practical difficulties of implementing this policy.

10. MEDICINE STAMP ACT.—The Committee received a letter dated May 26th from the Socialist Medical Association asking for opposition to the Government's proposed repeal of the Medicine Stamp Act :—

> (*a*) Every Committee which has discussed this subject has reported in favour of publishing formulae on every drug package.
>
> (*b*) It will remove even the present resemblance of control over these preparations.
>
> (*c*) It must lead to more extensive self-medication.
>
> (*d*) It is unlikely to mean any saving to the consumer but rather increased profits to the manufacturers.

The Committee decided to reply to the Socialist Medical Association that the Society regrets any step that may lead to the greater use of secret remedies by the public.

11. DELIVERY OF FOOD AND MILK IN PRIVATE CARS.—Professor Picken forwarded correspondence with Dr. H. R. Tighe (M.O.H., Swansea C.B.) regarding the practice of delivering milk and other foodstuffs in saloon cars on which the vendors displayed their names by hanging cards inside the window of the car or by pasting paper on the glass. Dr. Tighe was doubtful whether this practice could be stopped by the powers given under the new Food and Drugs Act.

The Committee decided to write to Dr. Tighe that Section 30 (*e*) covered regulations affecting the transport of bread, and regarding milk they drew attention to Section 29 (*l*) of the Milk and Dairies Order, 1926, which covers transport of milk by rail or *road*.

12. CONTROL OF SANITARY ADMINISTRATION.—The Committee considered a letter from Dr. John Stokoe (M.O.H., Blyth M.B.) in which he reported that the Northern Centre of the Sanitary Inspectors' Association had approached his Town Clerk with a request that the whole of the sanitary administration be placed under the control of a Senior Sanitary Inspector under the general direction of the M.O.H. The S.I.A. later urged also "That all sanitary matters should be transmitted to the appropriate committees by the Senior Sanitary Inspector, who should have the direction of the same as is the usual custom with other local authorities." Apparently objection had been taken to the fact that the Housing Inspector at Blyth was not a qualified Sanitary Inspector although he was qualified in building construction.

13. ARREARS OF SUBSCRIPTION.—The Executive Secretary reported that the position regarding arrears was as follows :—

Members in arrears for 3 years or more ...	24
" " " 2 "	54
" whose subscriptions are unpaid for the current year	168

The Committee agreed that the members in arrears for three years or more should forthwith be given notice that their membership would be terminated failing payment.

14. RECRUITMENT.—The Executive Secretary reported that the total number of elections during the present Session had been 99 (86 Fellows and 13 Associates) as compared with a figure of 134 for the last session. Six candidates were awaiting election at the next Ordinary Meeting.

15. REPRESENTATION OF THE SOCIETY.—The Committee appointed the following, subject to confirmation by the Council in September next :—

> General Council for the National Registration of Plumbers, Annual Meeting, Torquay, July 12th—Dr. J. V. A. Simpson.
>
> National Milk Publicity Council, 1939-40—Dr. Thomas Orr.

[The Council confirmed these nominations.]

16. DEPUTATION OF YOUTH ORGANISATIONS.—Dr. Vynne Borland reported that he had attended as a representative of the Society in a deputation of Youth Organisations before the Minister of Health and the President of the Board of Education. The deputation had requested that facilities for the education of young adults in social hygiene be given Government assistance. The Minister had requested the leading members of the deputation to act as a committee in putting forward concrete suggestions.

17. AGE LIMIT FOR M.O.H. APPOINTMENTS.—The Executive Secretary reported that he had drawn the attention of the B.M.A. to the age limit of 35 imposed for the appointment of M.O.H., Canterbury, and that letters had been sent by the B.M.A. to the city council and to the Ministry requesting that this age limit be raised.

The report was adopted with the amendments under items 5 (iv), 6 (ii) and 15.

REPORT OF THE JOURNAL COMMITTEE.—Prof. R. M. F. Picken (Chairman) presented the following report of the Journal Committee :—

1. Your Committee, consisting of the President (Dr. E. H. T. Nash), Drs. G. F. Buchan, James Fenton, Professor R. M. F. Picken, Drs. E. W. Caryl Thomas and Ernest Ward, has held four meetings during the Session 1938-39.

2. We elected Professor R. M. F. Picken to be Chairman of the Committee for the second year.

3. We have kept under general review the contents of the journal, and the Chairman, in particular, has undertaken to read through and approve for publication all papers and original contributions submitted. One gratifying feature of the year has been the increasing proportion of original contributions of high quality submitted for publication in PUBLIC HEALTH, which seems to indicate that the journal is being more widely read.

4. The business results for the last quarter of the session were very satisfactory, in so far as the gross advertisement revenue was the best recorded for any quarter in this or any other recent year, and printing costs for the same period were lower than those of preceding quarters.

5. Financially, the year has been the most satisfactory since 1914, when an exceptional advertisement revenue was obtained. The figures of expenditure and income set out in the Revenue Account of the Society show substantial increase in advertising revenue and a further steady rise in sales and subscriptions, with the result that the net cost of the journal to the Society is below £300, whereas until recently this cost had been between £500 and £600.

6. It will be the Society's endeavour to keep the journal as complete and as informative as possible during the war period. Probably rises in the costs of paper and printing and a falling-off in advertising revenue will necessitate a reduction in the size of the journal, but it is hoped that there will be no lack of interesting material if members will contribute concise articles, with special reference, no doubt, to problems created by the war.

The report was adopted and thanks were expressed to the Committee for their conduct of the journal during the year.

BALANCE SHEET AND REVENUE ACCOUNT, 1938-39.—The draft balance sheet and revenue account, of which the audit had not yet been completed, were submitted and the Council were pleased to learn that it had been possible to maintain a credit balance on the year's accounts, in spite of the heavy non-recurring expenditure in connection with the termination of the lease of 1, Thornhaugh Street.

The question was raised whether the expense of printing the Roll of Members was justified in view of the possible diminution of income during the war. A proposal was made that a short supplement of alterations to last year's Roll might be published. This matter was referred to the General Purposes Committee with power to act.

WAR-TIME PROCEDURE OF THE SOCIETY.—The Council decided that executive power in the intervals between Council meetings should be vested in the General Purposes Committee rather than in a smaller and less representative body.

In regard to the procedure laid down by the Articles of Association, the following report by the Executive Secretary was adopted :—

ELECTIONS OF MEMBERS OF COUNCIL UNDER ARTICLES 19 (*d*) AND (*f*).—Article 20 states that these elections shall be carried out by the Council at their meeting in September, held in London.

This year an infringement of Article 20 has occurred and I RECOMMEND that the following resolution be adopted :—

> "That the Council take note that the elections of members of the Council under Article 19 (*d*) and (*f*) was this year not in accordance with the provision of Article 20 that such elections be carried out at a meeting held in London in September; and determine that the elections made in Birmingham on October 20th, 1939, be recognised as valid for the Session 1939-40; and that this resolution be reported to the Society."

MEETINGS OF THE COUNCIL.—Article 23 states that the ordinary meetings of the Council shall be held in London in the months of November, February, May and September, unless the Council shall otherwise determine. In regard to these dates of meeting, it is laid down (Article 17) that the President and other Officers for the coming session shall be elected at the May meeting held in London; and (Article 20—see above) that the co-opted members of the Council shall be elected at the September meeting, held in London. But the words in Article 23—"unless the Council shall otherwise determine"—may be taken to override the above provisions in present circumstances.

I beg to RECOMMEND that the Council adopt a resolution on the following lines :—

> "That the Council do determine, under the power given them by Article 23, that their meetings shall be held, until further notice, in accordance with the decisions of the President in consultation with the General Purposes Committee and, if thought advisable, at places other than London; but that the elections of the President and Officers and of co-opted members of the Council for the ensuing session shall be carried out at some time between May 1st and September 30th in each year."

For the above procedure it would not appear to be necessary to make any change in the present Articles of Association adopted in 1935. Any change in the terms of the Articles as printed would require the procedure of a Special Resolution and an Extraordinary General Meeting as laid down by the Companies Act, 1929.

ANNUAL GENERAL MEETING.—Article 29 states that this meeting shall be held in London in the month of November on a day and at a place fixed by the Council and that at least seven days' notice shall be given of such meeting to every member. Seven members form a quorum at any meeting of the Society.

I beg to RECOMMEND that the Council fix the holding of the Annual General Meeting at the Society's offices on Friday, November 17th, 1939, and that notice be given in the November issue of PUBLIC HEALTH.

ORDINARY MEETINGS.—Article 31 states that the holding of Ordinary Meetings shall be subject to the determination of the Council.

While the Council may consider it inadvisable to fix any general meetings of the Society, with the exception of the Annual General Meeting for the ensuing session, I would remind them that the election of new members can only be carried out by such meetings.

REFRESHER COURSES.—It was regretfully decided that it would not be possible to continue the arrangements for the refresher courses which should have been held during the session, and that the holding of courses must be indefinitely postponed.

ELECTION TO THE COUNCIL UNDER ARTICLES 19 (D) AND (F).—The following were elected as members for the session 1939-40 :—

> *Under Article* 19 (*d*)—Drs. Cyril Banks, J. J. Buchan, James Ferguson, Thomas Orr, T. N. V. Potts and Sir Wm. Savage; as Departmental Officers—Drs. H. Stanley Banks, Muriel Radford and H. G. Trayer.
>
> *Under Article* 19 (*f*)—Sir Francis Fremantle, M.P., Capt. G. S. Elliston, M.P., Prof. Sir Wilson Jameson and Prof. R. M. F. Picken.

ELECTION OF COMMITTEES FOR THE SESSION 1939-40.—

> *General Purposes Committee—Ex officio* The President (Dr. F. T. H. Wood), Vice-Presidents (Drs. E. H. T. Nash, James Fenton and Ernest Ward) and Hon. Treasurer (Dr. G. F. Buchan). Other members Drs. J. S. Anderson, Vynne Borland, J. J. Buchan, James Ferguson, R. H. H. Jolly, Catherine Morris Jones, Prof. R. M. F.

Picken, Dr. T. N. V. Potts, Sir Wm. Savage, Drs. J. A. Stirling and H. Gibbons Ward.

Journal Committee.—The President (*ex officio*), Drs. G. F. Buchan, James Fenton, R. M. F. Picken, E. W. Caryl Thomas and Ernest Ward.

A proposal was made for the addition of a dental member on the Journal Committee, but the Council decided that the election of a member to represent a specialist interest would be a precedent for enlarging the Committee beyond the original intention.

In view of the decision to postpone the refresher courses indefinitely it was decided not to reappoint the Refresher Courses Committee for the time being.

ANNUAL REPORT OF THE COUNCIL.—The Council approved the Annual Report for presentation to the Annual General Meeting of the Society. (The report is printed on pages 88 *et seq.*)

CIVIL DEFENCE.—The Council had before them two resolutions of the County Boroughs M.O.H. Group (reported in PUBLIC HEALTH, August, p. 339) and a resolution passed by the Northern Branch in regard to the relationship of the M.O.H. to A.R.P. work, and a further resolution passed by the County Boroughs M.O.H. Group at a recent committee meeting.

It was decided to send in a full statement of the views of the Society to the Government departments concerned, and a small sub-committee consisting of Drs. Cyril Banks, Gordon Lilico and T. N. V. Potts were asked to put the various points raised into a form of memorandum which could be considered in detail by the General Purposes Committee on November 17th.

It was considered whether the Chief Medical Officer of the Ministry should be asked to recognise a representative committee of the Society which would consult with him on matters of difficulty, but for the time being it was felt that an *ad hoc* deputation to follow up the proposed memorandum would be more politic.

CENTRAL MEDICAL WAR COMMITTEE.—It being understood that Dr. Fenton had been unable to attend meetings and in view of the hospital problems which had arisen, the Council decided to nominate Dr. Lilico as the Society's representative.

CHEAP MILK FOR MOTHERS AND YOUNG CHILDREN.—The Council decided to refer to the General Purposes Committee the question of the desirability of the scheme inaugurated by the Ministry of Agriculture to enable local welfare authorities to buy milk at a reduced price for distribution to expectant and nursing mothers and children under five. Attention was drawn to the editorial in *The Medical Officer* of August 26th with reference to this question.

LIFE MEMBERSHIP.—A recommendation from the Southern Branch for the election of Dr. R. H. Wilshaw, formerly M.O.H., Worthing M.B. (joined the Society 1909) as a fully-paid life Fellow was adopted for submission to the next General meeting.

HONORARY FELLOWSHIP.—It was reported that Dr. J. Sim Wallace had recently proffered his resignation from the Society on account of his advancing years. The Committee of the Dental Officers' Group asked the Council to support a proposal that Dr. Wallace should be elected an Honorary Fellow of the Society as a person eminently distinguished in the advancement of public health. Dr. Sim Wallace became a member of the Society when the School Dentists Society merged with the Society in 1922, but both before and after that year he had played a leading part in the campaign for the prevention of dental caries and he was internationally known for his work in this field.

The Council decided to put forward a recommendation for the election of Dr. Sim Wallace as an Honorary Fellow at the next General meeting.

THANKS TO THE BIRMINGHAM CITY COUNCIL.—The President proposed that the thanks of the Council should be accorded to the Birmingham City Council for making available the Council Chamber for this meeting, and especially to Dr. H. P. Newsholme for his good offices in obtaining the accommodation.

With reference to future meetings, several members suggested that they might be held at provincial centres though it was not clear whether Birmingham was actually the most convenient meeting place for all concerned.

The meeting then adjourned at 4.10 p.m.

YORKSHIRE BRANCH.

President: (1938-9) Dr. P. R. McNaught (M.O.H., York C.B.); (1939-40) Dr. J. Sharpe (Dep. M.O.H., Leeds C.B.)

Hon. Secretary: Dr. James Mair (M.O.H., Harrogate M.B.).

The Annual Meeting of the Branch was held in the Municipal Maternity Hospital, Hedon Road, Hull, at 2.30 p.m. on Friday, June 23rd, 1939.

In the unavoidable absence of the President, the chair was occupied by Dr. J. C. Pickup, who was supported by 19 members and friends. The minutes of the last meeting were read, approved and signed.

The chairman reported that the Council of the Branch had appointed Drs. Potts and Sutherland as auditors for the ensuing season.

The following were elected for the session :—

Representatives on the Council of the Society: Drs. J. J. Jervis and J. Mair.

Representatives on the Tuberculosis Group Committee: Drs. G. S. Johnson and N. Tattersall.

The annual statement of accounts was submitted by the Hon. Treasurer and approved.

A paper on "Refresher Courses for Midwives" was read by Dr. Helen Standring (Senior A.M.O.H. for Maternity and Child Welfare, Hull) was followed by a short discussion after which the members were entertained to tea by the Hull City Council.

A tour of inspection of the Maternity Hospital followed, after which on the proposal of Dr. Sharpe, seconded by Dr. Sutherland, a very hearty vote of thanks was accorded to Dr. Standring for her paper and to the Hull City Council for their hospitality.

The National Association for the Prevention of Tuberculosis has decided to devote its activities in war time chiefly to propaganda and the care and rehabilitation of tuberculous patients and their families. Burrow Hill Colony remains open and has a few vacancies at present for tuberculous youths.

PUBLIC HEALTH

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Editorial

Poliomyelitis in Essex and Cardiff

No really large epidemic of acute anterior poliomyelitis has ever occurred in this country, but the year 1938 saw the greatest number of notifications since this disease first required to be notified in 1912. From the whole of England and Wales, 1,489 notifications were received, as compared with 768 in 1937 and 530 in 1936. In addition there were 96 cases of acute polioencephalitis. The only previous year in which the number of cases of poliomyelitis exceeded a thousand was 1926. All parts of the country were affected, but the increase over normal was less noticeable in the northern and south-western parts of England, although South Wales was quite seriously involved. An unusual feature of the abnormal prevalence, mentioned in the Annual Report of the Ministry of Health, was its prolongation well into the winter. It will be remembered that the epidemic of 1937-38 in Victoria, Australia, was also unusual in its seasonal incidence.

During the present autumn poliomyelitis has been more than usually prevalent over a wide area of the U.S.A., although there has been nothing comparable to the great American epidemics. Generally, it may be concluded from the records for the last few years of countries all over the western world that poliomyelitis is wakening up. There appears to be no definite ground for assuming that we shall be as fortunate in the future as we have been in the past. We ought, therefore, to be prepared for a major epidemic and the rise of incidence during the last two years arouses a slight apprehension that it might come soon, although there has been a decline in 1939.

These considerations lend an added interest to the passage of the Annual Report for 1938 of Dr. W. A. Bullough, County Medical Officer of Essex, dealing with the outbreak of that year. It is available as a separate fascicle. During the year 181 cases came to the knowledge of the health department, of which 174 occurred between July 31st and December 31st, chiefly in the north-eastern portion of the county. The tax on hospital accommodation was severe and necessitated a rapid readjustment. During the communicable

phase the proper place for the cases was an isolation hospital. Transference thereafter to general or orthopaedic hospitals was considered but thought inadvisable. On the other hand, indiscriminate admission to, or retention in, the nearest isolation hospital would have been unsatisfactory for a disease requiring such specialised care, even from the outset. Accordingly three hospitals were detailed to admit acute cases, two of them only from their own districts. One of the latter was ear-marked for cases requiring orthopaedic treatment from any area, while a fourth, which had been closed, was re-opened for convalescents and cases not requiring orthopaedic treatment. Specially qualified staff were transferred from a sanatorium to one of the isolation hospitals. After-care and observation after discharge were provided at the county orthopaedic clinics. Clearly arrangements of this kind called for vigorous co-ordinative action on the part of the county health department, for the facilities of the county council, district councils, joint hospital boards, education authorities and welfare authorities had to be utilised. It speaks highly for the capability and good sense of Dr. Bullough, his staff and his colleagues in the service of other authorities that the adjustments were carried through so smoothly and efficiently. The district medical officers of health and local practitioners were informed of the progress of the epidemic from time to time, and one such letter reproduced in the report is a model of clearness and tact. Dr. Bullough also acted on the principle that it pays to tell the public the whole truth. Posters were displayed, pamphlets issued and various organisations asked to co-operate in excluding young children from public meetings and so on.

Of the 174 cases constituting the epidemic, 16 died definitely of the disease and two other deaths might later prove genuinely to be due to it. The fatality rate was, therefore, about 10 per cent. The age distribution of 167 cases was as follows :—

Age	-5	-10	-15	-20	-30	-40	Total.
Cases	51	49	29	20	14	4	167

When 136 cases are classified according to whether they came from a town or rural district, the customary contrast in age distribution is observed :—

Age	-5	-10	-15	-20	-30	-40	Total.
Urban	31	27	7	4	7	1	77
Rural	13	9	19	15	2	1	59

The comparison may be carried further by quoting the age distribution of a smaller contemporaneous epidemic in Cardiff, which is referred to in more detail below. In this city 32 cases were reported between September 19th and December 17th, with one other on February 7th, 1939. Their ages were as follows :—

Age	-5	-10	-15	-20	-30	-40
Cases	20	6	4	1	1	1

The difference in age distribution is important since poliomyelitis is one of the diseases in which fatality tends to be higher at later ages, so that it should be regarded all the more gravely when it affects rural districts in epidemic form.

The incidence in Essex, as usual, fell more heavily on males than on females at all ages.

Dr. Bullough's report contains a passage on the control of the spread of infection by Dr. F. E. Camps, County Consultant Physician and Pathologist. It is refreshing to read a statement of faith in the time-honoured procedure of practical epidemiologists. His belief in school closure and exclusion from school is, however, not supported by any other relevant fact than that the fatality and sequelae of the disease are so much more serious than those of the other infections of childhood that every child should be given the smallest extra chance of escaping them. Here, as with other infectious diseases, it would seem that the policy to be favoured might differ as between urban and rural communities. As regards early detection and isolation the success of the measures taken is indicated by the fact that of 80 cases admitted to one hospital as many as 17, or 21·2 per cent., were mild or abortive.

This brief resumé of a most useful report may be concluded by quoting Dr. Bullough's summarised conclusions :—

(1) One authority should be responsible for all hospital administration, including isolation hospitals, at no distant date.

(2) Until that date, the local Medical Officer of Health, in whose area the Isolation Hospital is situate, should be the Medical Superintendent of the Hospital, or if not, be closely associated with its administration.

(3) The services of a Consultant Physician should be available for visiting the homes and making the diagnosis there of doubtful cases.

(4) An efficient service for orthopaedic treatment of patients, both during the early stages and for after-treatment, is essential. This necessitates close co-operation between the Isolation Hospital Authority and the Authorities responsible for orthopaedic treatment of patients.

(5) Prompt action should be taken in epidemic periods by local authorities regarding advising the public of the facts and discouraging crowded assemblies as far as possible, avoidance of gatherings of young children and preventing them from entering any house where there is a case of illness.

(6) It would appear advisable that for the next few years every Medical Officer of Health should advise, towards the middle of summer, medical practitioners and others of the possibility of this disease occurring, so that the early cases will not be overlooked.

Details of the autumnal outbreak of poliomyelitis in Cardiff, fortunately limited to 33 cases, are contributed to the Annual Report of Dr. J. Greenwood Wilson, Medical Officer of Health, for 1938, by Dr. Hilda A. Cohen. Unlike the previous outbreak in 1923, information of the occurrence of which only reached the Public Health Department when it was practically over, the early recognition and notification of the first cases in the more recent epidemic enabled prompt isolation and efficient treatment to be carried out. The cases occurred in four waves, each being separated by an interval of about a week, and those in the early age periods suffered most, 20 being under 5, 26 under 10, and 30 under 15 years. The chief symptoms and signs in order of appearance were gastro-intestinal disturbances, marked irritability and restlessness alternating with drowsiness, slight rise of temperature, muscular tenderness, neck rigidity and weakness of muscles. In two cases a scarlatiniform rash was present. Paralysis of one limb only was noted in one case, of two or more limbs in 25 cases, of facial muscles in four cases, and respiratory paralysis necessitating the use of the respirator in four cases. The report does not indicate how far the apparatus was successful in preserving the life of the patient, but the total number of deaths was four, a case fatality of 12·1 per cent. More than half of the cases occurred in one ward of the city, but there were no multiple cases in any household, and in only one pair of cases was there any history of definite contact. There was no evidence of infection having been spread at school, and although Dr. Cohen is of the opinion that mild and abortive forms of the disease were responsible for dissemination, only one such case was disclosed at a school clinic. The usual measures of prevention were set in motion. Cases were isolated in hospital, contacts of school age were visited and excluded from school for three weeks, and close inquiry was made into movements of the family and visitors. After notification of the second case the general practitioners were informed of the possibility of further cases of poliomyelitis; whilst after 15 cases had come to light a description of the disease was circulated and a recommendation that gargles and throat douches should be employed. Where there was difficulty or doubt consultations were arranged and if necessary patients were admitted to the isolation hospital for observation. The infant welfare centre in the affected area was closed to prevent contact infection. The benefits of the city orthopaedic scheme were extended to the patients while in hospital and after discharge, any preventable deformity being thus avoided.

It is no criticism of present day epidemiologists or clinicians to say that it is doubtful if the methods at their disposal do much to prevent the occurrence of cases or to check the inflammatory process in the anterior horn cells once it is initiated. It would appear that only the orthopaedic surgeon can intervene with any degree of success, and while his resource and patience are illimitable, even so his role is ultimately that of salvage. Such reports as those summarised above, representing careful and conscientious application of every possible means to deal with the emergency and alleviate the results, leave one with the hope that the time is near when the laboratory worker will be able once more to present the field worker with some effective means of countering the onslaught of this tragic virus.

Action by the Society

We draw attention to the report printed on page 68 of the meeting of the General Purposes Committee held on November 17th. The Council have given a wide reference to the Committee during the war period and it is thought desirable to inform members at once of certain lines of action which are being taken.

It will be seen that the Ministries of Health and of Home Security have been asked to receive a deputation from the Society in regard to the responsibilities of medical officers of health for aspects of the Civil Defence and Casualty Treatment services; it is hoped that some regular means of consultation with the Government departments will be gained so that the experience and local knowledge of the public health service will be properly utilised in the future development of Civil Defence schemes.

Another point which the Society has urged upon the Ministry of Health is that the introduction of the Circular 1840 scheme for the provision of milk at 2d. per pint or less to expectant and nursing mothers and young children be postponed, partly because of the additional administrative burden which the operation of the scheme would create but chiefly because of the criticisms to which the scheme is open upon public health grounds; the latter were very clearly expounded in an editorial which appeared in the *Medical Officer* of August 26th.

Lastly, a domestic concern of the Society is the decision indefinitely to postpone publication of the Roll of Members. This is an expensive production at the best of times and the rise in paper costs would make it still more so; there is also some doubt whether it is sufficiently used by members to justify its issue at a time when due economy is desirable. A list of corrections to last year's Roll may be issued instead. In the meantime, the Executive Secretary would be glad to be kept

informed of *all changes of address and appointment* so that the central office and Branch and Group Secretaries may keep their lists up to date.

Diphtheria Immunisation

We are glad to print on page 59 of this issue a brief but clear account of the law in relation to compulsory immunisation in Guernsey, and the methods by which it has been operated. At the date when the article was written (October, 1939) 45 per cent. of the children under school age and 80 per cent. of those aged 5 to 14 years had been immunised, either with two injections of Alum Precipitated Toxoid at two or three weeks' intervals, or with Toxoid Anti-Toxin Floccules administered in three injections at fortnightly intervals. Roughly, of a total of 10,000 children 6,700 have been immunised and the above-noted higher proportion among school children is probably due to the fact that 4,200 were treated before compulsion took effect in April, 1939, persuasion being easier with this group. Seventeen children contracted diphtheria within eight weeks of the first injection and 24 after longer periods. All but two of these were mild and there were no deaths among them. It is interesting to note that the work has been carried out entirely by general practitioners. As the promoters no doubt anticipated, agitation against immunisation has been fostered from England, but apparently with little success. So far, the exemptions on medical grounds have not been numerous. The experiment is one which will be watched closely by observers in the larger island.

Another instance of remarkable and rapid success of an immunisation campaign is recorded by Dr. Ellis Taylor (Assistant M.O.H. and S.M.O.) in the Annual Report for 1938 of Dr. P. Stanley Blaker, late M.O.H. of Dudley. Here immunisation through the agency of general practitioners had hung fire since 1935. In January, 1938, a scheme was organised mainly through the schools and welfare centres, although co-operation continued with the local medical profession. School teachers gave willing help and meetings of parents, largely attended, were addressed by the school medical officer. As a result, out of 8,695 possibles, 8,092 consent forms were issued; and 5,827 children were immunised with two doses of A.P.T. or three of T.A.F. by the end of the year, a percentage of 67, surely a unique achievement in this country. Dudley, however, has still to tackle the toddler group of whom only 258 were dealt with during the year. No doubt this will be done now that the school ages have been so thoroughly dealt with. The cost, which did not include any expense for Schick testing, worked out at 1s. 9d. per head, against an estimate of 2s. 3d., so that Dudley could now maintain its immune school population by treating every school entrant in succeeding years at a total annual cost of £25. The figures cover the expenses of materials and printing but not of organisation and staff time. These latter are likely to be greater if an effort is made to concentrate on the pre-school group.

For those who have been unable to follow the voluminous literature on immunisation, attention may be drawn to Sir J. C. G. Ledingham's opening paper to a discussion at the Annual Meeting of the B.M.A. in Aberdeen last July.* It gives an excellent resumé of the history and present position of immunisation in this country and of the relative merits of the various antigens in use.

Smoke Abatement and the War

Like many other bodies which have good causes to advocate, the National Smoke Abatement Society has had to face a drastic cutting-down of its campaign, which its supporters had hoped was about to make a real advance in clearing up our atmosphere. Publication of the September and succeeding numbers of its journal, *Smokeless Air*, in its peace-time form had to be suspended, but in its place has appeared Special Issue No. 1† of an occasional bulletin under the same title, which will be a useful means of keeping in touch with supporters. The bulletin discusses the war-time implications of atmosphere pollution as follows:—

> It has been suggested that the Society should now encourage the production of smoke with a view to baffling enemy aircraft; but a smoke pall will indicate the presence of a densely-populated or industrial area even more than it may conceal specific objectives, and a smoke plume may well betray the presence of an isolated factory that might otherwise be unnoticed. Rather more urgent is the need for continuing the control of factory smoke emission, if for no other reason than that this is one of the signs of wasteful combustion and of fuel losses. The waste of fuel that goes on in this country is always shocking, and now, when every scrap of energy must be put to good use, it is little short of unconscious sabotage. Local authorities, therefore, should not slacken their observations and control over industrial chimneys, but, in national as well as local interests, should, if anything, keep more careful watch than ever. The rationing of coal for domestic purposes will lead to an automatic reduction of domestic smoke, and if, by more careful firing, this is made to go further, there will be an even more substantial lessening of smoke. This will be of especial benefit, for in the coming winter we shall need all the light and brightness we can get.

*Brit. Med. J. (1939). 2, 841.

†Published (Autumn, 1939) by the National Smoke Abatement Society, 94, Manor Green Road, Epsom, Surrey.

It goes on to urge the importance, in view of an anticipated reduction of smoke pollution during the war, of continuing the observations which form the chief part of the Investigation of Atmosphere Pollution carried on by the Department of Scientific and Industrial Research. The latest report* showed how much, during the last ten years, the co-operative effort (in which 80 local authorities now take part) of measuring the extent of air pollution has grown both in the number of observing points and the methods used and how this evil had begun to diminish simultaneously with the greater realisation of its extent. This report was notable for a most lucid description by Dr. J. S. Owens, Superintendent of Observations, of the nature and causes of fog, both of the "water vapour" and "smoke" varieties. We hope that the prediction of the National Smoke Abatement Society that war conditions will reduce atmospheric pollution will prove correct, and that any advance which is made will not be lost again when peace returns.

Research of the Rockefeller Foundation

The latest annual report† of the Rockefeller Foundation devotes considerable space to virus diseases, especially to yellow fever; dealing with the control of this illness in the Americas, it is realised that the organisation of anti-mosquito measures in the leading urban seedbeds of infection gave good and even striking results, but failed to eradicate yellow fever from Brazil. Since the outbreak of 1930, it became evident that two factors, rural yellow fever and jungle yellow fever, prevented the complete abolition of the disease. To get rid of the rural illness it was only necessary to extend the measures for mosquito control to the smaller towns, villages and country areas; but jungle yellow fever, although similar to any other kind of yellow fever in its effect upon the patient, differs from the classical variety in that it is not carried by the *Stegomyia* or *Aëdes aegypti*, and in that in the maintenance of the disease man does not seem to be the only or even an important source of the virus.

In the campaign against yellow fever there are three main lines of attack, viscerotomy (the routine post-mortem removal of liver tissue for microscopical examination from the bodies of all persons dying within eleven days after the onset of any febrile illness), anti-mosquito measures and vaccination. From the point of view of control, jungle yellow fever is important because it has added the new weapon of vaccination; for the only reasonable hope of preventing these human cases is based on individual immunisation of exposed populations. The use of cultured virus and hyper-immune animal serum was abandoned as unsatisfactory; but a strain of virus, 17D, during repeated passage on chick embryo tissue from which brain and spinal cord have been removed lost much of its viscerotropic and neurotropic properties. This strain can safely be used without an accompanying injection of serum; and during 1938, over a million persons had been vaccinated against yellow fever, a process, both epidemiologically and from the standpoint of laboratory tests for immunity, has proved highly satisfactory. The duration of immunity remains to be determined, but the reactions to vaccination are so mild as to cause no serious difficulty in its acceptance by the people, while the cost per case is between 8 and 9 cents.

Notable improvements were made in the cultivation of the virus used for the vaccine, and the study was continued of the problem of changing the pathogenicity of the virus by cultivation in the laboratory. The original discovery which made immunisation practicable becomes even more valuable by the finding that the mosquito cannot transmit the virus from the inoculated to the susceptible subject.

The report gives, among other things, a summary of work on the epidemiology of scarlet fever in Rumania; and with the number of strains of beta-haemolytic streptococci now over 7,000, the problems seem more complex than ever. It is becoming increasingly apparent that the erythrogenic nature of streptococci cannot be explained on the basis of type alone, even for any given locality; for some the factor must decide why, for example, type 10 is associated with most cases of scarlet fever in Rumania, and yet also be present in villages where the disease does not occur. Further attention is being directed towards the toxigenic properties of various strains and the relative immunity or resistance of individual hosts. A study was made to determine the possible value of the anti-streptolysin reaction in identifying a typical and latent case of scarlet fever; and it is shown that a comparatively insignificant streptococcal infection can bring about an appreciable rise in the anti-streptolysin titre which may persist for weeks or even months.

The report is encouraging both in the results of difficult problems overcome and in the promising way in which the unsolved problems are being faced and attacked; and further reports will be awaited with keen interest.

*24th Report on Investigation of Atmospheric Pollution for year ended March, 1938. H.M. Stat. Office. Price 2s. net.

†The Rockefeller Foundation: International Health Division, Annual Report, 1938. 49 West 49th Street, New York.

authorities to certain recommendations relating to the conditions of service of hospital nurses contained in the Interim Report of the Inter-Departmental Committee on Nursing Services.

Circular 1833. Price 1d. net. (Encloses S.R. & O. of 1939, No. 840.) Price 1d. net. *Food and Drugs.* Forwards to Food and Drugs Authorities (England) copies of the Public Analysis Regs., 1939, relating to the qualifications of Public Analysts and the form of Certificates of Analysis, for purposes of Food and Drugs Act, 1938.

Circular 1836. (Encloses Costing Returns. Part I. 1936-37.) Price 9d. net. *Costing Returns—Year ended 31st March*, 1938. Forwards to Clerks of County Councils and Town Clerks of County Borough Councils copies of Part I of the Costing Returns for 1937-38 which contains particulars of average cost per inmate per week in Poor Law Hospitals; General Hospitals (administered under the Public Health Acts, or the Local Government Acts); Sanatoria (and other Institutions for the residential treatment of Tuberculosis); and Maternity Homes and Hospitals.

Circular 1840. Price 3d. net. Addressed to Welfare Authorities regarding the proposals of the Government in co-operation with the milk industry for securing a reduction in the price of liquid milk to Local Authorities for the purpose of their maternity and child welfare arrangements.

Circular 1841. (Encloses Memo. E.V.5.) Price 3d. each net. *Government Evacuation Scheme.* Issued with Memo. E.V.5 to Local Authorities and County Councils giving further information and asking for certain particulars in connection with the Government Evacuation Scheme.

Circular 1844. *Civil Defence Act*, 1939. Draws the attention of water undertakers to Part V of the Civil Defence Act, 1939, and indicates the lines on which the report asked for in section 36(1) of the Act should be framed.

Circular 1846. *Civilian Deaths due to War Operations.* Instructs Local Authorities to keep daily lists of the names and addresses of the persons killed as a consequence of war operations whose bodies are brought into their mortuaries and advising as to the disposal of ration books and identity cards.

Circular 1847. *Casualty Bureau—Notification of Casualties.* To County Councils (except London and Middlesex) and County Boroughs (except East Ham, West Ham and Croydon). Sets out the arrangements for setting up Casualty Bureaux and for Notification of Air Raid Casualties.

Circular 1849. Price 3d. net. *Emergency Hospital Scheme. Equipment of Hospitals.* Confers on County and Local Authorities with hospitals in the Emergency Hospital Scheme authority to make certain local purchases of equipment.

Circular 1850. Price 2d. net. *Civil Defence Act*, 1939. Informs County and Local Authorities Civil Defence Act, 1939 of the effect on Emergency Hospital Scheme and other emergency medical services.

Circular 1851. *Government Evacuation Scheme.* Informs Local Authorities of the arrangements made to supply camp beds which are being issued in lieu of mattresses for use in connection with the Government Evacuation Scheme. Asks to be informed of the Local Authorities' proposals as regards storage and requests that an estimate of the needs of the district be furnished.

Circulars 1855 *and* 1855*A*. *Emergency Hospital Scheme. Billeting of Doctors, Nurses and other Hospital Staff.* To County Borough and County District Councils. Sets out arrangements for billeting additional Doctors, Nurses and other Hospital Staffs in an emergency (Circular 1855—Reception Areas: Circular 1855A—Evacuation and Neutral Areas).

Circular 1858. *Emergency Powers Defence Act*, 1939. Informs Local Supervising Authorities under the Midwives Act that a Regulation is about to be made under the Emergency Powers Defence Act, 1939, which will empower them, if considered necessary, in order to secure an adequate number of women for attendance on women in childbirth or as maternity nurses, to make an Order or Orders exempting from the provisions of the Midwives Acts, 1902 to 1936, any such women who have surrendered their certificates under Sub-section (1) of Section (5) of the Midwives Act, 1936.

Circular (unnumbered). Letter of Chief Medical Officer addressed to County Medical Officers of Health on Government Evacuation Scheme.

Circular (unnumbered). Letter of Chief Medical Officer. Deals with Evacuation of Expectant Mothers, Medical and Nursing Staff.

Costing Returns. Price 2d. net. Sewage Disposal Works. Costing returns for the year ended March 31st, 1939.

Report. Price 3s. 6d. net. Rehabilitation of Persons injured by accidents. Final report of the Inter-departmental Committee.

Statement. Price 4d. net. Housing, House Production, Slum Clearance, etc.; England and Wales. Position at March 31st, 1939.

Booklet. Price 3d. net. Food and Drugs Act, 1938. Tables of Comparison for the Food and Drugs Act, 1938, showing the way in which earlier enactments are dealt with by the Act and the correspondence between the Sections of the Act and the provisions of the earlier Acts.

Circular 1861. *Emergency Hospital Organisation.* To County and County Borough Councils and Voluntary Hospitals. Pay of Nurses and Nursing Auxiliaries provided by Civil Nursing Reserve and giving whole-time service at hospital.

Circular 1862. *Air Raid Precautions Act*, 1937. To County and County Borough Councils, Metropolitan Borough Councils and other Scheme-Making Authorities. Medical Supplies for First Aid Posts. Replenishment of deficiencies by Local Authority. Sanction to purchase through usual channels and claim re-imbursement.

Circular 1863. *Local Government Staffs (War Service) Act*, 1939. Draws the attention of local authorities to the Act, the general principles of which are that (i) local authorities are empowered to make up the balance of civil pay of their employees undertaking war service as defined in the Act and (ii) the superannuation rights of such employees are preserved. The Act also includes provision for the removal of disqualification as regards local authority membership of persons employed in civil defence service.

Circular 1866. Price 1d. net. *Housing Acts: Postponement of Work.* Addressed to Housing Authorities, England and Wales, informs Local Authorities of the decision in view of the outbreak of war that Inquiries into Slum Clearance Orders will be deferred, that steps taken should stop short of actual demolition save in exceptional circumstances. Similar conditions will apply to individual demolition orders and redevelopment schemes. The erection of further houses will not be approved save under exceptional circumstances and Local Authorities should arrange with Contractors to concentrate on houses in an advanced stage of construction.

Circular 1867. *Deaths due to War Operations.* Notifies Local Authorities that the Home Secretary has authorised the Clerk to any Local Authority to issue certificates of death due to war operations.

Circular 1868. *Emergency Hospital Organisation.* To County and County Borough Councils and Voluntary Hospitals. Refers to Circular 1861. Flat rate of 40s. (non-resident) per week is limited to classes of personnel specified and does not extend to ancillary personnel, *e.g.*, cooks, kitchen staff, etc.

Circular 1869. *First Aid Posts.* To County, County Borough and Metropolitan Borough Councils and other Scheme-Making Authorities (copies to other County District Councils for information). Refers to Circular 1789 and reviews question of the proportion of personnel to be employed on a whole-time basis in war-time.

Circular 1871. *Government Evacuation Scheme.* Issued to Local Authorities. Gives information in some detail on problems arising out of the scheme.

Circular 1874. *Emergency Hospital Scheme.* Addressed to County Councils, County Borough Councils, Mental Hospital and Mental Deficiency Authorities with hospitals and institutions in the emergency hospital scheme—sets out the principles governing the payments to hospitals in respect of the treatment and maintenance of civilian air raid casualties.

Circular 1876. *Government Evacuation Scheme.* Issued to Local Authorities. Explains the position of persons who were on holiday, or were staying with relatives at the time that evacuation was carried out.

Circular 1880. To Local Supervising Authorities under the Midwives Acts (England)—referring to Circular 1858 and drawing attention to Regulation 33 of the Defence Regulations, 1939, as set out in Article 8 of the Order in Council amending the Defence Regulations, 1939 (S.R.O. 1939 No. 978) and requesting that two copies of any Orders be furnished to the Minister and one to the Central Midwives Board.

Circular 1881. To County, County Borough, Metropolitan Borough Councils and other Scheme-Making Authorities, Mental Hospital Authorities and Voluntary Hospitals—Nursing Personnel, Unemployment Books should not be stamped for Trained and Assistant Nurses: but should be stamped for all whole-time Nursing Auxiliaries and female personnel, trained in first aid and serving whole-time at first aid posts.

Cmd. 6089. Price 5s. Twentieth Annual Report of the Ministry of Health, 1938-39.

E.M.S. Memo. No. 44. Price 3d. net. Emergency Medical Services Memo. No. 4. Memorandum for the guidance of medical officers and other personnel at first aid posts.

THE MINISTRY AND COMMUNICABLE DISEASES

During the past month the Ministry of Health have issued several circulars and memoranda regarding various infectious diseases.

Notification of Measles and Whooping-Cough.—Circulars 1896 and 1896a, dated November 1st, state that regulations for the notification of measles and whooping-cough have been made to come into operation forthwith throughout England and Wales, and provide for the notification of all cases by medical practitioners to medical officers of health. The object is to enable the Department to ascertain readily and rapidly the incidence of these diseases as it may be affected by the displacement of child population caused by the recent emergency measures and the changes that may have occurred in the geographical distribution of the infection diseases. The fee payable to a medical practitioner for each certificate under the regulations will be one shilling.

Returns by medical officers of health of the notifications received under the regulations should be made to the Registrar-General weekly on the same form and in the same manner as for the notifiable diseases specified in Section 343 of the Public Health Act, 1936. The intention is that the regulations shall remain in operation only so long as the special conditions created by the present emergency continue and that they shall then be revoked. All existing local regulations relating to the notification of measles and whooping cough are being revoked but the Minister will be prepared to consider the question of remaking these local regulations when the present general regulations cease to operate.

It is important that every local authority should cause notice of the regulations to be given to all medical practitioners resident or practising within their area and that steps should be taken to make the regulations as widely known as possible.

Typhoid Fever.—A Memorandum on Typhoid Fever (Memo. 225/Med.) issued by the Ministry was published on November 22nd, price 2d. The Memorandum deals with the history, prevalence, diagnosis, prevention and control of the disease, and contains an appendix on laboratory diagnosis. The Memorandum is intended primarily for the use of medical officers of health, but should also be of assistance and interest to general practitioners and the public.

Influenza.—On November 20th the Ministry issued a Memorandum on Influenza (Memo. 2/Med., price 2d.) which is a revised edition of the Memorandum on the same subject issued in 1929. The Memorandum includes a statement of the principal known facts regarding influenza, a brief history of the disease in this country during recent years, and advice as to measures of personal protection. Part III describes the administrative measures which local authorities may take to prevent occurrence of the disease and to minimise its spread; they are reminded that the Minister has already sanctioned the provision by local authorities in periods of influenza prevalence of medical assistance (including nursing and dispensing of prescriptions) for the poorer inhabitants who may be suffering from the disease.

One must add that the Plymouth percentages are worked out on a total of 294 samples while the others are on a total of 85. But I think 85 samples is a reasonable number on which to base some sort of tentative comparison.

This may sound confusing enough but there is worse to come.

After some hesitation we decided to send three comparable samples to three different laboratories, all of first-rate standing.

On August 31st last year we sent four comparable samples of drinking water to three laboratories. The results were startling and may be summarised as follows :—

TABLE II.

Laboratory "A."	Laboratory "B."	Laboratory "C."
B. coli absent in 100 c.c.	Absent in 100 c.c. *Coli aerogenes* per 100 c.c. = Nil.	*B. coli* present in 1 c.c. *Coli aerogenes* 250 per 100 c.c.
B. coli absent in 100 c.c.	*B. coli* present in 10 c.c. *Coli aerogenes* in 100 c.c. = 24.	*B. coli* present in 1 c.c. *Coli aerogenes* in 100 c.c. = 90.
B. coli absent in 100 c.c.	*B. coli* present in 10 c.c. *Coli aerogenes* in 100 c.c. = 35.	*B. coli* present in 1 c.c. *Coli aerogenes* = 110.
B. coli absent in 100 c.c.	*B. coli* absent in 100 c.c. *Coli aerogenes* = Nil.	*B. coli* present in 10 c.c. *Coli aerogenes* = 50.

In other words, one laboratory reported all four samples as highly satisfactory, another as 50 per cent. satisfactory and the third as all extremely unsatisfactory. I would remind you that the water is upland surface water from a good source and at this time was receiving 0·35 parts per million of chloramine.

The experiment was repeated shortly afterwards and gave the following results :—

TABLE III.

Laboratory "A."	Laboratory "B."	Laboratory "C."
B. coli absent in 100 c.c.	*B. coli* absent in 100 c.c. *Coli aerogenes* = Nil.	*B. coli* present in 1 c.c.
B. coli absent in 100 c.c.	*B. coli* present in 10 c.c. *Coli aerogenes* count = 35.	*B. coli* present in 1 c.c. *Coli aerogenes* count = 110.

This again gives the same story. Thus you will see that one laboratory gave six out of six samples of water as *B. coli* absent in 100 c.c., *i.e.*, all satisfactory, whilst another one found *B. coli* present in 1 c.c. in four of the six samples and in the case of this latter laboratory one sample only was satisfactory.

As a further piece of experimentation we sent eight samples of the same tap water to two different laboratories—four to each. In each case I am pleased to say that the results were strictly comparable and satisfactory. This was repeated a second time, but unfortunately the results varied from suggesting a highly satisfactory water supply to suggesting a seriously contaminated one.

We soon stopped sending samples to Laboratory "C." One feels that either there was something wrong with the technique at that laboratory, or, if it is claimed that the number of *B. coli* increased because of the railway journey, then all bacteriological examinations at a distant laboratory are useless. In that case one wonders what happens to all the various authorities who do not have a bacteriological laboratory in their own area.

I know that the bacteriologists will say immediately that there is an error in our method of taking samples. Naturally we had looked into this matter carefully and adopted the standard technique which has just recently been confirmed in Appendix "A" of the last edition of the grey book on the "Bacteriological Examination of Water Supplies." All samples were put into an ice box immediately and the ice was renewed prior to posting. Samples were sent off by the afternoon post and would arrive at the laboratory early the following morning. Personally I feel that if there had been an error in sampling this error would have been constant and would have been reflected in the results.

The bottles used had been previously sterilised at the laboratory. Candidly I feel that the error (if any) is at one of these three laboratories and I look forward to the bacteriologist's explanation.

Perhaps before going any further I may mention one or two things which occur to me as a mere onlooker. Probably most samples are put up by technicians—are we sure that all technicians are really reliable ? Most of us must have noticed how bad results seem to come in batches. At one period (generally in the holiday season) we find all samples of milk or water may be particularly bad for no obvious reason.

Is there any check up on the method of sterilisation of utensils ? Is there any possibility of variation in the qualities of various media ?

Questions for the Responsible Officials

Having dealt with the results themselves the next point to consider is the question of the appropriate action to be taken. If we were to believe the laboratory "A" all was well and we could sleep soundly at night. If laboratory "C" was correct then there was need for drastic action immediately. In consultation with the Water Engineer and the City Bacteriologist, the Medical Officer of Health tried to rule out as far as possible all sources of contamination and there appeared to be no obvious source. The water mains appeared tight and had been periodically flushed. All drains surrounding the service reservoirs had previously been tested and any defective ones remedied, and the gathering ground appeared satisfactory.

I suppose one of the most difficult tasks of a Medical Officer is to know when to make a formal report to the Council and furthermore to know what recommendation to make.

We have all read Memo. 221 on the "Safeguards to be adopted in day-to-day Administration of a Water Undertaking." By publishing this memo. the Ministry have completely "passed the baby" on to Water Undertakings (in our case the Medical Officer of Health and the Water Engineer). I think most people are agreed that this memo. is a counsel of perfection—and a very expensive counsel. We all know the difficulties of formulating such a scheme. Why has this only just been discovered ? What is the value of bacteriological examination if the results can be so divergent ? The water supply is having more treatment than it has ever had and yet it is proposed to spend all this money on it ; there have been no epidemics due to polluted water supply ; if this work is done can we guarantee absolutely that there will be no water-borne epidemics ? etc., etc. Finally, I leave you to imagine the reaction of the sensational Press to such a demand placed before a local authority under threat of dire consequence if they are not adopted.

If by any chance the local authority decided to do all this work in a single year, one can imagine the other pet schemes which would have to be abandoned.

I am not trying to embarrass the bacteriologists by making these remarks. In Plymouth the Medical Officer of Health's Department is frequently in consultation with the City Bacteriologist on various problems and we get enlightenment on various matters. In fact I think Dr. Wordley agrees on the possibilities of error in bacteriological examinations. But probably every Medical Officer subconsciously puts himself in the witness box and thinks of answers which should be made to possible criticisms of his actions. Unfortunately the Ministry of Health have given the impression that bacteriological examinations are the absolute measure of the safety of a water supply. But what can we do when the measure itself appears to fluctuate so violently ? Personally I think that this is unfortunate and that just as much attention should be paid to the exclusion of possibilities of contamination all the way from the gathering ground to the household tap. Our experience in Plymouth suggests that one's peace of mind may well depend more on the particular laboratory which examines the water samples than on the danger of pollution itself.

DR. WORDLEY

The major question raised by Dr. Hughes is that of assessing discordant results of bacteriological examinations of water. That is to say what administrative action if any should be taken when the report from one laboratory appears to indicate that the sample examined is of excellent purity whereas a similar sample examined by another laboratory appears to indicate a very high degree of contamination.

Roughly speaking the figures quoted by Dr. Hughes show that water examined locally immediately on receipt appeared to be excellent while those samples which had travelled were very much worse. This raises both a general and a special problem.

As far as the water of Plymouth is concerned we are dealing with a moorland source far away from any possible human or animal contamination. The whole of the catchment area is owned by the Corporation and the water is chlorinated. In Table II it will be seen that absurdly variable results were obtained. That is to say one laboratory consistently had a result of no *B. coli* in 100 ml. while another equally consistently gave results of *B. coli* present in 1 ml. Now bearing in mind the origin of Plymouth water and the fact that it is chlorinated (assuming this is constant) it is obvious on general grounds which result is more likely to represent the purity of the water in question. In fact the difference between *B. coli* being absent in 100 ml. and present in 1 ml., would, on the face of it, mean either gross errors in bacteriological technique, or gross errors in sampling, or an enormous growth in transit due to unsatisfactory methods of keeping the water cool, or a very long time on the journey with a resulting rise of temperature.

Checks on Laboratory Methods

For example, the last report of the Metropolitan Water Board shows that upwards of 99 per cent. of samples of waters chlorinated terminally gave negative results for the presence of *B. coli* in 100 ml. of water, and this with waters heavily contaminated at source. These results are the ideal to be aimed at. Therefore, if a given laboratory is constantly getting good figures for what on general grounds

is a satisfactory water and at the same time getting results indicating very gross contamination from samples coming from suspicious sources, this by itself is fairly good evidence that methods are reliable.

In my laboratory actually Difco Medium is used throughout and it is to be presumed that these media are very constant in composition. Further a number of samples from time to time are put up in parallel on MacConkey broth and Brilliant Green Bile Broth. Any bacteriological examination which aims at giving numerical results demands, if comparisons are to be made, a rigid exactness of methods which is difficult to obtain.

There are many sources of error to guard against. Some of the more obvious are errors in sterilisation of pipettes and measuring apparatus, differences in media, manipulations in adding thiosulphate and so on.

The real check on any laboratory's work is that its results are consistent with the probabilities as I have mentioned above. To take a topical example, if for instance in grouping the blood of a large number of persons a surprising number of Group B were obtained, this by itself ought to lead to a careful scrutiny as to possible errors, and only a careful watch by the director of the laboratory will enable these and similar errors to be spotted at once and the error traced.

Possible Sources of Error Outside the Laboratory

The second point apart from errors of technique is the effect of a lapse of time in transit as a possible source of error. These waters before dispatch had the chlorine neutralised by sodium thiosulphate and I have never been sure of the exact reason for this. Chlorinated water is supplied to the consumer, so why should not similar water be examined ?

There is no doubt however that Inspectors taking samples of water could easily contaminate them during collection. The whole process cannot e dealt with in the precise manner common in :boratory technique. As an example one need ıly consider the taking of blood for culture in .inical medicine. Anyone not versed in rigid ,acteriological technique would contaminate at least 90 per cent. of samples even in such a simple operation. Whereas with a rigid technique one would not expect a single contamination in hundreds of cases.

Lastly, in dealing with possible sources of contamination in taking samples, there is the question of dirty taps. Many taps in sculleries and the like are grossly contaminated with debris, grease, etc., both inside and outside. Wiping with spirit, flaming and so on will certainly sterilize the outer surface, but it is almost impossible to clean the inner bore of the tap. Even if the water is allowed to run for a considerable time there is always the danger of material being loosened when taking a sample and the possibility that if 12 or more hours elapse before the water is tested considerable growth may result.

The ideal method of sampling would appear to be to collect the water from the various supply mains and not from various domestic taps. It is therefore comparatively easy for any laboratory by means of constant check to be certain that its methods are reliable.

This being so there seems to be no reason to have samples examined by a series of laboratories, especially as it is pretty certain that small errors in the technique of collection may produce very discordant results.

It must be remembered that the presumptive test in common use for the presence of *B. coli* is only an indicator of possible contamination and does not differentiate between *B. coli* and intermediates. The intermediates are common in soil pollution and in any series of examinations giving poor results it is necessary to distinguish between faecal *B. coli* and the intermediates. There are numerous tests for the purpose and probably the two simplest are growth on Koser's Citrate Medium and growth at 44° C.

Actually, as far as Plymouth is concerned, practically all the positive presumptive *B. coli* tests were due to intermediates.

The ideal plan is for the examination of waters to be carried out if possible by a nearby laboratory so that there can be constant personal collaboration between the Medical Officer of Health, the Water Engineer and the Director of the Laboratory. In this way errors of any kind will be bound to be noted. Any mistakes in technique on either side or sudden natural variations will on consultation receive due consideration. In many ways the matter resembles a difficult problem in clinical medicine in which the difficult part is the weighing up of all the evidence, not the isolated importance of any single piece of evidence.

Two well-known medical officers of health have recently retired. One is Dr. R. D. Smedley, who has been compelled through ill-health to give up his post as county medical officer of health for West Sussex, several years before reaching the age limit; we wish him a quick restoration to full health. The other is Dr. A. B. McMaster, for 20 years medical officer of health for the borough and port of Dover, and a prominent member of the Association of Port Health Authorities. Both will take with them the esteem of their colleagues and their wishes for a pleasant retirement.

Compulsory Diphtheria Immunisation in Guernsey

By ROWAN W. REVELL, M.D., D.P.H.
Medical Officer of Health, States of Guernsey.

After Guernsey had been practically free from diphtheria for the previous five years, an epidemic of diphtheria started in October, 1937.

There were 10,000 children under 14 years of age, a large proportion of whom were presumably susceptible. In these circumstances, the Guernsey Board of Health decided that mass inoculation of the children was the only practicable means of controlling the epidemic. It did not appear that the necessary percentage could be obtained within a short period by a voluntary scheme, or could be maintained after the subsidence of the epidemic, so it was decided to introduce a compulsory scheme. Such a scheme was passed by the States (the local Parliament) on April 29th, 1938, and a projected law on July 7th, 1938. This was not confirmed by an Order in Council (from the Privy Council) until April, 1939. In the meantime, free inoculation was offered to all children up to the age of 14 years.

Under the law all children who, on April 15th, 1939, were between the ages of 2 and 10 years were required to be inoculated, and in future all children after attaining the age of 2 years and before reaching the age of 2½ years. An earlier age was not adopted, as it was held that there would be more objection from parents, but those who wish may have their children inoculated after one year of age. Children are exempted on any of four grounds: a previous attack of diphtheria, a negative Schick Test, previous inoculation, or a certificate of unfitness. So far 19 certificates of permanent unfitness and 94 of temporary unfitness have been issued.

Two doses of A.P.T. at an interval of not less than two weeks, and not more than four weeks, was specified by the law for the children under ten. This gave rise to very few reactions, which were mostly mild, and this method of immunisation seems quite satisfactory for these ages, although some suppliers of A.P.T. recommend eight as the age limit. With the advantage of more recent knowledge the period between the two injections has been increased to at least three weeks. Three injections of T.A.F. at fortnightly intervals were used for older children. Some 4,200 children were inoculated before the compulsory law was passed ; since then the number has increased to over 6,700.

No action under the law has been taken as yet, except for notices in the local papers, but now individual notices are being sent to those parents who have not had their children inoculated.

Since the epidemic started there have been 567 cases of diphtheria in children under 14 years of age, with 18 deaths. In the inoculated, 24 children over eight weeks from the first injection, and 17 children under eight weeks from the first injection, contracted diphtheria ; there were no deaths, all but two of the cases being mild.

The percentage of children under 5 years of age inoculated is 45 ; the percentage of children from 5 years to 14 years is 80 ; and the percentage of all children under 14 years of age 67 or, including children who have had diphtheria, 72 per cent.

The immunisation has been carried out by the general practitioners, either at their surgeries or at the schools ; their activities both in propaganda and in persuasion have been most valuable, and I have no doubt that the family doctor has much power to influence parents to have their children immunised. A.P.T. and T.A.F. were supplied free to the doctors and the fees paid were those stipulated by the B.M.A. Certificates of inoculation (not immunisation) were issued in duplicate books of 100, one certificate being given to the parent, and the counterfoil left in the book for return to the Medical Officer of Health. The names of the children to whom the law applied were obtained from the register of births for those under 5 years of age, and from the Education Council for those aged from 5 years to 10 years.

Although the epidemic definitely began to subside after 4,000 children had been inoculated, I do not think it would be of much value to give figures showing the fall in new cases in relation to the number inoculated, as the effect of factors such as natural immunisation due to the epidemic and the season of the year cannot be excluded. I might add that there has been considerable propaganda against diphtheria immunisation and against compulsion, which has been organised from England.

Two leaflets on topical subjects are available free of charge to medical officers of health for distribution to the public. One, entitled "Cleanliness of School Children: Care of the Hair," is issued by the Health and Cleanliness Council, Aldwych House, W.C.2, and gives simple directions for the removal of nits and headlice. The other is on "Bed-Wetting" and is from the National Baby Week Council, 29, Gordon Square, London, W.C.1; this is very well written advice to foster-parents of evacuees.

Dr. Nash's Cookery Book, previously reviewed by us, is proving particularly useful at present in connection with communal feeding schemes. It is published by Messrs. Simpkin Marshall, Ltd., price 6d. a copy.

Correspondence

EVACUATED CHILDREN.

To the Editor of PUBLIC HEALTH.

SIR,—I have read with much interest the article on this subject in your current issue. What puzzles some of us is the apparent discrepancies between published reports of school medical inspections and the incidence of lack of personal hygiene among the children. It would be helpful to have some published figures as to the percentage of (say) head lice in some of the children in receiving areas. For instance, the Annual Report of the L.C.C. School Medical Officer for 1937 (p. 10) gives the following percentages: 97·4 per cent. were found free from traces of nits or pediculi in the hair: or 2·6 suffered from this form of uncleanliness. In a rural area well known to me, where only London children are taken, the figures are certainly very much higher. They seem like 50 per cent. ! It is true that in the rota visits made by nurses in the homes 7·9 per cent. of children were found to be verminous.

As for the problem of bed-wetting, no figures are given in the L.C.C. report. Many cases have been reported to me personally in which children of 8 to 10 years (mostly boys) have refused to co-operate in the use of domestic utensils, even during the day-time. Many are wet and dirty. In one such case (an apparently normal boy of 10 years) he could also neither read nor write. The problem of excretion as a whole certainly needs further investigation in view of the facts now brought to our notice.

Yours truly,

14, Park Village East, STELLA CHURCHILL.
Regent's Park, N.W.1.
November 8th, 1939.

PEDICULOSIS.

To the Editor of PUBLIC HEALTH.

SIR,—In times gone by pediculi were the unwanted guests of both rich and poor. In the 19th century the richer classes freed themselves of the pest, but amongst the poorer classes large numbers were still infected, for instance, in 1902, in many London Schools "scarcely a girl was free from infestation, and vermin could be seen dropping from the heads of the elder girls as they stooped over their lessons."

Since that time conditions have been greatly improved and we learn from the Annual Report of the Chief Medical Officer to the Board of Education that between 1924 and 1933, a drop had occurred in the number of unclean and verminous school children from 7·4 to 3 per cent. Since 1933, however, no progress is apparent, the percentage remaining around 3 per cent. Since relatively few boys suffer it is probable that 4 to 5 per cent. of all girls are infected.

With the arrival of the evacuees we have been painfully reminded that in spite of all the care and work of cleanly mothers and our school nursing staff, pediculosis remains a common condition and it is evident that there is a weak spot in our plan of campaign. Every school doctor and nurse knows what that weak spot is. They know that certain school children after thorough cleansing are reinfected again and again. They know that other members of the family must be harbouring vermin and reinfecting the school children. Yet, although these vermin-infected families, the centres from which infection is spread, are well known the local authority has no legal power to deal effectively with the matter. Whilst they have the right to inspect the hair of every school child and to cleanse any person known to be verminous they have no power to inspect the hair of other members of the families of the vermin-infested school child. Until they are given power to deal with whole families at a time all their work is palliative and largely futile; on the contrary, if they were allowed to examine all home contacts they could clear away the centres of infection and pediculosis would become a rarity.

The public have been roused to indignation because verminous children have been billeted on clean families and they ask why every child was not carefully examined before leaving its home town. Would it not be better to ask why pediculosis should continue to exist in England at all as it could easily be finally eradicated if local authorities were given the necessary powers to deal with it effectively ?

Pediculi are most interesting and agile little creatures, and hunting for them and their eggs is quite an art, but in these times most of us will agree that mothers and school nurses could be employed more usefully. In any case, fully-trained nurses should not be employed to do this work which could be equally well done by any capable woman.

With a public rightly incensed with the present state of affairs, would the present not be an opportune time to ask Parliament to give Local Authorities power to deal effectively with this nuisance which claims so much of the time of over-worked mothers and fully-trained nurses, albeit the latter should not be so employed ?

The necessary powers might be included in a properly drafted clause to the following effect:—

> If on reasonable grounds it is suspected that one or more members of a family harbour vermin, then it shall be the duty of the Medical Officer of Health to arrange for the examination of all members of the family, and unless, in the following four weeks, they have taken effective steps to disinfest themselves, to have all infested members of the family disinfested at the same time.

It seems a great waste of time and money to do so much work to maintain our present standard of cleanliness when it is apparent that by cleansing the relatively few vermin-infested families, the centres of infection, we could finally put an end to pediculosis. Earlier such action might have provoked resentment and criticism, but now that the public are impressed with the need for drastic action the Health Staff would have their sympathy in any steps taken to end the nuisance.

I am, yours faithfully,

DUNCAN FORBES,
Lately Medical Officer of Health for Brighton.
2, Buckingham Road,
Brighton.
November 13th, 1939.

Book Reviews

Public Health Services. (Administrative Research Series.) By NORMAN WILSON, M.A., D.P.A., Medical Officer's Department, Birkenhead. 1938. London and Glasgow: Wm. Hodge and Co., Ltd. pp. 244. Price 7s. 6d. net.

Mr. Wilson is already known to members of the public health service by his interesting contributions on questions of administration. His book now under review is one of a series of studies made under the auspices of the Institute of Public Administration, and he gives the keynote by quoting a supplementary question asked by Miss Ward in the House of Commons, in 1937, as to the forthcoming National Health Campaign, and the Minister's reply:—

> "Miss Ward: Is the campaign that is to be inaugurated to be on the highest standard or on the lowest standard, and if it is to be on the highest standard, may I ask what is to happen to those people who want to take advantage of the health services which are advertised on the highest standard when they find they are not available owing to their non-provision by their own local authorities ?
>
> "Sir K. Wood: In regard to the first part of the question, naturally anything associated with the Ministry of Health will be on the highest standard."

The comment is appended that no answer to the second part of the question was recorded. Thus we are at once confronted with the familiar proposition that the theoretical uniformity of public health practice in this country means in fact, first, that the standards of the most progressive authorities are retarded by the standards of the less progressive and, secondly, that the latter class do not implement the potentialities of their statutory powers or duties. As Mr. Wilson puts it, 'No student of our institutions can hope to obtain a realistic conception of them merely by studying their legalistic framework, particularly when, as is the case where public health is concerned, much of the legislation is permissive."

The author discusses this proposition by making a careful comparative study of the services provided by the one class of local authorities which are supposed to exercise full and equal public health powers, *viz.*, the county boroughs. The results of this survey, which he carries out service by service, are thought-provoking, even though he is careful to admit that local circumstances may justify wide variations in practice. But many of his comparisons are far too effective to be ascribed to any circumstantial differences. Under Maternity and Child Welfare, for instance, he points out the very wide variations in the remission or reduction of a midwife's fees to necessitous cases, or in the scales of fees which have been laid down under the 1936 Act. Many other examples of discrepancies between the practices of one authority and another are given, and, although the author is careful not to draw conclusions where there is insufficient information as to local circumstances, such a contrast as that between £3 3s. per birth and 3s. 9d. per birth in the sums spent by two boroughs in providing milk to necessitous mothers must have some significance.

Of school medical services, the author remarks that only few county boroughs in 1934 carried out routine inspections other than the groups prescribed. He draws attention to the different standards of ascertainment which may account for a variation from 35·4 per cent. to 5·8 per cent. children found defective. It is surprising too to note that twelve county boroughs do not provide orthopædic treatment, and the estimates of the mental deficiency rates are divergent in the extreme.

The tuberculosis service is not so open to criticism, but Mr. Wilson thinks that after-care and provision of extra nourishment are not up to the standards of the actual treatment of the disease; less than half the county boroughs use their powers under the 1913 and 1921 Acts. Special housing help for the tuberculous is provided by only 13. Under the head of the Poor Law medical services the author discusses the progress made in the transfer of hospitals; at the beginning of 1937 over half the C.B.s had still to take over P.L. hospitals to be administered as public health hospitals. Domiciliary medical relief—"The only means of medical aid available to a large section of the population"—he finds to be very patchily administered; the "open choice" method is mentioned with approval.

His comments on "Public Health Officers" are interesting. It is pointed out that the M.O.H. is not necessarily the officer ultimately responsible for the direction of all the health services of his town, for he may be divorced from active control of poor law medical services, public assistance or even school medical inspection. It is argued that the M.O.H. has to devote too much time to managerial work calling for administrative rather than medical ability—and this is extended to the proposition that it is unwise and uneconomical to appoint technical officers to what are largely administrative posts merely because of technical qualifications. Mr. Wilson believes the solution to be the appointment of a lay administrator coequal with the M.O.H.; we believe that the better solution would be the more adequate training in administration of those medical officers who aspire to the M.O.H.-ships of large towns and counties, because no dual control would solve the difficulty that only a man trained in preventive medicine is able to initiate and extend public health measures. The isolation of some assistant medical officers in routine child welfare or school medical work is justly criticised.

In his general criticism, the author states that it is the theory of local government that formulation of policy is the function of the elected representative but that in public health, above all other municipal activities, a great amount is formulated by the M.O.H. Nevertheless, he questions whether the combination of a relatively unprogressive M.O.H. and a progressive council does not achieve better results than that of an enthusiastic M.O.H. and an indifferent council.

He considers that it is urgently necessary to devise some method of ensuring that, when some fresh development has proved its value, no local authority should be permitted to lag behind the others. Compulsory legislation would in theory secure every town the services it needs, but in practice we know that the adequacy of

such service would be according to the lights of the local council and not of the Ministry of Health. The inability to find the money is still a genuine reason for inadequacy in many towns and too much Exchequer assistance would fetter the prized autonomy of local councils. But Mr. Wilson strongly holds the view that public health is a national as much as a local responsibility and that as high a degree of uniformity as possible is imperative; or to put it another way, that the care of the public health is a local responsibility but has more than a local importance.

He discusses the extension to some public health services of the principle of regional control or joint action already applied in other directions, but on the grounds not of necessity but of greater efficiency; and suggests a detailed survey of the whole country similar to that undertaken by the Tyneside Commission. For public health purposes he considers that a population unit of 250,000 is the smallest which can itself comprehensively and economically carry out its health responsibilities. Our Society, in its memorandum of 1932*, held the view that an area of population 75,000-100,000 could administer all its own health services, with the exception that it would have to join with other similar areas in respect of hospitals, sanatoria and laboratories; but this proposal was directed to the reorganisation of districts which it was hoped would result from the Local Government Act of 1939 and any future reorganisation might have to be more drastic. As Mr. Wilson points out, the problems of public health in town and country are largely different; one is that of bringing the public to the services and the other that of bringing the services to the public. He thinks that the case for regionalism will fail if it cannot bridge the gap between the wealthier and poorer of its elements without Exchequer assistance.

It will be seen that this book raises questions which all of us would do well to ponder in the intervals, if any, of our day-to-day work. The present dislocation of war may, indeed, bring about opportunities for a true reconstruction when peace returns, and the more hard thinking that is done now about the best form of providing health services in the future the better.

The Disposal of Sewage. By T. H. P. VEAL, B.SC., A.M.I.C.E. 2nd Edition. 1939. pp. v + 174. London: Chapman and Hall, Ltd. Price 10s. 6d. net.

This book is intended primarily to meet the needs of students who wish to acquire a knowledge of main principles, without going into unnecessary detail.

The subject is dealt with under the headings: Quantity, Analyses, Primary and Settlement Processes, Bacteria Beds, Bio-Aeration Tanks, Land Treatment, Disposal of Sludge, Layout and Construction of Works, and Sewage Disposal in Rural Districts.

A useful object lesson is provided in the form of detailed developments of alternative schemes for dealing with the sewage of a town of 50,000 inhabitants.

The application of the principles explained in the text is generally clearly shown, a minor though not unimportant exception occurring in connection with a small scheme for a country house in which the "filter" is shown covered in with concrete, the only means of aeration being a small vent pipe the same as that provided for the septic tank.

The author's treatment of the subject as a whole is simple and clear. The book is well suited for those for whom it is intended.

The Art of Mothercraft. Parts I and II. By LESLIE GEORGE HOUSDEN, M.D. 1939. London: National Association of Maternity and Child Welfare Centres and for the Prevention of Infant Mortality. pp. 139. Price (each volume) 1s. 6d. net.

The author states that, like Gaul of old, the "Art of Mothercraft" is divided into three parts: the first for use at school, the second later and the third at home, by husband and wife together. He has completed the first two volumes, which are very readable and useful little books, and the third is in preparation. Dr. Housden has had the advantage of association with one of the most famous children's hospitals and a wide experience in general practice, and also possesses a lively sense of humour and a clear and vivid style of writing.

The first volume, which can be put safely into the hands of a schoolgirl of eleven or twelve, deals with general principles. In simple language the author describes how a young baby should be cared for, dressed, fed and bathed, and then shows how these processes should be adapted for older children. There are useful chapters on character training, on rules for maintaining health and on the early signs which show that all is not well with a child. Questions are appended to each chapter so that the young reader may test whether she has really understood what she has read.

Part II follows the same general lines as the first volume, but adds those details which are necessary for a reader who is not merely interested but who intends herself to put into practice the ritual described. The technique of breast feeding is well described, and the difficult process of weaning simplified by feeding tables which set out exactly how each feed should be arranged month by month from six months to one year. For mothers unable to breast feed their babies there is a short chapter on bottle feeding. The author favours a cow's milk mixture, but wisely refrains from giving too detailed advice on a matter which he feels is better referred to the family doctor; he does, however, give useful information concerning the choice and care of feeding bottles and teats, the actual preparation of feeds and the importance of scrupulous cleanliness. The chapters devoted to the upbringing of older children contain advice about character training and the necessity for co-operation between both parents in order to produce the proper environment for the child's development. The measures necessary to prevent illness and accidents are described, with a word of warning against the specious advertisements of the patent food and medicine manufacturers. Possibly more stress might have been laid on the value of immunisation against diphtheria, which is a service now provided by most health authorities. Practical advice on home nursing and the care of a child's teeth conclude this volume, which is stimulating, easy to read and should certainly find a place in the home of every intelligent young mother.

* PUBLIC HEALTH (October, 1932), **46**, 28. Local Government Areas.

A Synopsis of Hygiene. By Sir W. WILSON JAMESON, M.A., M.D., F.R.C.P., D.P.H., Barr.-at-law, Professor of Public Health, University of London, and Dean of the London School of Hygiene and Tropical Medicine; and Lt.-Col. G. S. PARKINSON, D.S.O., R.A.M.C., M.R.C.S., D.P.H., Assistant Director, Public Health Division, London School of Hygiene. With a section on Personal Hygiene by G. P. CROWDEN, D.SC., M.R.C.P. 6th edition. 1939. London: J. & A. Churchill, Ltd. Pages viii+687. Price 21s. net.

The regular reappearances of Jameson and Parkinson's *Synopsis* indicate how firm a place it has secured not only as a textbook for D.P.H. students but as a reference book in health department libraries. The sixth edition musters 687 pages compared with the 628 of the fifth in 1936, and this increase in size represents the further accumulation of legislation affecting the work of the public health service, *e.g.*, the Factories Act, the Food and Drugs Act and the new C.M.B. regulations as to the training of midwives; even the Cancer Act, which was still a Bill at the time of publication, is summarised. As one would expect from the authors' associations with the London School of Hygiene, the scientific references which have always become a feature of this book are brought right up to date, and there has also been extensive rewriting of the parts referring to hospitals, maternal health and industrial hygiene. The arrangement of sections remains as before. One can only admire the skill and lucidity with which such a vast field is thoroughly covered in the space of this book. The index as usual is up to the standard of the rest.

Sanitary Law in Question and Answer: for the use of students of Public Health. By CHARLES PORTER, M.D., B.SC., M.R.C.P., ED., Barr.-at-law (lately M.O.H., St. Marylebone) and JAMES FENTON, C.B.E., M.D., M.R.C.P., D.P.H. (M.O.H., Kensington). 4th edition. 1939. London: H. K. Lewis & Co., Ltd. Pages xvi+352. Price 10s. net.

This well-known textbook first appeared in 1910, and the soundness of the original foundation is attested by the way in which the catechismal form has been able to cope with the enormous growth of material to be covered in each successive edition. The new matter involved since the 3rd edition of 1932 was so voluminous that the authors seriously considered deserting "question and answer," but decided to adhere to this method of expounding their subject. Actually, we feel that the general arrangement of the book is so clear and the cross headings so numerous that the book would gain by dropping the questions and letting the answers speak for themselves; economy in space thus affected might be usefully employed for further items of information. It is perhaps inevitable that a certain disproportion should become apparent in a work which has to incorporate on an old basis much new material, but the only serious criticism in this case might be the very small space, *viz.*, two pages, allotted to school medical work, whereas port health work receives eleven pages, aircraft regulations twelve, maternity and child welfare nine, the Factories Act twenty-eight, and housing over fifty. However, the information is there, even if some aspects are unduly expanded at the expense of others, and this new edition should be a useful help to the D.P.H. student who may feel apprehensive at the task of mastering even the consolidating Acts of the last few years.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointment.

ANGUS C.C.: A.C.M.O.H., Dr. J. M. Thomson.

CARSHALTON U.D.: M.O.H., Dr. F. L. Smith (Part-time M.O.H., Carshalton and Merton and Morden U.D.s). Salary £1,100 rising to £1,200 plus £50 p.a. for travelling expenses.

CHELMSFORD M.B.: M.O.H., Dr. J. Mervyn Thomas (Dep. M.O.H., Barking U.D.).

FINSBURY MET. B.: M.O.H., Dr. C. O. S. Blyth Brooke (Dep. M.O.H. and T.O., Finsbury). Salary, £1,000 rising by £50 annually to £1,100.

HARROGATE M.B.: M.O.H. and S.M.O., Dr. D. D. Payne (Dep. M.O.H. and Dep. S.M.O., Croydon C.B.). Salary £800, rising annually by £50 to £1,000.

HORNCASTLE U. & R.D.s, WOODHALL SPA U.D. (A.C.M.O.H., LINCS C.C.): Acting M.O.H., Lieut.-Col. Frederick Harvey R.A.M.C. (ret.). (Lately A.C.M.O.H., Hereford C.C. and M.O.H. Chadderton U.D.).

ISLE OF ELY C.C.: C.M.O.H., Dr. W. K. Dunscombe (M.O.H. and S.M.O., Tipton M.B.).

MINISTRY OF HEALTH: M.O., Dr. A. T. Elder (A.C.M.O.H., Lancs C.C.).

NORTHERN IRELAND, MINISTRY OF HOME AFFAIRS: Dr. E. Armstrong (County Bacteriologist and A.C.M.O.H., Dumfriesshire C.C.).

PRESTON C.B.: A.M.O., M. & C.W., Dr. Miriam K. McAllum. Salary £575, rising to £750 p.a.

SHAFTESBURY M.B., SHAFTESBURY & STURMINSTER R.D.s (A.C.M.O.H., DORSET C.C.): M.O.H., Dr. Noel F. Pearson (Dep. M.O.H. and Dep. S.M.O., Luton M.B.). Salary £800, rising to £900 p.a.

SOUTHGATE M.B.: A.M.O.H., Dr. Marjorie K. Hall (Part-time M.O., Shoreditch Met. B. and West Ham C.B.).

SOUTH SHIELDS C.B.: Dep. M.O.H., Dr. R. A. Leader (M.O.H., Stone U. and R.D.s, A.C.M.O.H, Staffs C.C.).

SPALDING R.D.: M.O.H., Dr. C. W. Dixon (A.T.O., Holland (Lincs) C.C.).

TUNBRIDGE WELLS M.B.: A.M.O.H. and A.S.M.O., Dr. Patrick Crowley.

WEST SUSSEX C.C.: C.M.O.H., Dr. J. S. Bradshaw (Dep. C.M.O.H., Staffs C.C.).

THE SCHOOL DENTAL SERVICE IN WAR-TIME

The Board of Education have issued a circular (No. 1485) dated November 24th, which deals comprehensively with the question of reorganising the school dental service so as to deal with the present exceptional conditions. It is explained that the issue of a detailed circular regarding the school medical service has been held up owing to the present uncertainty as to the number of doctors and nurses available; but that other calls on dental personnel are not likely to be so pressing for the time being. The fact that dental defects in school children outnumber all other defects combined is given as another reason for issuing advice at once on the conduct of the dental service. It is stated that the circular (which is summarised below) concerns mainly the receiving authorities but that some paragraphs (*e.g.*, 3, 8, 9, 10 and part of 12) apply to all areas.

2. *Responsibility of Local Authorities.*—In Circular 1469 (May 19th, 1939) it was laid down that the responsibility for providing a School Medical Service for evacuated children would rest with the receiving Education Authority. It is emphasised that the School Dental Service is an integral part of the School Medical Service. While the responsibility for such provision rests with the receiving authority, no additional expenditure in respect of evacuated children will ultimately be borne by that authority.

3. *Resumption of Conservative Treatment.*—It was recognised by the Board that it would be necessary in many areas to suspend conservative dentistry for a period following evacuation. If this period is greatly prolonged, much of the work done in past years will be wasted. It is hoped, therefore, that Education Authorities will as soon as possible arrange for a resumption of conservative work if this has not already been done.

4. *Scope of Service for Evacuated Children.*—It is most desirable that there should be no differentiation in the facilities available as between the evacuated children and those normally resident in the area. The Board have been informed that there has been differentiation in some areas.

5. *Appointment of Additional Dental Officers.*—Owing to the substantial increase in the school population of receiving authorities, it will be necessary for the majority of them to consider the question of augmenting their dental staffs. The responsibility for doing this rests solely with them, though they will naturally take steps to ascertain the wishes of the evacuating authorities which have sent children to their areas. Some direct transfers of dental staff from evacuating authorities to receiving authorities have already taken place, but as a Dental War Committee has been set up by the Government for the purpose of co-ordinating the supply of dentists to the various services, authorities who are prepared to release dental officers for service with other authorities, and authorities who propose with the Board's concurrence to increase their staffs should communicate with the Secretary, Dental War Committee, 13, Hill Street, Berkeley Square, London, W.1. The Committee would have no difficulty in putting authorities in touch with experienced public dental officers employed by evacuating authorities or with other dentists who are willing to undertake school dental work. When communicating with the Dental War Committee a receiving authority should include information as to which evacuating authorities have sent children to their area. The Committee will then be able to ascertain if there are on their register any dental officers who are available for transfer from those areas.

6. *Remuneration and Status of Transferred Officers.*—Some difficulty may be experienced in connection with the remuneration of additional officers since there is no uniformity in the salaries paid by different education authorities. It would appear reasonable that officers who transfer for the emergency period from an evacuating authority to a receiving authority should continue to receive the scale of salary which was paid to them by the evacuating authority. This is the principle applied in the case of teachers, though in their case the salaries continue to be paid directly to them by the evacuating authorities. Such a method of direct payment will not always be practicable in the case of dental officers, as it does not necessarily follow that they would transfer to an area containing children from the area in which they had previously been employed. In any case, the transferred dentist, with his wide field of operation, will to a far greater extent than the teacher be dealing with children belonging to more than one authority.

7. *Provision of Emergency Treatment.*—The Board have received reports of evacuated children attending the surgeries of private practitioners for the relief of pain during the period prior to the re-opening of the schools. In towns where a permanent clinic exists the school dental staff should be able to provide adequate facilities for the treatment of emergency cases. There may nevertheless be some towns where, although additional staff could be obtained to meet any demand, accommodation and/or equipment is not immediately available, and in such cases it may be necessary to enter into arrangements with private practitioners. (Details are given, suggesting payment on the scale fixed for National Health Insurance dental treatment.)

8. *Nurses as Dental Attendants.*—In war-time one of the nation's greatest needs is for trained nurses. For a considerable number of years the Board have urged Local Authorities to appoint as dental attendants women who do not possess general nursing qualifications, and this advice has been accepted by many authorities. The Board trust that some authorities who have not acted on this advice will realise their responsibility for seeing that the nursing resources of their areas are utilised to the best advantage.

9. *Economy of Officers' Time.*—In order to conserve the time of the dental staff, clerical work should be reduced as much as possible. Records must be kept which will enable the Board's statistical return to be completed and which will furnish evacuating authorities with the information they require, but more elaborate recording should be discouraged and detailed charting should not be carried out during school inspections. The Board recommend that conservative treatment of the temporary dentition should be confined for the most part to treatment by silver nitrate and that, in general, fillings in temporary molars should be restricted to simple occlusal cavities.

10. *Dental Clinics as First Aid Posts.*—It is reported that in some areas school clinics, providing accommodation for school dental treatment, have been appropriated as First Aid Posts and that dental treatment in those premises has been discontinued. As was indicated in the Board's Circular 1475, it is desirable that First Aid Posts should be available for school medical work, provided that such work does not interfere with the war purposes of these posts. The Board trust that every effort will be made to ensure that the accommodation in these clinics is made available for a resumption of dental work or that alternative accommodation is provided without delay.

11. *Consents for Treatment.*—It will often be impossible to obtain consents for treatment from the parents of evacuated children and it is, therefore, suggested that the following procedure might be adopted. If it appears that the parent has consistently refused in the past to allow the child to receive dental treatment, emergency treatment only should be given. If there is evidence that the child has received dental treatment in the past, it may be assumed that the parent would agree to treatment, and action might be taken as if the parent's consent had been obtained.

12. *General Anaesthetics.*—It is most important to avoid, if at all possible, the administration of a general anaesthetic without the consent of the parent having been obtained. This limitation may render it desirable to produce local anaesthesia by the regional method in a larger proportion of cases than formerly, since infiltration anaesthesia is to be deprecated in the presence of sepsis. Dental officers who received their professional education prior to the development of regional anaesthesia may wish to obtain some instruction in this technique. If so, their local authorities would do well to communicate with the nearest dental hospital or similar institution, *e.g.*, the Eastman Dental Clinic, with a view to ascertaining if arrangements could be made for these officers to attend there for a few days' instruction in this subject. Reasonable expenditure so incurred would be approved by the Board.

In some areas nitrous oxide as a general anaesthetic is administered only by medical practitioners. In view of the need for setting free medical officers for other duties, it is suggested that these local authorities might arrange for their dental officers to act as dental anaesthetists as is done elsewhere. The "Conditions of a satisfactory school dental scheme*" prescribed that general anaesthetics shall not be administered by the operator except in cases of special urgency. Shortage of staff may result in some relaxation of the general rule. In no circumstances, however, may any general anaesthetic other than nitrous oxide, with or without oxygen, be administered by the operator.

13. *Journeys to Clinics.*—In view of traffic dangers and the unfamiliarity of evacuated children with the whereabouts of the clinics, steps should be taken to see that the younger ones at any rate are not unaccompanied. Assistance given by the teachers may be supplemented by voluntary workers, *e.g.*, Boy Scouts and Girl Guides.

14. *Transfer of Records.*—There does not appear to be any need for a general transfer of existing dental record cards from evacuating authorities to receiving authorities, but the names of children known or believed to be "bleeders" should be forwarded to the receiving authorities. Similar action might well be taken in respect of children wearing orthodontic appliances, since harm may be done if a lengthy interval elapses without readjustment of these appliances.

The dental officers of receiving authorities will naturally make a record of any treatment carried out for evacuated children, and these authorities should endeavour to accede to any request made by the evacuating authorities for periodical summaries of the work so performed. It is desirable that the records should be kept in such a way as to enable receiving authorities to show separately in their statistical returns at the end of the year particulars of work carried out for evacuated children, whether by salaried officers or by private practitioners remunerated by the authority.

15. *Fees for Treatment.*—It is recommended that receiving authorities be relieved of responsibility for collecting payments in respect of the dental treatment of evacuated children, but that on the receipt of the periodical summaries of work referred to in paragraph 14, evacuating authorities should consider the possibility of recovering fees for treatment in cases where payment for a given period has not already been made.

16. *Treatment for Secondary School Pupils.*—Authorities for Higher Education have power to provide dental treatment for Secondary School pupils under Section 80 (2) of the Education Act, 1921. Some of these authorities have not hitherto exercised their powers under this section, and it is recommended that they should review the position if pupils have been evacuated to their areas. It would be regrettable if pupils who have been consistently receiving conservative dental treatment were now to be deprived of it.

17. *Co-operation with Maternity and Child Welfare Authorities.*—It has always been the Board's policy to encourage co-ordination of the School Medical Service with Maternity and Child Welfare arrangements, and accordingly a substantial part of the dental treatment carried out under Maternity and Child Welfare schemes has been performed by school dental officers working, as a rule, in school clinics. In Circular 1882 recently issued by the Ministry of Health, Maternity and Child Welfare Authorities were urged to extend the "facilities already provided for their own population to mothers and children under 5 years (not being educated in schools recognised by the Board of Education) who are sent into their areas under the Government Scheme." Specific mention was made of arrangements for dental treatment, and the Board feel confident that Local Education Authorities will assist Maternity and Child Welfare Authorities to fulfil their increased responsibilities in this sphere.

*The "Health of the School Child," 1933, p. 165.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1810. Price 1d. net. *Repair of War Damage. Housing Accommodation.* Issued to Housing Authorities in England and Wales. Outlines procedure and measures to be taken by Local Authorities for carrying out necessary repairs to housing accommodation rendered unfit for human habitation by war action.

Circulars 1828, 1828*A*, 1828*B*, 1828*C*, 1828*D*. *Government Evacuation Scheme.* Inform Local Authorities of the arrangements made to supply blankets and overlays for use in connection with the Government Evacuation Scheme. Ask to be informed of the L.A.'s proposals as regards storage and request that an estimate of the needs of the district be furnished.

Circular 1830. Price 1d. net. (Encloses Memo. 36/Foods.) Price 1d. net. *Food and Drugs.* Forwards to Food and Drugs Authorities (England) copies of the revised Memorandum 36/Foods, relating to procedure under the Food and Drugs Act, etc.

Circular 1832. Price 1d. net. *Hospital Nursing—Conditions of Service.* Draws the attention of local

authorities to certain recommendations relating to the conditions of service of hospital nurses contained in the Interim Report of the Inter-Departmental Committee on Nursing Services.

Circular 1833. Price 1d. net. (Encloses S.R. & O. of 1939, No. 840.) Price 1d. net. *Food and Drugs.* Forwards to Food and Drugs Authorities (England) copies of the Public Analysis Regs., 1939, relating to the qualifications of Public Analysts and the form of Certificates of Analysis, for purposes of Food and Drugs Act, 1938.

Circular 1836. (Encloses Costing Returns. Part I. 1936-37.) Price 9d. net. *Costing Returns—Year ended 31st March*, 1938. Forwards to Clerks of County Councils and Town Clerks of County Borough Councils copies of Part I of the Costing Returns for 1937-38 which contains particulars of average cost per inmate per week in Poor Law Hospitals; General Hospitals (administered under the Public Health Acts, or the Local Government Acts); Sanatoria (and other Institutions for the residential treatment of Tuberculosis); and Maternity Homes and Hospitals.

Circular 1840. Price 8d. net. Addressed to Welfare Authorities regarding the proposals of the Government in co-operation with the milk industry for securing a reduction in the price of liquid milk to Local Authorities for the purpose of their maternity and child welfare arrangements.

Circular 1841. (Encloses Memo. E.V.5.) Price 3d. each net. *Government Evacuation Scheme.* Issued with Memo. E.V.5 to Local Authorities and County Councils giving further information and asking for certain particulars in connection with the Government Evacuation Scheme.

Circular 1844. *Civil Defence Act*, 1939. Draws the attention of water undertakers to Part V of the Civil Defence Act, 1939, and indicates the lines on which the report asked for in section 36(1) of the Act should be framed.

Circular 1846. *Civilian Deaths due to War Operations.* Instructs Local Authorities to keep daily lists of the names and addresses of the persons killed as a consequence of war operations whose bodies are brought into their mortuaries and advising as to the disposal of ration books and identity cards.

Circular 1847. *Casualty Bureau—Notification of Casualties.* To County Councils (except London and Middlesex) and County Boroughs (except East Ham, West Ham and Croydon). Sets out the arrangements for setting up Casualty Bureaux and for Notification of Air Raid Casualties.

Circular 1849. Price 3d. net. *Emergency Hospital Scheme. Equipment of Hospitals.* Confers on County and Local Authorities with hospitals in the Emergency Hospital Scheme authority to make certain local purchases of equipment.

Circular 1850. Price 2d. net. *Civil Defence Act*, 1939. Informs County and Local Authorities Civil Defence Act, 1939 of the effect on Emergency Hospital Scheme and other emergency medical services.

Circular 1851. *Government Evacuation Scheme.* Informs Local Authorities of the arrangements made to supply camp beds which are being issued in lieu of mattresses for use in connection with the Government Evacuation Scheme. Asks to be informed of the Local Authorities' proposals as regards storage and requests that an estimate of the needs of the district be furnished.

Circulars 1855 *and* 1855*A*. *Emergency Hospital Scheme. Billeting of Doctors, Nurses and other Hospital Staff.* To County Borough and County District Councils. Sets out arrangements for billeting additional Doctors, Nurses and other Hospital Staffs in an emergency (Circular 1855—Reception Areas: Circular 1855A—Evacuation and Neutral Areas).

Circular 1858. *Emergency Powers Defence Act*, 1939. Informs Local Supervising Authorities under the Midwives Act that a Regulation is about to be made under the Emergency Powers Defence Act, 1939, which will empower them, if considered necessary, in order to secure an adequate number of women for attendance on women in childbirth or as maternity nurses, to make an Order or Orders exempting from the provisions of the Midwives Acts, 1902 to 1936, any such women who have surrendered their certificates under Sub-section (1) of Section (5) of the Midwives Act, 1936.

Circular (unnumbered). Letter of Chief Medical Officer addressed to County Medical Officers of Health on Government Evacuation Scheme.

Circular (unnumbered). Letter of Chief Medical Officer. Deals with Evacuation of Expectant Mothers, Medical and Nursing Staff.

Costing Returns. Price 2d. net. Sewage Disposal Works. Costing returns for the year ended March 31st, 1939.

Report. Price 3s. 6d. net. Rehabilitation of Persons injured by accidents. Final report of the Inter-departmental Committee.

Statement. Price 4d. net. Housing, House Production, Slum Clearance, etc.; England and Wales. Position at March 31st, 1939.

Booklet. Price 3d. net. Food and Drugs Act, 1938. Tables of Comparison for the Food and Drugs Act, 1938, showing the way in which earlier enactments are dealt with by the Act and the correspondence between the Sections of the Act and the provisions of the earlier Acts.

Circular 1861. *Emergency Hospital Organisation.* To County and County Borough Councils and Voluntary Hospitals. Pay of Nurses and Nursing Auxiliaries provided by Civil Nursing Reserve and giving whole-time service at hospital.

Circular 1862. *Air Raid Precautions Act*, 1937. To County and County Borough Councils, Metropolitan Borough Councils and other Scheme-Making Authorities. Medical Supplies for First Aid Posts. Replenishment of deficiencies by Local Authority. Sanction to purchase through usual channels and claim re-imbursement.

Circular 1868. *Local Government Staffs (War Service) Act*, 1939. Draws the attention of local authorities to the Act, the general principles of which are that (i) local authorities are empowered to make up the balance of civil pay of their employees undertaking war service as defined in the Act and (ii) the superannuation rights of such employees are preserved. The Act also includes provision for the removal of disqualification as regards local authority membership of persons employed in civil defence service.

Circular 1866. Price 1d. net. *Housing Acts: Postponement of Work.* Addressed to Housing Authorities, England and Wales, informs Local Authorities of the decision in view of the outbreak of war that Inquiries into Slum Clearance Orders will be deferred, that steps taken should stop short of actual demolition save in exceptional circumstances. Similar conditions will apply to individual demolition orders and redevelopment schemes. The erection of further houses will not be approved save under exceptional circumstances and Local Authorities should arrange with Contractors to concentrate on houses in an advanced stage of construction.

Circular 1867. *Deaths due to War Operations.* Notifies Local Authorities that the Home Secretary has authorised the Clerk to any Local Authority to issue certificates of death due to war operations.

Circular 1868. *Emergency Hospital Organisation.* To County and County Borough Councils and Voluntary Hospitals. Refers to Circular 1861. Flat rate of 40s. (non-resident) per week is limited to classes of personnel specified and does not extend to ancillary personnel, *e.g.*, cooks, kitchen staff, etc.

Circular 1869. *First Aid Posts.* To County, County Borough and Metropolitan Borough Councils and other Scheme-Making Authorities (copies to other County District Councils for information). Refers to Circular 1789 and reviews question of the proportion of personnel to be employed on a whole-time basis in war-time.

Circular 1871. *Government Evacuation Scheme.* Issued to Local Authorities. Gives information in some detail on problems arising out of the scheme.

Circular 1874. *Emergency Hospital Scheme.* Addressed to County Councils, County Borough Councils, Mental Hospital and Mental Deficiency Authorities with hospitals and institutions in the emergency hospital scheme—sets out the principles governing the payments to hospitals in respect of the treatment and maintenance of civilian air raid casualties.

Circular 1876. *Government Evacuation Scheme.* Issued to Local Authorities. Explains the position of persons who were on holiday, or were staying with relatives at the time that evacuation was carried out.

Circular 1880. To Local Supervising Authorities under the Midwives Acts (England)—referring to Circular 1858 and drawing attention to Regulation 33 of the Defence Regulations, 1939, as set out in Article 8 of the Order in Council amending the Defence Regulations, 1939 (S.R.O. 1939 No. 978) and requesting that two copies of any Orders be furnished to the Minister and one to the Central Midwives Board.

Circular 1881. To County, County Borough, Metropolitan Borough Councils and other Scheme-Making Authorities, Mental Hospital Authorities and Voluntary Hospitals—Nursing Personnel, Unemployment Books should not be stamped for Trained and Assistant Nurses: but should be stamped for all whole-time Nursing Auxiliaries and female personnel, trained in first aid and serving whole-time at first aid posts.

Cmd. 6089. Price 5s. Twentieth Annual Report of the Ministry of Health, 1938-39.

E.M.S. Memo. No. 44. Price 3d. net. Emergency Medical Services Memo. No. 4. Memorandum for the guidance of medical officers and other personnel at first aid posts.

THE MINISTRY AND COMMUNICABLE DISEASES

During the past month the Ministry of Health have issued several circulars and memoranda regarding various infectious diseases.

Notification of Measles and Whooping-Cough.—Circulars 1896 and 1896a, dated November 1st, state that regulations for the notification of measles and whooping-cough have been made to come into operation forthwith throughout England and Wales, and provide for the notification of all cases by medical practitioners to medical officers of health. The object is to enable the Department to ascertain readily and rapidly the incidence of these diseases as it may be affected by the displacement of child population caused by the recent emergency measures and the changes that may have occurred in the geographical distribution of the infection diseases. The fee payable to a medical practitioner for each certificate under the regulations will be one shilling.

Returns by medical officers of health of the notifications received under the regulations should be made to the Registrar-General weekly on the same form and in the same manner as for the notifiable diseases specified in Section 343 of the Public Health Act, 1936. The intention is that the regulations shall remain in operation only so long as the special conditions created by the present emergency continue and that they shall then be revoked. All existing local regulations relating to the notification of measles and whooping cough are being revoked but the Minister will be prepared to consider the question of remaking these local regulations when the present general regulations cease to operate.

It is important that every local authority should cause notice of the regulations to be given to all medical practitioners resident or practising within their area and that steps should be taken to make the regulations as widely known as possible.

Typhoid Fever.—A Memorandum on Typhoid Fever (Memo. 225/Med.) issued by the Ministry was published on November 22nd, price 2d. The Memorandum deals with the history, prevalence, diagnosis, prevention and control of the disease, and contains an appendix on laboratory diagnosis. The Memorandum is intended primarily for the use of medical officers of health, but should also be of assistance and interest to general practitioners and the public.

Influenza.—On November 20th the Ministry issued a Memorandum on Influenza (Memo. 2/Med., price 2d.) which is a revised edition of the Memorandum on the same subject issued in 1929. The Memorandum includes a statement of the principal known facts regarding influenza, a brief history of the disease in this country during recent years, and advice as to measures of personal protection. Part III describes the administrative measures which local authorities may take to prevent occurrence of the disease and to minimise its spread; they are reminded that the Minister has already sanctioned the provision by local authorities in periods of influenza prevalence of medical assistance (including nursing and dispensing of prescriptions) for the poorer inhabitants who may be suffering from the disease.

The Society of Medical Officers of Health

ANNUAL GENERAL MEETING

The Annual General Meeting was held at the offices of the Society on Friday, November 17th, 1939, at 4.30 p.m.

The retiring President (Dr. E. H. T. Nash) was in the Chair and there was a large attendance of members.

Apologies for non-attendance and good wishes to the President-elect for his year of office were received from a number of members.

The minutes of the Annual General Meeting held on November 18th, 1938, were approved and signed.

The retiring President then proceeded to the installation of Dr. F. T. H. Wood as President of the Society for the session 1939-40 and to invest him with the Badge of Office. The installation was received with general applause, to which Dr. Wood briefly returned thanks.

The meeting next adopted the annual reports of the Council, the Hon. Treasurer (to whom thanks were accorded) and the Editor for the session 1938-39, these having been printed in PUBLIC HEALTH for November, pages 38 *et seq.*

A report was also received relating to the procedure of the Society in war-time (see PUBLIC HEALTH, November, page 47.)

Mr. J. T. Harris was re-elected as auditor for the current session.

The meeting then proceeded to the election as an Honorary Fellow, under Article 9, of Dr. J. Sim Wallace, formerly dental surgeon, London Hospital, and lecturer in preventive dentistry, King's College Hospital, and a member of the Society since the amalgamation with School Dentists' Society in 1922. The Council had recommended the election of Dr. Sim Wallace in view of his pioneer work in regard to the prevention of dental caries. Dr. R. H. Wilshaw (formerly M.O.H., Worthing; joined the Society, 1909) was then elected as a fully-paid Life Fellow under Article 12 on the recommendation of the Council and of the Southern Branch.

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

As Fellows.—Brown, Douglas, M.B., CH.B. (GLASG.), D.P.H.; Capon, Philip John Lauriston, Maj. R.A.M.C., M.R.C.S., L.R.C.P., D.P.H.; Cargill, Walter Paulet, B.SC., M.B. (MANCH.), M.R.C.S., D.P.H.; Craig, Jenny D., M.B., CH.B. (MANCH.), D.C.H.; Davies, Evelyn Mary, B.A., M.R.C.S., L.R.C.P., D.P.H.; Fenton, John, M.B., B.CH. (IRE.), B.A.O., D.P.H.; Florentin, Miriam, M.B., CH.B. (MANCH.), D.P.H.; Gammie, John Lawrence, M.B. (ABERD.), D.P.H.; Gray, Eva, M.B., CH.B. (CAPE TOWN), D.P.H., D.A.; Harvey, Malcolm Smith, M.B., CH.B. (EDIN.), D.P.H.; Hepple, Norman Vaughan, M.D., B.S., B.HY. (DURH.), D.P.H.; Humble, Elizabeth Greta, M.B., CH.B. (VICT.); Lewis, John Tudor Richards, M.D. (LOND.), D.P.H.; Lockhart, Robert, M.C., M.B., CH.B. (EDIN.), D.P.H.; McIntosh, David Glass, M.B., CH.B. (ST. AND.), D.P.H.; Montgomery, Gladys, M.B., M.D. (GLASG.), D.P.H.; Nisbet, George, M.B., CH.B. (EDIN.), D.P.H.; Roberts, Muriel Irene Horsfall, M.B., CH.B. (BIRM.), D.P.H.; Rosie, Jessie Irene, M.B., CH.B. (EDIN.), D.P.H.; Seiler, Henry Edmund, M.D. (GLASG.), D.P.H.; Townsend, Eric, M.D. (EDIN.), D.P.H.

As Associates.—Bulcock, Geoffrey Henderson, L.D.S.; Hackman, William Gilbert Craven, L.D.S.

Nominations for the next election were then received in respect of the following: —

Dr. Sydney K. Appleton (A.C.M.O.H., Notts C.C.); Dr. Herbert S. Davies (M.O.H., Newton-le-Willows and Golborne U.D.s); Dr. Brendan Sheehan (S.M.O., Cornwall C.C.)

Dr. Cyril Banks then moved a hearty vote of thanks to the retiring President (Dr. Nash) for his work on behalf of the Society during the past year. This was warmly seconded by Captain G. S. Elliston, M.P., who referred to his very long friendship with Dr. Nash and to the latter's pioneer efforts in many branches of public health work. The vote of thanks was carried by acclamation. Dr. Nash, in reply, expressed his appreciation of his year as President and of the honour which had been done him.

Under the head of other business, Sir Francis Fremantle asked whether the Society was tackling the question of venereal disease in war-time; he pointed out the great amount of invalidity, 416,000 cases, which had occurred from this group of diseases in the Great War, and stated that, whereas there was some prophylactic service for the Army, the care of the civilian population was left entirely to the local authorities; he wondered whether medical officers of health had considered the use of mobile units to deal with any increase in V.D. incidence.

It was not possible under the constitution to discuss this subject at length without previous notice of motion having been given, but the proposal was made that this matter should be put down for detailed consideration at the next meeting of the General Purposes Committee, and this was accepted by the meeting.

The meeting then adjourned.

GENERAL PURPOSES COMMITTEE MEETING

As mentioned in the editorial on page 51, it is thought desirable to keep members of the Society informed of action taken by their central representatives. Since the meetings of the Council may now be at longer intervals than usual, a wide reference has been given to the General Purposes Committee. There follows a summary of the proceedings of the Committee at their meeting held on Friday, November 17th.

The meeting was attended by Dr. Cyril Banks (Chairman), the President (Dr. F. T. H. Wood) and eleven other members.

Medical Officers of Health and Civil Defence Responsibilities.—The Committee considered a memorandum drafted by Drs. Cyril Banks, Gordon Lilico and T. N. V. Potts on the reference given by the Council at its October meeting. There was a lengthy discussion as to the terms of the memorandum and as to the best method of approach to Government Departments on the points at issue. It was eventually decided that a deputation consisting of the Chairman of the General Purposes Committee, the President, Professor R. M. F. Picken and Drs. James Ferguson, Gordon Lilico and T. N. V. Potts should approach the Ministry of Health and the Ministry of Home Security and request that arrangements be made for medical officers of health (represented through a special committee of the Society) to discuss with responsible administrative and executive officers of the Departments certain defects in the existing administration of the medical and public health aspects of Civil Defence and Casualty Treatment Services and to be called into consultation whenever new points of policy concerning these matters were under consideration.

It was decided to redraft the memorandum in the light of the Committee's discussion so that it should be available for submission to the Government Departments if requested.

It was pointed out that in London satisfactory means of consultation already existed through the Advisory Body (consisting of six London medical officers of health) to the Metropolitan Boroughs Standing Joint Committee which had had frequent consultations with officers of the Regional Commissioner.

Cheap Milk for Mothers and Young Children.—On another reference from the Council the Committee considered a scheme inaugurated by the Ministry of Agriculture and endorsed by the Ministry of Health in their Circular 1840 for the provision of milk by welfare authorities at a reduced price of 2d. per pint or less to expectant or nursing mothers and children under five years of age. There was general agreement amongst members of the Committee with the criticisms of the scheme put forward in an editorial of the *Medical Officer* for August 26th. The Committee also had the advantage of having before them details of a similar scheme carried out in the Walker district of Newcastle-on-Tyne since April, 1937. Dr. Charles (M.O.H., Newcastle) had recommended his Council against the extension of the scheme to the city as a whole.

The Committee decided to urge upon the Ministry of Health postponement of the general introduction of the scheme. Although the Society had in the past supported the idea of increasing the general consumption of milk they had done so with the proviso that the milk supply must be made safe. It was felt that the present proposals might have a detrimental effect on maternity and child welfare work in so far as provision of milk under the present schemes was definitely related to attendance at welfare centres; also many medical officers of health believed that dried milk had scientific advantages over wet milk in these schemes. The other reason for requesting postponement would be that the additional administrative burden, at a time when public health departments were very fully occupied not only with normal public health work but also with civil defence, would prove a serious matter.

Tuberculosis Services in War-Time.—Dr. James Ferguson reported that he, with Dr. P. L. T. Bennett, had represented the Society at the conference at the Ministry of Health held on October 27th and briefly reported in PUBLIC HEALTH for November, page 25. He said that he had expressed the view of medical officers of health that it was desirable that sanatorium accommodation should be reserved for its normal purpose even in time of war. Dr. Bennett had put the point that tuberculosis medical personnel should not be diverted from their normal work. The Committee nominated Dr. Ferguson and Dr. Ernest Ward (the Tuberculosis Group's representative on the Council) to be the Society's representatives on the Liaison Committee which the Minister of Health had requested should be set up in order to keep in touch with him on the problems relating to the tuberculosis service.

Trained Nurses at First-Aid Posts.—A letter was received from the Royal College of Nursing asking the Society's support for the employment at first-aid posts of more than one trained nurse, this being the limit imposed by the Ministry of Health Circular 1867. The College thought that there was a need for a larger proportion of trained nurses at first-aid posts and said that they had received reports of additional nurses being employed at the same rate of pay as women A.R.P. workers.

The Committee recognised the importance of a trained nurse being available at the post whenever an air raid might have occurred, but could not see their way to recommending a definite appointment of more than one whole-time trained nurse at each post in view of the financial burden which would be involved. It was also learnt that some authorities had been able to arrange that the services of their own public health nursing staff would be instantly available in case of need. It was therefore decided to reply to the Royal College that the Committee considered that no scheme should be thought complete unless it allowed for one trained nurse (whether employed whole-time at a post or otherwise) to be instantly available for duty at any time during each shift.

Journal Committee.—Professor Picken (Chairman of the Journal Committee) reported that his Committee had discussed the question of the forthcoming increase in paper prices which would result from the Government control. He said they had authorised the Manager of PUBLIC HEALTH to use Government grade 2 paper if that proved satisfactory. This would lessen the additional expenditure on paper. He reported that otherwise the financial position of the journal was satisfactory and that advertisement revenue had not fallen off to the extent that was at first anticipated.

Roll of Members, 1939-40.—The Committee decided not to proceed with the printing of the Roll of Members for the current session. It was estimated that apart from the anticipated increase in paper prices the Roll would have cost the Society in the region of £100 and it was felt that this expenditure was not justifiable. Also there was some doubt in the minds of the Committee as to the extent to which the Roll is used by members. The Executive Secretary was asked to bring an estimate before the next meeting of the cost of producing a supplement to last year's Roll to

give changes of address, appointment, deletions and additions to the list since October, 1938.

Other Matters.—The Committee appointed representatives of the Society on various bodies for the coming year. They also received communications regarding a Circular from the Ministry of Food about the destruction of butter considered to be unfit for human consumption; a letter from Dr. Duncan Forbes which is printed on page 60 of this number on the subject of pediculosis; and a resolution from the Dental Officers' Group regarding dental care of evacuees. Full consideration of these was deferred until the next meeting.

NORTH-WESTERN BRANCH.

President: Dr. G. Jessel (Cons. T.O., Lancashire C.C.)
Hon. Secretary: Dr. J.E.Spence (M.O.H., Eccles, M.B.)

The opening meeting of the session was held on Friday, November 10th, 1939, at the Public Health Laboratory, York Place, Manchester.

In the absence of the retiring President, Dr. R. M. Galloway, Dr. J. J. Butterworth occupied the chair. Eighteen members were present and apologies were received from ten members.

The minutes of the last meeting were confirmed. The programme for the session was considered and it was resolved to have as many meetings as possible and that owing to the difficulties in respect of travelling that one meeting be held in Liverpool and one in Preston.

The Hon. Secretary reported that Dr. H. E. Watkins, who has been a member of the Society since 1908, had retired from his appointment as Medical Officer of Health for Newton-in-Makerfield and it was unanimously resolved that the Society be recommended to elect him as a fully-paid Life Fellow.

Dr. Butterworth then inducted Dr. G. Jessel into the Presidential Chair, and Dr. Jessel suitably thanked the members for the honour they had conferred upon him.

Dr. J. D. Kershaw proposed that the sincere thanks of the Branch be accorded to Dr. R. M. Galloway for his services in the Chair during the past year and Dr. G. Lissant Cox seconded the proposition which was carried with acclamation.

Dr. G. Jessel then delivered his Presidential Address on "The Tuberculosis Dispensary" which will be published in PUBLIC HEALTH.

Dr. A. Simpson, in proposing a vote of thanks to the President, observed that the Branch were fortunate in having as President a member who had always strongly emphasised the great need for close co-operation between the various branches of the public health service. In seconding the vote of thanks Dr. Lissant Cox expressed his pleasure in listening to such a thoughtful and competent address. Large administrative areas were fortunate in being able to provide first-class clinicians for the tuberculosis service who were of sufficient standing to act as consultants. He felt that progress in the fight against tuberculosis must rest on prevention more than treatment and stressed the importance of the careful examination of all adolescents entering industry. Dr. Jessel briefly replied to the vote of thanks.

APPOINTMENTS IN THE DEFENCE SERVICES

Many members of the Society who hold commissions in the Royal Navy or Army Reserves or in the R.N.V.R. or T.A. have already been called up for service with their units. We report below the appointments of which we have been informed.

CHALKE, H. C. DAVIES (Dep., M.O.H., Hampstead Met. B.), Captain R.A.M.C.

WILLOUGHBY, H. M. (Dep. M.O.H., Port of London Health Authority), Surg. Lieut.-Cdr., R.N.V.R., H.M.S. *Woolwich*.

YOUNG, W. RITCHIE (Asst. Cons. D.O., L.C.C.), Surg. Lieut.-Cdr. (D.), R.N.V.R.

CERTIFICATES IN MOTHERCRAFT

The National Association of Maternity and Child Welfare Centres and for the Prevention of Infant Mortality is drawing the attention of local education and welfare authorities to its proposed scheme for the organised teaching of mothercraft. The Association believes that, whilst mothercraft has been included to some extent in the curricula of elementary and secondary schools and of evening institutes, it has not been thoroughly instilled nor has it been made to appeal as it should. The regulations and syllabus now issued by the Association envisage theoretical and practical examinations of a non-professional type, open to girls over 16 and women who have attended an approved course of instruction. The Association will settle the standards of the examination and the questions set. It will also appoint examinees who it is thought should be doctors and health visitors working in pairs; their fees will be based on the number of examinees, but there is a minimum of two guineas for doctors and one guinea for health visitors. Each successful candidate will receive an appropriate certificate.

The full course of instruction outlined by the Association would comprise 24 lectures, each lasting an hour and followed by one hour of practical work, and would usually cover a period of six months. The lecturers would be doctors, nurses, health visitors or other persons with special experience, and it is suggested that their remuneration should be locally arranged. Local organisations would be expected to bear all expenses (including examiners' and lecturers' fees) of the courses and examinations; fees would be payable by candidates.

The syllabus of the course is a comprehensive one. It ranges through simple anatomy and physiology, preparation for motherhood (including the necessity for pre-natal supervision by doctor and midwife), the lying-in period, early management of the infant, breast feeding and its advantages over artificial feeding, weaning, normal development of the baby and character formation, care of the toddler, management of the nursery, prevention of disease, popular errors and fads, and what the local authority provides for mother and child and how to take advantage of this.

The Association also proposes a junior course and junior certificate for girls under 16. This course would deal with elementary facts about babies and young children and their management, feeding, clothing and environment. The temporary address of the Association is 7, Pembridge Square, London, W.2.

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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 also available for a certain number of approved commercial advertisements. Application should be made to the Executive Secretary of the Society, at Tavistock House South, Tavistock Square, W.C.1.

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Editorial

The Health of the People

Written before but published after the outbreak of war, Sir Arthur MacNalty's Annual Report for 1938* may be the last full survey of the state of the public health for some time to come. Statistically it is a gratifying account. The birth-rate is slightly up at 15·1 per 1,000, the crude death-rate has fallen to 11·6 per 1,000, the infant mortality, at 53 per 1,000 live births, the maternal mortality at 2·97 per 1,000 total births, and the crude death-rate from tuberculosis at 635 per million, are the lowest on record. On the descriptive side there is much that is already well known to the public health service but reference may be made to some points of special interest.

Infectious Diseases.—A brief account is given of the very interesting events which followed the introduction of variola major from foreign ships into Gravesend early in 1938, when several cases not connected with the liner case or with each other contracted the disease, and symptoms occurred in vaccinated contacts resembling smallpox toxæmia. A fuller description of all the circumstances than that already given by Dr. Conybeare is desirable. In contrast with the high proportion of infantile cases of post-vaccinal encephalitis in 1937, only one case at this age occurred among a total of eight in 1938. It is satisfactory to note that no further instances have been reported of jaundice following prophylactic injections of convalescent serum, but no explanation of this phenomenon seems yet to have been found. Among the disappointments in the public health field is the failure to decline, but rather an increase, of diphtheria, 65,008 cases being notified in 1938. A table analysing the main causes of death in age periods shows that diphtheria is now the most important single fatal disease at school ages. Regret is, therefore, expressed at our comparative reluctance to recognise the supreme importance of immunisation. A special chapter of the report is devoted to the enteric group of fevers, following

*On the State of the Public Health. Annual Report of the Chief Medical Officer of the Ministry of Health for the Year, 1938. H.M. Stationery Office. 1939. Price 3s. 6d. net.

much the same lines as the Ministry's recent memorandum. Short accounts are also given of five outbreaks in 1938, illustrating the various ways in which carriers or missed cases infect foodstuffs. A full description of the poliomyelitis outbreak of 1938 will also be found, and some particulars of the behaviour of this disease since 1926. The rise in cerebrospinal fever in 1937 and in 1938 has not been great, but its occurrence just before the outbreak of war must cause some concern as to what will happen among young men now concentrated in barracks. It has been associated with an increase in the proportion of Group 1 Neisseria infections, these representing 71 per cent. of strains examined from the whole country and 80 per cent. in London. Some mention is made of the effect of the Local Government Act, 1929, in concentrating the treatment of infectious diseases in larger and fewer isolation hospitals. There is no indication that the Medical Department of the Ministry is dissatisfied with any of these schemes, many of which seem rather paltry to active members of the public health service.

Maternity and Child Welfare.—While expressing pleasure at the improved rates of maternal and infantile mortality already noted, Sir Arthur reminds us that the neo-natal rate has fallen much less over a long period of years and has been almost stationary throughout the last decade. This refractoriness casts some doubt on the suggestion that the fall in the maternal mortality rate is due to better ante-natal and obstetric care. Indeed, more emphasis might have been placed on the large part of the fall in maternal mortality which is classed as puerperal sepsis and the possible credit due to sulphonamide treatment. An interesting account is given of an enquiry into county maternal deaths by the Medical Advisory Committee of Hampshire, the results of which were transmitted to all practitioners in the area, a means of fostering better obstetrics in a rural area. The effort to set up lists of practitioners representing " the best local obstetric skill " is described but little is said about the difficulties encountered in this connection. The relative neglect of the post-natal field of work in maternity schemes is still a matter for regret. An experiment in Dagenham with day foster mothers as a substitute for day nurseries, and the Birmingham scheme of approved foster mothers as a means of furthering the protection of child life, deserve attention.

Food.—A brief but clear account is given of the recent work of the Advisory Committee on Nutrition, which makes it all the more deplorable that no clear pronouncement has yet been made, so far as we know, of the part which scientists are to take in the work of the Ministry of Food. A valuable discussion is included of the problems of giving effect to the recommendations as to definitions and standards of food of the Departmental Committee of 1934 by means of Regulations under the Act of 1938. This should be studied by all who are concerned with food administration. As usual a full description is given of the occurrence of food poisoning, from which it is noted that in twenty-one instances the origin was presumed to be a toxic product of bacterial growth in food, of which eleven presented strong evidence of staphylococcal origin; that salmonella was found in the mesenteric glands of 500 healthy pigs after slaughter; and that *S. aertrycke* has been isolated from dry sheet gelatine, an observation which may help to elucidate some of the outbreaks associated with so-called " cream " pastries.

Tuberculosis.—Associated with the decline in tuberculosis mortality, which has been greater since 1931 than at any other time during the present century, the check to the fall of the specific rates among young adults appears now to be passing away. It will be remembered that this age-group suffered badly during the recrudescence of the last war, and its future affection will be watched with some anxiety under renewed war conditions. There has been a gratifying increase in the number of contacts examined, but still a marked deficiency on the adult male side. The part played by hospitalisation as a preventive measure may be judged from the steady increase in the proportion of deaths occurring in institutions, which has now reached 42·7 per cent., a ratio still far short of that in some foreign countries.

Venereal Diseases.—The decline of cases under treatment for venereal diseases continues and this has been specially marked in the case of gonorrhœa. It is believed that a larger proportion of cases of the latter disease may now be receiving private treatment, since the symptoms are quickly and easily eradicated by sulphonamides. The success of such treatment is noted, both in shortening the acute phase and reducing complications, but a warning is given as to the frequency of relapse, emphasised by work published since this report was written. The problems of impending war are discussed, and the suggestion is put forward that mobile units might be established in county areas, travelling especially to places where camps have been set up, and working in premises temporarily adapted for the purpose.

War Emergency Preparations.—A chapter is devoted to this subject, detailing the arrangements which are all too familiar to the public health service. A note at its end, appropriately outlined in black, mentions the subsequent outbreak of war and claims that, although certain modifications

and adjustments have had to be made, on the whole this "vast organisation" has stood the test of experience to a remarkable degree. The real test, however, is still to come.

General.—There is much of direct interest to readers which exigencies of space prevent us from mentioning, but reference should be made to valuable contributions by members of the staff appearing as appendices on puerperal mastitis, chick embryo vaccine lymph, an outbreak of toxic polyneuritis probably from tri-ortho-cresyl, and hydatid disease in Wales which seems to be commoner in industrial areas than might have been expected. Throughout the report there are numerous references to original work published elsewhere. These are valuable though not exhaustive. For instance, in the passage on psittacosis no mention is made of the view that this disease is transmitted in the Faroe Islands by fulmar petrels and may be carried by other seabirds*, a suggestion of considerable importance to a race of islanders like ourselves.

The Tuberculosis Dispensary

A valuable review of twenty-five years' experience in tuberculosis dispensary work will be found in Dr. Jessel's Presidential Address to the North-Western Branch appearing on page 78 of this number of PUBLIC HEALTH. Dr. Jessel has worked, observed and reflected, and his conclusions deserve the close attention and respect of his fellow-members of the service.

Some errors of early dispensary planning are described; small premises were allotted for the work, the arrangements were awkward and unsatisfactory and the sites were generally far from large general hospitals and often also distant from other public health units. Dr. Jessel believes that the most efficient arrangement is to place the dispensary in the out-patient department of a large hospital in close association with other branches of medical work, and he prefers the name "clinic" to "dispensary." By such association it is thought that the fear of the word tuberculosis may be overcome, and it is pointed out that the majority of patients attending such a clinic are not tuberculous; he might have suggested the figure of 70 per cent., which is a moderately accurate estimate of the proportion.

There is no doubt that adequate X-ray facilities, and X-ray reports helpful to practitioners, abolish many of the clinic difficulties and ease the examination of the all-important adult contact. Moreover the expense of installation is counterbalanced, for with X-ray control our institutions are no longer burdened with numerous non-tuberculous patients. Dr. Jessel rightly deprecates the sending of patients to general hospitals for diagnosis, for the tuberculosis officer has, or should have, a wider and more useful experience of the interpretation of chest films than the hospital radiologist. Many diseases cast shadows similar to tuberculosis and their discrimination is no easy matter. In X-ray dispensary work Dr. Jessel was one of our pioneers and speaks with authority. The Mantoux test he has found to be a helpful diagnostic in children.

It is advocated that the health visitor dealing with tuberculosis should minister to that work alone and not in addition to schools and maternity and child welfare, but such limitation is not universally possible, partly because of expense and partly because of the scattered areas that may have to be covered. Moreover the "omnibus" health visitor, if readers will forgive the word, can sometimes carry out useful tuberculosis detective work and she becomes acquainted with the inter-relationships of our departments.

The attention of all our readers should be directed to Dr. Jessel's address.

Lancet* (1939), **1, 708.

Milk and Nutrition

The last of the series of reports to be issued by the Milk Nutrition Committee in connection with the researches into the nutritive values of raw and pasteurised milk has now been published. This report* deals with the effects of dietary supplements of pasteurised and raw milk on the growth and health of school children. The report deals with 6,097 children randomly divided into four feeding groups with supplements (*a*) biscuit, (*b*) ⅓-pint milk pasteurised, (*c*) ⅔-pint milk raw, (*d*) ⅔-pint milk pasteurised. The children were mostly in the age groups 5 to 7, 8 to 10, 11 to 14 years. The tests used were objective measurements, *i.e.*, height, weight, chest circumference and pull (dynamometer test) and subjective assessments, *i.e.*, clinical assessment of state of nutrition, assessment of intellectual capacity, while certain other assessments were tentatively tried.

The report itself must be studied for the details, which are discussed fully, but the general conclusions may be mentioned. They confirm the nutritional importance of milk for promoting growth, health and intellectual capacity. The ⅔-pint supplement gave better results than the ⅓-pint. No constant differences could be detected between the growth-promoting effects of ⅔-pint pasteurised and ⅔-pint raw milk in either height, weight or chest circumference. Thus this investigation, like all the earlier ones, confirms the exceptional value of milk for children.

*Published by The National Institute for Research in Dairying, Shinfield, Reading. 1939. 2s., post free.

In the last section of the report the Committee reviews the findings from all the researches, the earlier ones dealing with chemical tests on raw and pasteurised milk and comparative feeding experiments with these two milks on rats and calves. For both sets of animals it will be recalled that there was no difference detected between the nutritive values of raw and pasteurised milk, and to this is now added the conclusion "There are no differences between the nutritive values of raw and pasteurised milk of any practical importance for school children who receive milk as part of their ordinary diet." An interesting thesis could be written upon the utility of erroneous hypotheses. Now that the hypothesis that milk was in some obscure way (always made more effective by the extreme vagueness of the supposition) damaged by the process of pasteurisation has been completely disproved, we hope the opponents of pasteurisation will have the grace to admit their error. To disprove it has necessitated an immense volume of research, which should not have been required, as there never was any reliable evidence of nutritional damage by pasteurisation, but it has had the useful result that much of value in the way of increased knowledge of nutrition questions has accrued.

Miniature Radiography

The use of X-rays for the diagnosis of pulmonary tuberculosis received a great stimulus during the war of 1914-18. Especially after the commencement of conscription recruiting boards wisely referred to the tuberculosis officer any men as to whom a question of tuberculosis was raised. For the first time tuberculosis departments were faced with the demand for a quick diagnosis. In the frank case with definite clinical signs of an active lesion there was, of course, no difficulty, but in the circumstances of recruitment for the Services these proved a small proportion of the total. The use of X-rays, in spite of the fallacies with which it is attended, was a very great aid to diagnosis and has become an essential tool in the hands of the clinician. The cost, however, is still so high that X-ray examination tends to be reserved for contacts or persons with such clinical symptoms or signs as, in any case, would have been considered sufficient ground for diagnosis by some tuberculosis physicians. The full advantage of this type of examination cannot be gained until it is much more widely available for survey purposes. Work on the Continent and in the U.S.A. shows that about 1 per cent. of unsuspected communities so examined are found to have tuberculous lesions in the lungs. Mass radiography is a procedure which should carry us far toward the objects for which tuberculosis schemes were brought into being in 1912, and any reduction in its cost is of prime importance. We were glad, therefore, to publish a communication on Mass Radiography by Dr. A. Robinson Thomas in our September issue and welcome the criticism on technical points by Dr. B. A. Dormer and Mr. K. G. Collender of South Africa which appears this month on page 88. It is clear that local authorities should be satisfied not only that miniature X-ray pictures can now be taken rapidly and in great numbers at enormously reduced current cost, but that they can be made definitive, even if this involves some increase in the initial cost of plant. Unfortunately we understand that Dormer and Collender were unable to obtain the special wide focus lens for their camera, which they consider essential, except from a firm in Germany. It may be that this difficulty has been, or may be, overcome. The whole question is one which should receive not only the serious consideration of local authorities but also the Ministry of Labour in connection with the examination of recruits.

The Central Midwives' Board

The report of the Central Midwives' Board for the year ended March 31st, 1939,* shows that 16,761 women were practising as midwives in England and Wales in 1938, compared with 17,494 in 1937. The Midwives' Roll contained the names of nearly 63,000 women. This was a net decrease of over 4,000 on the previous year.

During the year the new training and examination rules of the Board came into operation and on March 31st the number of institutions approved for the training of midwives was 89 in respect of the first period of training and 63 in respect of the second period. The number of candidates entering for examination during the year was the largest on record—4,806, as against 4,420 in the previous year, and 2,683 in 1927.

The report refers to various decisions made by the Board on midwives' training, etiquette and practice. The Board were in communication with the Royal College of Obstetricians and Gynaecologists regarding the conditions of the Board's ruling on the administration of nitrous oxide and air by midwives and the Royal College recommended against the removal of any of the safeguards originally incorporated in their advice in the Board's ruling.

Post-certificate courses became obligatory as from the beginning of 1939, but have unfortunately had to lapse owing to the outbreak of war. The Board have made advance arrangements in case of national emergency and it seems that the register of those whose names were in the current

*Published by H.M. Stationery Office Price 4d net.

midwives' roll and who volunteered their services has been much used by the local authorities.

Recent Food and Nutrition Surveys

We are reminded by the appearance of two further careful studies that the problem of what is a proper state of nutrition and what is the correct diet with which to produce it, remains to be solved. These studies are one by Dr. T. N. V. Potts,* giving the results of an analysis of diets of 205 families in the West Riding of Yorkshire, and the other by Dr. F. J. G. Lishman† in the Annual Report for the County of Gloucester, being a survey of the nutritional state of 2,142 elementary school children. It should be emphasised that this problem becomes in war-time of increasing importance and it would be unwise if the national effort for Civil Defence prevented the furtherance of these investigations in the field. In many respects Medical Officers of Health have been asked to undertake duties during the past year which have made it quite impossible to carry on this valuable work. We are still only on the fringe of knowledge. As was emphasised in this journal in July of last year, when Professor Bigwood published his "Guiding Principles for Studies on the Nutrition of Populations," we are as yet unable to claim full comprehension either of the standard of physiological nutrition or of the proper diet to establish and maintain it.

The best type of investigation, as emphasised by the Technical Commission on Nutrition (1937),‡ is that in which enquiries into the state of nutrition are combined with dietary surveys covering the same population. Such an investigation constitutes a biological assay in which variations in growth or other manifestations of the state of nutrition may be correlated with the intake of the various constituents of the diet. In this manner Brockington§ correlated growth with the proportion of animal protein foods in the diet in the children of a series of families for whom a dietary survey had been made, and has been able to show later‖ that rate of growth in working class families declines as the family grows in size and the family diet becomes more and more insufficient. Neither of these new studies fulfils this ideal, since one is a record of diets without observations on nutrition within the group, and the other is a record of nutrition without observations on the diets.

Lishman, in his study of 2,142 elementary school children, has gone most carefully into the means of assessing normal nutrition, and his careful analysis of the signs of undernourishment will serve as a useful guide to investigators. In making his assessment he has wisely retained the classification, A, B, C, D, of the Board of Education and has not relied upon one factor but a series of clinical observations. It is of interest that he did not record any somametric index nor did he make any observation (other than visual) of the height and weight. It may be that an observation on the *rate of growth* might have yielded valuable corroborative evidence.

The results of his enquiry show that 11 per cent. of children were A nutrition, 61·7 per cent. B, 25·7 per cent. C, and 1·7 per cent. D. This constitutes further evidence that whatever may be the ideal of nutrition in childhood, a high proportion fail to reach the arbitrary level which has been fixed clinically and which probably represents the average rather than the ideal. There is, in fact, some danger that we may come to look upon the average as the normal in the absence of any certain test. That this is probably not the case is suggested by Brockington's finding that the average rate of growth of the children in a number of residential schools was 153·8 per cent. of Adamson's scale prepared from measurements of 70,000 elementary school children to Brighton. It is even possible that only those children classified as A in Lishman's analysis might have exhibited that state of nourishment which a properly constituted diet could produce. It is of interest that a much higher proportion of A children (a difference which was definitely significant statistically) occurred in the youngest age group and a much higher proportion of A children in all age groups (again significant statistically) were girls.

Pott's survey of the diets of 205 families in the West Riding of Yorkshire has been compiled with the greatest accuracy. This is, in fact, vouchsafed by the inclusion of the name of Miss M. L. Clarke as assisting in the field work and organisation of the enquiry and that of Dr. A. Bradford Hill for carrying out all the statistical work. A careful study of the report is recommended to all who are interested in this subject. As a minor criticism it would appear to be unfortunate that the scale of man-values which has been used (in order, it is stated, to be in conformity with previous investigations) should be based upon calorie requirements. Such a scale does not take into consideration the very varying requirements of protective foods and,

*Report on a Study of the Diets of 205 Families in the West Riding of Yorkshire, 1939, County Council of West Riding of Yorkshire (C.M.O., Dr. T. N. V. Potts).

†Lishman, F J. G. Survey of the Nutritional State of Elementary School Children. Annual Report of School Medical Officer, Gloucestershire County Council, 1938.

‡Report of the Technical Commission on Nutrition: London Session, November, 1937. *Bull. Health Org. of the League of Nations*, 7, Extracts No. 8.

§Brockington, C. F. *Public Health*, 52, 209.

‖——— *Ibid*, 52, 307.

therefore, does not sufficiently emphasise the importance of the addition of children to the family dietary. The time has now come to substitute some more representative scale of values, possibly one of cost co-efficients.

Of the many varied and interesting findings of this investigation, one of the most valuable is the diminishing proportion of protective foods present in the diet of working-class families in proportion as the family grows in size and the income per head declines. In all working-class families mineral constituents are considerably below the level considered desirable for optimum nutrition. Deficiencies of protein and iron follow as the family increases. Consumption of milk is noticeably low and this again declines as the number of children increases. In families with relatively large numbers of children, expenditure is least on fresh fruit, dairy produce, fresh vegetables and meat. Thus it is that the West Riding survey will be added to those many others which in the last few years have slowly, steadily and persistently pointed to the deficiency of "protective foods" which inevitably occurs in working-class families. The period of school life when the growth impulses of the future manhood of the nation are striving to produce normal development, the diets of a high proportion of children would appear to be lacking in the constituents essential to growth. It cannot be beyond the power of man to remedy such an anomalous state of affairs.

Potential Pathogens in the Upper Respiratory Tract

The first part of the recent Report, No. 90* from the Ministry of Health, is by Dr. Edith Straker and colleagues at the London School of Hygiene and contains much meat and many observations of fundamental importance for the bacteriologist and epidemiologist. The value of work of this kind is commensurate with the care with which the investigation is (1) planned, (2) executed and (3) analysed. As to the last of these, it is enough to say that the hand of Mr. Bradford Hill, D.SC., is apparent on almost every page of the report. In brief outline, the plan consisted of nasopharyngeal swabbings from a 100 odd adult workers (later reduced to 60) at the School of Hygiene, first at monthly and later at two-monthly intervals from 1930 to 1937, supplemented by two similar swabbings of the clerical staff at the Ministry of Health. To obtain data from younger groups living under different conditions, 200 boys, aged 13 to 18, at a public school 50 miles north of London were swabbed once a term from 1933 to 1937, and again this material was supplemented by four swabbings from 100 boys, aged 11 to 15, at the Royal Hospital School, Greenwich. A single nose and throat swabbing was taken from 50 children, aged 2 to 11 years, living in an orphan school. Anterior nasal as well as nasopharyngeal swabs were taken from the School of Hygiene personnel from 1934 onwards. It is a pity that a working-class or factory sample of the population was not included among the adults, and that a more thorough investigation of infants and young children, among whom respiratory infections are so common, was not possible. And in view of the different findings which emerged in the two groups of boys, more details of the sleeping arrangements at the public school should have been given. There is little fault to find with the bacteriological technique. The field was set to catch the main bacterial pathogens—or potential pathogens—which inhabit the upper respiratory tract—the hæmolytic streptococcus, pneumococcus, meningococcus and *H. influenzæ* (now better called Pfeiffer's bacillus). The pneumococci and meningococci were submitted to serological examination—the percentage of typable pneumococci was surprisingly low (50 to 75 per cent.), Pfeiffer's bacillus was divided into the different biological varieties (typical ad atypical, indole positive and negative) while some attempt was made at the serological typing of the hæmolytic streptococci. Lancefield grouping might have been included in the later years since our knowledge of the proportion of hæmolytic streptococci isolated from "normal" throats which belong to Group A is still inadequate.

Only a selection of the many interesting findings can be mentioned. The pneumococcus carrier rate among adults varied from 20 to 40 per cent. with type iii *facile princeps* and the "epidemic" pneumococcus types which commonly cause lobar pneumonia, *viz.*, i, ii, v, vii and xiv, rarely present, a finding which may be due to sampling from a population among whom lobar pneumonia is uncommon. Among the schoolboys the carrier rate was much higher at the Royal Hospital School (always over 50 per cent.) than at the public school (22 to 29 per cent.), which may have been the result of different environmental conditions. The striking feature among the younger children was the high incidence (58 per cent.) of pneumococci in the nose, compared with a rate usually under 10 per cent. for adults.

*A Study of the Nasopharyngeal Bacterial Flora of Different Groups of Persons observed in London and South-East England during the years 1930 to 1937, by Edith Straker, M.B., B.S. (LOND.), D.P.H., A. Bradford Hill, D.SC., PH.D., and R. Lovell, PH.D., M.SC., M.R.C.V.S., D.V.S.M., together with Some Observations on the Occurrence of *H. influenzæ* in the Trachea by A. B. Rosher, M.R.C.S., L.R.C.P., D.P.H., and W. T. Cole. Ministry of Health Reports on Public Health and Medical Subjects, No. 90. H.M. Stationery Office. Price 2s. net.

The carrier rate for the hæmolytic streptococcus among adults mostly lay between 5 and 15 per cent., with higher levels, as might be expected, for children and adolescents (at the Royal Hospital School, the rates varied between 21 and 54 per cent., the latter rate coinciding with an outbreak of tonsillitis). Hæmolytic streptococci were only twice isolated from the nose. A high incidence of Pfeiffer's bacillus in all groups (ranging from 50 to 80 per cent.) was probably due to the use of selective media plus mouse-inoculation. There was no evidence that the carrier rates of this organism were significantly associated with epidemics of influenza.

One of the most interesting findings was the carrier rates for the meningococcus. Among adults and at the Royal Hospital School the frequency was most often between 10 and 20 per cent., but at the latter institution the predominant type was atypical and rarely agglutinable. At the public school the incidence was seldom over 5 per cent. and at the orphan school the single swabbing gave a rate of 10 per cent. Like the hæmolytic streptococcus, the meningococcus was rarely isolated from the nose. Dr. W. M. Scott found that practically all the agglutinable strains belonged to the rather heterogeneous Group 2. From experience in the last war, a meningococcus carrier rate of 20 per cent. has usually been regarded as the warning signal of an impending epidemic among men in barracks but since then Dudley and Brennan have reported a persistent carrier rate of over 50 per cent. among naval ratings without any coincident clinical infection. While improvements in technique may account for these higher rates among populations free of cerebrospinal fever the more significant finding probably relates to the serological group of the isolated meningococci, because epidemics of the disease are most often caused by Group 1 strains.

There was a little seasonal variation in the nasopharyngeal carrier rates of the various organisms. The pneumococcus rate was usually lowest in the autumn and showed a slight positive correlation with hot, dry periods, whereas—and this is an odd observation—the streptococcus carrier rate showed converse tendencies. An interesting analysis has been made on the incidence of the different pathogens in one person over a period of time. The fairly constant percentages of the various organisms at any one swabbing might suggest that certain persons were carriers over long periods while others remained free. Such was not the case. It is true that there were individuals who could be called chronic carriers, others who were intermittent carriers and still others who rarely "carried," but the probability that any one person under observation for a sufficiently long time would become a carrier of each of the bacteria under study for a shorter or longer period was very great. The chance was naturally greatest for Pfeiffer's bacillus, less for pneumococcus and still less for the hæmolytic streptococcus and meningococcus. In short, there seems to be a continual interchange of nasopharyngeal flora going on in a community, and all of us are liable to become carriers of these potential pathogens. Pneumococcus carriers were more likely also to carry the meningococcus, which may mean that these two organisms live in the nasopharynx (and conditions which suit the one also suit the other), whereas the hæmolytic streptococcus probably prefers the tonsils. Men were more frequent carriers of the pneumococcus and meningococcus than women which prompts the query "does smoking contribute to the carrier state?" Apparently no attempt was made to correlate the clinical state of the throat and nasopharynx with a chronic carrier condition.

An examination of the bacterial flora during and after attacks of acute coryza lent no support to the view that any of the bacteria under study initiated the infection although the pneumococcus and Pfeiffer's bacillus seemed sometimes to be secondarily involved. But here as elsewhere no mention is made of any *quantitative* change in the bacterial flora.

Space does not allow more than the mere mention of Dr. Rosher's interesting findings on *H. influenzæ* in the trachea post-mortem. A definite seasonal trend with rates highest in the first quarter and lowest in the third together with the data from nasal cultures suggests that in late winter and early spring and after the common cold, there is an extension both downwards and forwards of respiratory mucosa "colonised" by Pfeiffer's bacillus and possibly the pneumococcus.

Sir Arthur MacNalty's prefatory note is a masterly summing-up of the implications of this exhaustive enquiry, which deserves the most careful perusal by every public health worker.

A MEETING of the Dental Officers' Group will be held at the rooms of the Society, Tavistock House South, Tavistock Square, W.C.1, on Saturday afternoon, January 27th, 1940.

2 p.m.—Annual General Meeting of the Metropolitan and Home Counties Sub-Group.

2.20 p.m.—Paper: "The Public Hospital Dental Service," by A. G. Taylor, L.D.S. (ENG.).

DR. J. A. CHARLES (M.O.H., Newcastle-on-Tyne) has been appointed external examiner in public health by the University of Sheffield.

DR. H. C. JENNINGS (County M.O.H., Oxfordshire) has been appointed examiner in public health for the B.M., Ch.B. degree in the University of Oxford.

The Tuberculosis Dispensary*

By GEORGE JESSEL, M.A., D.M. (OXON), D.P.H. (MANCH.).
Consultant Tuberculosis Officer, Lancashire County Council.

Introductory

In January, 1915, I had the honour to read a paper before this branch on the work of a tuberculosis department. To-day, nearly 25 years later, I have chosen for the subject of my Presidential Address, " The Tuberculosis Dispensary." It is natural that a tuberculosis officer should desire to speak on matters with which he is most familiar, and no apology is necessary for selecting this subject at a time when every aspect of public health work is likely to come under close scrutiny. In 1937, tuberculosis was the fifth principal certified cause of death in England and Wales at all ages, and the third for the age-period 15 to 65, man's working life. Judging by our experience of the last war, a rise in the tuberculosis death-rate is again probable in the near future.

I shall avoid as far as possible matters with which we are all familiar, and devote my time to a consideration of the changes and developments that have taken place since the inception of public tuberculosis schemes. I shall also give expression to certain personal views and some conclusions I have reached as a result of practical experience.

Much water has flowed under the bridges since Sir Robert Philip in 1887 opened at Edinburgh a dispensary which was destined to become a model for the world. It led to the recommendations of the Interdepartmental Committee of 1912, which were the basis of our tuberculosis schemes. It speaks well for the soundness of the conclusions then reached that fundamentally the dispensary remains what it was then, although important modifications and developments have subsequently taken place. It is with these that I am now principally concerned, in the hope that the interest and sympathy of administrative officers, no less than of clinicians, may be further stimulated.

Dispensary Premises

It is almost a commonplace to assert that most of our English institutions have developed in piecemeal fashion, or have been hurriedly improvised as a result of urgent necessity. A striking example is seen in our present A.R.P. measures, and the beginning of our public arrangements for the prevention and treatment of tuberculosis was in conformity with our usual practice. When the National Health Insurance Act became law in 1912, important responsibilities in connection with tuberculosis, which were not capable of immediate fulfilment, were entrusted to county and county borough councils. Arrangements for the establishment of dispensaries and residential institutions had to be hastily made or improvised. It is thus not surprising that the buildings selected for dispensary use often left much to be desired. In some cases a building was selected on a main thoroughfare with noisy trams passing the door; in others the rooms were too small or too few in number, without provision for future expansion of the work to be undertaken. Indeed, one may say that, although the best possible selection in the circumstances may have been made, it was seldom the building that would have been chosen, if sufficient time for planning and preparation had been possible. Perhaps the most serious and far-reaching mistake was made in establishing the dispensary as a separate building away from other medical units, whether voluntary or municipal. I am, of course, aware that medical officers of health are almost invariably anxious to have full control of municipal or county health services, and this I am not criticising. What I have in mind is something more important, *viz.*, the isolation of the tuberculosis officer from his colleagues in other branches of medicine. In my view, it has always been bad for tuberculosis officers in particular and medicine in general, that in only a few instances dispensaries have been established as part of the out-patient department of our hospitals. The tuberculosis arrangements as a whole in London have been subject to no little criticism, but there are at certain of our big London hospitals dispensaries existing side by side with other out-patient departments, and having as medical officer-in-charge a tuberculosis officer enjoying the same status as other out-patient physicians. Occasionally, the tuberculosis officer has, in addition, some in-patient beds. From the point of view of the public, whose fear of tuberculosis is still a reality, it is clearly an advantage to have a dispensary at or in close association with a general hospital. The failure to visualise or to translate into effect so important an arrangement has to some extent been mitigated of recent years owing to the gradual establishment of other public clinical services, *e.g.*, maternity and child welfare and the opportunity has been taken by some local authorities to establish a general health centre, of which the tuberculosis dispensary forms a separate but, at the same time, an integral part.

*Presidential Address to the North-Western Branch, Society of Medical Officers of Health, Manchester, November 10th, 1939.

Name

That the disadvantages, to which I have referred, are becoming more generally realised is shown by the discussions that have taken place with regard to the name " Tuberculosis Dispensary." Its isolation serves to accentuate and aggravate the unwillingness many people feel to visit a building set apart and associated in their minds with a dreaded illness, whereas at an out-patient department or a health centre, a visit to the chest clinic would cause a less unfavourable reaction. The Joint Tuberculosis Council recommended the designation " Tuberculosis Clinic " but there is now a noticeable tendency to drop the use of the word " Tuberculosis " from dispensary notice-boards. It seems, however, likely that in the case of well-established dispensaries the building will continue to be identified in the public mind with tuberculosis. Perhaps the best ultimate solution will be found in the gradual eradication of the fear of the disease from the mind of the public, as the beneficial effects of treatment become more widely realised.

The phobia of tuberculosis may, however, be exaggerated, and I feel that general medical practitioners could do more than they sometimes do to allay the fears of the timid. It should by this time be common knowledge that at a tuberculosis dispensary far more non-tuberculous than tuberculous persons are seen. This fact should be more generally realised. Patients ought to be told in a matter of fact way by their doctors that examination by the tuberculosis officer is necessary to make sure that they are all right or to eliminate the possibility of tuberculosis, which after all is only one of the many serious conditions that are daily found amongst patients at dispensaries. If doctors allow themselves to be unduly influenced by their patients and, taking the line of least resistance, wait until they themselves have made a definite diagnosis of tuberculosis before referring patients to the dispensary, the idea that a visit there means tuberculous disease would, of course, be fully justified. Delay in referring patients is frequently due to other causes; an insensitiveness on the part of the patient to slowly appearing symptoms, fear of loss of wages or employment, a sub-conscious disinclination to have one's suspicion of illness confirmed or, in the case of uninsured persons, the thought of a doctor's bill. On the side of the doctor, delay may be due to failure to examine fully, lack of appreciation of what constitutes a likely case for investigation, and occasionally the inability to realise that a man's *amour-propre* need not suffer, because he is not a specialist in every branch of medicine. Fortunately, the extending use of X-rays is tending more and more to abolish this particular inferiority complex.

Diagnosis

Leaving out of account such fundamental matters as sanitation, housing, improved working conditions, food, and general hygienic teaching, all of which have played and are playing a most important part in raising the resistance of our population, the special activities of the dispensary directly and indirectly must have made no inconsiderable contribution towards the decline in tuberculous mortality that has become increasingly manifest. Of all the varied activities of a dispensary, none is more important than the facilities therein provided for early diagnosis, not only from the point of view of the provision of specialised treatment as soon as possible, but in order that adequate steps may be taken forthwith to limit the spread of infection by the provision of residential treatment or otherwise. The tuberculosis officer must know personally the medical practitioners of his district, and endeavour to maintain their interest in tuberculosis. He should make it easy and pleasant for patients to be examined, give prompt and clear opinions as to diagnosis, and make the practitioner feel that co-operation is advantageous. It is unnecessary to dilate upon the importance of sputum examination, repeated several times if necessary, as this will quickly establish the presence of tuberculosis in many a case of supposed chronic bronchitis. On the other hand, a single negative result is valueless and is apt to give a false sense of security. On this account, reference of the patient to the dispensary for full investigation is to be preferred to the sending of a specimen of sputum. Until well after 1920, and indeed in some few areas to this day, apart from sputum examination, diagnosis has rested mainly, if not entirely, upon well-tried clinical methods, *e.g.*, history, symptoms, and physical signs. History, symptoms and inspection have lost none of their importance, but percussion and auscultation have tended of recent years to take a secondary place as radiology has become increasingly employed. About 1920, I was able to obtain a second-hand gas-tube X-ray apparatus from the War Disposals Board for the use of a Lancashire county dispensary, and this was one of the first, if not the first installation at a British dispensary.

Radiology

The importance of X-rays as a means of accurate and speedy diagnosis is now generally recognised, and many local authorities have made suitable provision at or in connection with their dispensaries. The distribution throughout England and Wales is, however, still patchy, and the suitability of the apparatus and the quality of the skiagrams are variable. Some local authorities have been

laggards, perhaps because the matter has not been convincingly and forcibly brought to their notice; in other instances the cost has been a deterrent. This, however, is a short-sighted point of view, because it is notorious that in the past large sums have been expended on the treatment of non-tuberculous conditions in tuberculosis institutions thereby delaying the admission of definite and infectious cases. It has been established beyond question that radiological evidence of pulmonary tuberculosis frequently exists with a complete absence of physical signs in the chest. Moreover, the time required for diagnosis is materially shortened and the need for observation beds can be reduced to almost negligible proportions. Indeed, nowadays, it is in most cases possible with the use of radiology for a clinician of experience in tuberculosis to establish a diagnosis within a few days, whereas formerly patients were kept under observations for weeks or even months. Radiology is useful in indicating the extent of lung involvement in a case of tuberculosis, and will usually show more extensive disease than the physical signs, if present, suggest. It is also important in the differentiation of non-tuberculous chest conditions, many of which have only become generally recognised with facility since the installation of X-ray apparatus. I refer more particularly to such common conditions as bronchiectasis, unresolved pneumonia, abscess of lung, malignant disease, etc., which in many instances were formerly diagnosed and treated for longer or shorter periods as tuberculosis. Again, the use of X-rays is indispensable in artificial pneumothorax treatment, which is or ought to be continued at the nearest suitable dispensary on a patient's discharge from hospital.

From the foregoing, it might be supposed that radiology provides a more or less mechanical means of accurate diagnosis. Such, however, is not the case. A skiagram is a shadow picture and, unfortunately, similar shadows may be cast in a variety of conditions. For example, the X-ray appearances in unresolved pneumonia, chronic tuberculosis, pneumonoconioses or malignant disease may be almost identical. Bronchitis and bronchiectasis may be interpreted as tuberculous infiltration, shadows at the roots as hilum tuberculosis and so on. On this account, the reference of patients by medical practitioners to general hospitals for X-ray examination is to be deprecated. It leads to confusion, overlapping, inconvenience and unnecessary expense. The interpretation of a chest skiagram is a specialised procedure, and few general radiologists see enough chest skiagrams to enable them to interpret a difficult one. Most are also at a disadvantage because unlike the tuberculosis officer, they do not examine the patient, and it is frequently impossible to make a diagnosis by means of a skiagram alone. Indeed, it cannot be too strongly emphasised that, apart from the discovery of tubercle bacilli on more than an isolated occasion, there is no single method that can be relied upon invariably to prove the existence of tuberculous disease. Accurate diagnosis depends upon the careful appraisement of all the available evidence, which includes history, symptoms, physical examination, laboratory and X-ray tests, etc. Thus, the ideal plan is to install an X-ray apparatus at the dispensary itself, so that the medical staff can become familiar with the appearances seen in a large number of cases and learn to correlate these with the physical signs. A system of payment *per capita* or any scheme whereby the examination and discussion of skiagrams is not easy, will inevitably tend to limit the necessary use of radiology.

In children under 15, physical signs and skiagrams have frequently been misinterpreted and many non-tuberculous persons have been regarded and treated as tuberculous. On this account, the use of the Mantoux intradermal tuberculin test is strongly recommended. It is easy and, when negative, is valuable, because within certain limitations it gives an assurance of the absence of tuberculous infection. In my own area last year 35 per cent. of the Mantoux tests done in children were negative, some of whom had previously been notified and treated elsewhere as tuberculous.

Treatment

Diagnosis should lead to prompt and effective treatment, usually residential, but some forms of treatment can be satisfactorily carried out at a dispensary. I have already alluded to refills in cases of artificial pneumothorax. In addition, abscesses may be incised or aspirated, plaster splints applied in joint cases and so on. The provision of medicine or cod liver oil at a dispensary is seldom necessary, and the chief advantage is derived from the closer supervision that such patients thereby receive. In some areas, artificial light treatment has been systematically given for a number of years for lupus and cervical adenitis, and many excellent results have been obtained with carbon arc and Jesionek lamps, used in conjunction with other ancillary methods. The ordinary mercury vapour baths are used in school or child welfare clinics are not so suitable. Time will not permit me to enter into this subject in more detail, and reference is suggested to papers I have published and the annual reports of the Central Tuberculosis Officer of Lancashire.

It is generally agreed that the most important element in the treatment of active tuberculosis is rest in bed. Before and after patients are treated

in residential institutions there is much to be done by the dispensary staff to render this possible and see that it is maintained. Indeed, the supervision or a patient's routine at home, together with some home nursing on occasion, is an essential part of the activities of any efficient dispensary. Treatment and prevention of infection in the home are closely linked, and on this account the visit of one woman, rather than two, is recommended. This applies to patients residing in non-county boroughs, and it is generally regarded as convenient that where a whole-time county tuberculosis nurse is employed, she shall be the sole health visitor, copies of her environmental reports being sent to the medical officer of health of the district. The supervision of tuberculous patients by a nurse is a specialised matter and should be combined with attendance at dispensary sessions. On this account, except in sparsely populated rural areas, the combination of tuberculosis, school and infant welfare nurse is to be deprecated.

Contact Examination

I have always found the teaching of the Edinburgh school, admirable in so many respects, difficult to follow as regards contact examination. The idea that a " march past " of contacts would reveal the stigmata or presence of tuberculous disease as a result of light percussion or other kindred procedure is in my view a figment of the imagination. The result has been the birth of the misleading word " pre-tuberculous " and the erroneous idea that the fingerprints of previous tuberculous toxaemia can be found in the school history of tuberculous persons. We now know, however, that the tuberculous adolescent is not the delicate child. A conservative outlook in the diagnosis of tuberculosis in children is justified by the fact that children diagnosed as non-tuberculous do not appear later as adolescents suffering from tuberculosis. The diagnosis of tuberculosis in adolescents is of far greater importance, but adolescents are shy birds and their attendance for examination is difficult to obtain. This is in marked contrast with the ease with which school children, either in good health or suffering from chronic bronchitis with or without bronchiectasis, can be induced with their mothers to crowd our dispensaries. I suggest that the examination of all entrants into factories and workshops at the age of 16 be extended to include offices, shops and, indeed, all employment; that examination be systematic and compulsory, that X-rays be available and that definite contacts of infectious cases be kept under observation and examined at intervals for five years. Experience has shown that it is not enough to look for secondary cases. It is equally important to find the primary case, *e.g.*, after a death from tuberculous meningitis or from phthisis in a young adult. A parent or older inmate of the home or workplace is not infrequently found to be suffering from chronic tuberculous disease. He or she may be entirely unaware of this and remain at work in fair health for years. Some intercurrent infection or strain may at length upset his equilibrium and force him to seek medical advice, when, after a longer or shorter period the correct diagnosis is made.

Improvements in our social system have resulted in raising the resistance of the population to tuberculosis, so that tuberculous infection is tending to be held in check, and frequently does not become manifest as disease until later ages. We see nowadays fewer patients with " galloping consumption," and relatively far more chronic and fibrotic cases. The examination of suitable contacts is in practice exceedingly difficult to secure.

Care and After-Care

Most tuberculous patients are at home for the greater part of their illness, and the dispensary has definite responsibilities in connection with them, both before and after they go to a sanatorium or hospital. These responsibilities are included in what is commonly but erroneously referred to as " after-care " and partake of social service activities in addition to medical supervision. This is scarcely the time to discuss the vexed question of Care Committee or *ad hoc* assistance through the tuberculosis officer. In either case the latter is usually responsible for recommending or making the grant, the cost of which is partly or wholly defrayed from public funds. The position of patients after their return home from institutional treatment remains the weakest part of even the best tuberculosis schemes, and it might well be cheaper for local authorities to set aside money to improve the home conditions of patients and to provide employment according to their fitness and abilities rather than complacently to accept the too frequent necessity for further periods of residential treatment which have little curative value. Institutions have become so comfortable and hence so popular that patients nowadays remain in them cheerfully for quite long periods, and a second admission is not infrequently sought for reasons not strictly due to deterioration of health. Fortunately, the use of blood-sedimentation tests provides tuberculosis officers with a useful guide in assessing the progress of a patient.

Information and Education

The spread of hygenic teaching in schools and elsewhere has doubtless led to an improvement in public behaviour. Promiscuous spitting, for example, is now far less prevalent, and I recall

that on my advice, the Wigan Corporation was one of the earliest authorities to adopt a byelaw with respect to spitting. What further steps can be taken? Lectures and addresses have their place and value, but care is necessary lest the public be unduly frightened by what ill-advised publicity agents are apt to describe as "this terrible disease." After all, the best advertisement for a dispensary is, or should be, the members of the staff. They are in constant touch with large numbers of the public, and much depends upon the impression they make. Knowledge, skill and helpful sympathy cannot remain indefinitely unknown while, on the other hand, dramatic methods make but a brief appeal, unless the dispensary can gain a reputation for consistent, helpful service. In my opinion, much if not most, in the way of public enlightenment can best be accomplished as part of general health education.

Personnel

I have left the question of the Tuberculosis Officer to the last, not because he is the least important, but because on him depends the success or failure of any dispensary. In the early years of tuberculosis schemes, appointments were perforce hurriedly made, and the further education of the tuberculosis officer in the light of advancing knowledge depended mainly on himself. It is now possible to form some conclusions as to the most suitable training and experience for a candidate. He should, of course, be well qualified and have some instinct for social service. Experience in general practice is invaluable, for he will have much to do with general practitioners and ought to understand their point of view. Furthermore, a broad outlook and experience of general medicine are thus acquired. An appointment at a good chest hospital, where modern methods of diagnosis and treatment are regularly carried out, is a valuable addition to ordinary sanatorium experience. What are we to say with regard to the possession of a Diploma in Public Health? A public health outlook is necessary for anyone dealing with an infectious disease, but his most important duties as a tuberculosis officer will be clinical, and as a clinician he stands or falls. He will, in addition, have definite administrative responsibilities, but much of this work can usually be efficiently carried out in any well-established scheme by a senior clerk acting under supervision. Unless, therefore, he seeks to become a medical officer of health, I do not regard the possession of a diploma in public health as an absolute necessity for a man whose other qualifications are first-class. It is unnecessary to allude to these other qualities, which are desirable in any public medical officer, e.g., character, personality, industry, an orderly and tidy mind, and the ability to get the right thing done with a minimum of friction, avoiding at the same time the easy, though fleeting, popularity that *laissez-faire* sometimes brings.

The superannuation Acts, though excellent as far as they go, have had as one result the cutting off of older and more experienced men from promotion in health services. Senior medical officers of health have often found to their dismay that they have been passed over in appointments by young and relatively inexperienced colleagues. The position of a tuberculosis officer is far worse. Experience increases his usefulness, but prevents him from gaining the wider contacts necessary for a medical officer of health. From the point of view of tuberculosis, this is often a distinct gain, as it is a speciality requiring wide clinical knowledge and an ever-extending experience. When a tuberculosis officer of ability becomes a medical officer of health it is a definite loss to clinical medicine. On the other hand, some tuberculosis officers discover that they have a natural aptitude for general public health work. It thus appears that tuberculosis areas should be large enough to permit of the appointment of an officer of consultant standing, with assistants, who might in time become senior clinical officers or enter other branches of public health. As senior tuberculosis officers are unlikely to be successful candidates for posts as medical officers of health, the larger and wider their clinical experience, it is only right that their status and salaries should be comparable with those of medical officers of health of similar responsibilities; otherwise the best men will either not enter the service or leave it at the first opportunity.

Tuberculosis work may be, as the late Professor Delèpine once told me, a *cul-de-sac*, but it provides opportunities for interesting and useful service. Some missionary spirit is required, and a willingness to work under conditions that many regard as monotonous and depressing. A tuberculosis officer must combine the role of clinician with that of schoolmaster, and never lose sight of the public health aspect of his work. He cannot succeed without broad human sympathies and some understanding of the difficulties and temptations of those on whose behalf he labours. He must limit his personal desires and not be dismayed if some of the credit due to him is shared by others. In the long run he can scarcely escape his reward. He is fortunate indeed if he earns the respect and esteem of his colleagues, and the gratitude of some of those whom it has been his privilege to serve.

THE Midwives' Institute have reopened their London headquarters at 57, Lower Belgrave Street, S.W.1.

School Meals: With Special Reference to Planning of Dietary and Assessment of Nutritional Needs*

By GEORGE F. BUCHAN, M.D., F.R.C.P., D.P.H.
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(*Note by Editor.*—Arising from suggestions made by the Board of Education, Dr. Buchan last year presented a report, from which the following is an extract, to his Children's Care Sub-Committee. In view of the importance which the subject of communal feeding has assumed at the present time, it is thought that Dr. Buchan's recommendations as to dietary and his review of nutritional assessment will be of special interest.

In the first part of his report, after dealing with points regarding equipment of the feeding centres, he gives an historical summary of arrangements for the feeding of school children, beginning with the report of the Royal Commission on Physical Training (1903) and the enquiry instituted by the President of the Board of Education, which led up to the passing of the Education (Provision of Meals) Act, 1906, and to later amendments consolidated in the Education Act, 1921. Reference is also made to Article 23 of the Board's Special Regulations of 1925 regarding selection of children and diet; to the Milk in Schools Scheme; to Administrative Memorandum 124 of December, 1934, revising the classification of nutritional states; and to Circular 1443, suggesting frequent "nutrition surveys." Dr. Buchan's report continues as follows:—)

Revision of Dietary

I beg to submit a revised dietary.

Breakfasts.

1. Brown or white bread and butter with jam, marmalade or golden syrup, or currant bread and butter. Cocoa made with milk.
2. Boiled egg with brown or white bread and butter. Cocoa made with milk.

Breakfast 1 to be given on four days a week.
Breakfast 2 to be given on three days a week.

Dinners.

1. Lentil soup. Bread and butter. Boiled currant pudding.
2. Meat pie, potatoes, peas. Brown bread and butter. Lemon rice and jam.
3. Brown stew and dumplings. Bread and butter. Baked jam roll or jam tart. Fresh fruit.
4. Roast mutton, potatoes, greens. Brown bread and butter. Stewed prunes and custard.
5. Baked fresh haddock, potatoes, parsley sauce. Bread and butter. Golden pudding.
6. Shepherd's pie, haricot beans. Brown bread and butter. Rice and raisin pudding.
7. Boiled beef, potatoes, carrots. Bread and butter. Dutch apple tart.
8. Savoury salmon and cheese pie. Brown bread and butter. Jam roly-poly.
9. Roast beef, potatoes, butter beans. Bread and butter. Stewed fresh fruit and custard.
10. Minced meat, potatoes, greens. Brown bread and butter. Banana trifle.
11. Cheese pie, gravy, peas. Bread and butter. Strawberry blancmange. Fresh fruit.
12. Italian casserole, potatoes. Brown bread and butter. Boiled chocolate pudding.

Milk.

The children on the feeding list each receive ½-pint of milk on each school day.

Fresh Fruit.

Each child on the feeding list receives an orange, apple, banana or other fruit in season once a week.

The new dietary as submitted above is improved as compared with the dietary now in use in the following main respects:—

(1) More animal or first-class protein in the form of meat, fish or cheese is allowed in the dietary to the extent of about 1 oz. per child per day.

(2) A roast mutton dinner is provided.

(3) Haddock is given instead of cod as the latter is supplied large and coarse.

(4) Only one soup dinner without meat occurs in the 12 menus as compared with two such dinners in 15 menus previously.

(5) An egg is provided at breakfast three times a week.

(6) Allowance has been made for wastage in the food as purchased so that the edible food may be of proper amount.

The average age of the children receiving meals is about 10 years and analysis of the revised dietary shows that each child receives approximately on the average the following quantities (Table I overleaf) daily in the food as purchased.

It will be understood that the meals supplied by the Education Committee are not intended to represent the complete daily food intake of the average child of 10 years. But as the economic circumstances of the families from which such

*Reprinted from the Borough of Willesden Annual Health Report for 1938.

TABLE I.

FOOD AND VITAMIN VALUES OF THE DIETARY.

	Provided in the Revised Dietary in the Food as Purchased.					*Approximate Total Daily Requirements in Food as Purchased.
	Breakfast.	Dinners.	Milk.	Fruit.	Total.	
Calories	858	1,422	126	—	2,406	2,800
Protein—						
Animal	2·5 gm.	18 gm.	6 gm.	—	26·5 gm.	25-30 gm.
Vegetable	19·5 gm.	19 gm.	0 gm.	—	38·5 gm.	
Total	22·0 gm.	37 gm.	6 gm.	—	65 gm.	75 gm.
Fat	30 gm.	63 gm.	7 gm.	—	100 gm.	80-100 gm.
Carbohydrate...	119 gm.	167 gm.	9 gm.	—	295 gm.	400 gm.
Calcium	0·65 gm.	0·49 gm.	0·19 gm.	—	1·33 gm.	1 gm.
Phosphorus	0·99 gm.	0·78 gm.	0·16 gm.	—	1·93 gm.	1 gm.
Iron	6·0 mgm.	7·6 mgm.	—	—	13·6 mgm.	15 mgm.
Vitamins A, B, C, D ...	A.B.D.	A.B.C.D.	A.C.D.	C.	A sufficiency	A sufficiency

*These figures are based on the requirements laid down by various authorities, but it must be understood that *they cannot in any sense be regarded as firm or absolute.* They, however, give an excellent guide to the average daily requirements of the average child of about 10 years.

children come are low it is desirable that they should be supplied with the essential and more expensive foodstuffs at school so that the supplementary feeding at home may be comparatively easy and cheap.

Having regard to these considerations I am of opinion that the dietary now submitted for the consideration of the Committee is a sound and proper dietary for the average child fed, namely, a child of 10 years, for the following reasons:—

It provides about 6/7ths of the total calories required.

It provides nearly all the animal protein and about 4/5ths of the total protein required.

It provides all the fat required.

It provides about 3/4ths of the carbohydrate required.

It provides all the mineral elements required.

It provides vitamins in sufficient amount.

The dietaries might conceivably be criticised on the ground that there is an insufficiency of raw fruit and green salads but in my opinion the extra cost of these does not warrant their inclusion in the menus. These foodstuffs contain Vitamin C which is protective against scurvy but having regard to the fact that a case of scurvy is very seldom seen in the population nowadays I do not think there is any clamant need for any further addition of fresh fruit and salads to the dietaries submitted.

The average daily costs of the dietaries are:—

	Pence
Breakfast	2·7
Dinners	3·8
Milk	0·5
Fruit	0·14
	—7·14

The weekly cost is therefore 50d.

The Problem of Selection

Having decided upon the dietaries the next problem which the Local Authority have to solve is which children in their area are unable by reason of lack of food to take full advantage of the education provided for them.

It has been suggested that this selection may be made (*a*) by medical examination, or (*b*) by having regard to the economic circumstances of the family.

Selection by Medical Examination.—It should be observed that the state of nutrition depends on many factors, including, previous disease, for example, rickets in early childhood leading to stunted growth; existing disease; chronic fatigue, due to prolonged hours of work or too little sleep; environmental conditions, for example, overcrowding or absence of mother at work; and diet.

Selection of the undernourished child by medical examination has been the subject of much discussion and various methods have been tried for assessing the state of nutrition, including anthropometric measurements; co-ordinational tests; lung capacity tests; volitional tests; fatigability tests; endurance tests; estimation of haemoglobin; and clinical assessment.

The Advisory Committee on Nutrition reporting to the Minister of Health in 1936 reported on the assessment of the state of nutrition in the following terms:—

"We have endeavoured to obtain information as to the measurement of the state of nutrition as we considered that the correlation of the state of nutrition with the diet consumed would be of assistance to us in our inquiries.

"We have had under review the various methods which have been tried or are in process of trial or

have been suggested for the assessment of the nutritional state. We are unable to recommend any known method as reliable. So far as our present knowledge goes it would seem that the clinical method given in detail in Administrative Memorandum No. 124 of the Board of Education is the most promising, but the trial of this method has not been sufficiently prolonged to establish its reliability."

The Clinical Method has received much attention recently and it is fair to say that confidence in this method is now considerably shaken. Different doctors have been asked to examine the same set of children and the results show that physicians differ widely in their estimates of the nutritional states of the same children. I shall quote only one such result of a nutritional survey of children of each sex conducted by school medical officers in Brecon, Glamorgan and Carmarthen. There were six doctors and the same children were examined by all of them. The comments of the County Medical Officer for Brecon on the results are:—

(1) All six doctors only agreed unanimously on 19 children.

(2) Five doctors agreed with one dissentient on 24 children.

(3) Four doctors agreed with two dissentients on 43 children.

(4) In no less than 17 instances the same child was assessed as "Excellent" by some and "Subnormal" by others, while other children were similarly labelled "Normal" by some and "Bad" by others.

Table II similarly suggests the inconsistency and unreliability of the results obtained by Clinical Assessment in Willesden, even allowing for the differing social circumstances of the area.

It may be that a clinical observer would be able to detect serious undernourishment in a child resulting from underfeeding over a period although having regard to the findings above quoted even this may be doubted. But whether this be so or not it should be remembered that it is unsound public health practice to wait until underfeeding has produced obvious malnutrition before applying the remedy. The child should be fed wherever the circumstances of the family are such that sufficient money at home is not available for the purchase of food.

Selection by Economic Circumstances.—In endeavouring to determine the need of children to be fed on account of economic circumstances it is necessary to find out how much it costs to keep the average unit in a family receiving school meals. Excluding rent, insurance, National Health and Unemployment insurance, fares to and from work and payments for the care of children, the costs of living fall under the following headings:—

Food,
Clothing,
Heating and Lighting,
Sundries, including cleaning materials, replacements, haircutting, postages, stationery, recreation and unforeseen expenditure.

TABLE II.

PERCENTAGE OF WILLESDEN CHILDREN EXAMINED, GROUPED ACCORDING TO THEIR STATE OF NUTRITION AS REQUIRED BY MEMORANDUM 124 OF THE BOARD OF EDUCATION

WILLESDEN ELEMENTARY SCHOOLS.

	1935.				1936.				1937.			
	Excellent	Normal	Slightly Sub-normal	Bad.	Excellent	Normal.	Slightly Sub-normal.	Bad.	Excellent.	Normal.	Slightly Sub-normal.	Bad.
Dr. A. ...	12	76	11	1·0	12	83	5	0·0	14	81·5	4·5	0·1
Dr. B. } Dr. C. } ...	10	76	13·5	0·5	3	95	2	0·0	4	94	2	0·0
Dr. D. } Dr. F. } ...	24	48	28	0·1	7	85	8	0·0	0·1	92	8	0·1
Dr. D. } Dr. G. } ...	—	—	—	—	—	—	—	—	13	75	11	1

WILLESDEN SECONDARY SCHOOLS.

	1935.				1936.				1937.
Dr. A. ...	20	78	2	0·0	23·5	76	0·5	0·0	Not available.
Dr. B. ...	0·0	96·5	3·5	0·0	0·0	100	0·0	0·0	
Dr. C. ...	35	58	7	0·0	20	79	1	0·0	
Dr. D. ...	0·0	69	31	0·0	0·0	91	9	0·0	
Dr. E. ...	4·5	90·5	5	0·0	—	—	—	—	
Dr. F. ...	23·5	73	3·5	—	8	91·5	1·5	0·0	
Dr. G. ...	—	—	—	—	17·0	80·0	3·0	0·0	

Food.—The child of 10 years may be assumed to be the average unit so far as food is concerned in the families receiving school meals. Such a child requires some 2,800 calories in the food as purchased as compared with some 3,400 calories for the adult male doing light work.

It has been already shown that the weekly cost of the meals provided by the Education Committee at contract prices is 50d. per week. It is probable that 25 per cent. would be added to this cost if the foodstuffs were bought at retail prices in small quantities, thus bringing these costs up to 62½d. per week. This sum, however, only provides 2,400 calories and 2,800 calories are required which at the same rate could be purchased for 73d. It should be observed that the 400 calories to be supplied at home are cheaper calories than those supplied at school, but I think the figure of 73d. or 6s. 1d. should be used so as to provide a margin.

The diet prescribed by the British Medical Association in its report in 1933 supplied 3,400 gross calories in suitable proportions of protein, fat and carbohydrate per average man. This diet has recently been examined and amended in the light of greater knowledge by R. F. George, who, in his address on "A New Calculation of the Poverty Line" in 1937 to the Royal Statistical Society, revised the weekly cost in relation to prices obtaining in 1936 with the following result:—

AGE IN YEARS.

1–2	2–3	3–6	6–8	8–10
3/2	3/11	4/4	4/7	5/2

10–12	12–14	Adult Man.
5/9	6/5	6/9

These figures are slightly below the figure of 6s. 1d. for the average child of 10 years given in this report, but the cost of living index for food only has gone up from 29 in July, 1936, to 41 in August, 1938.

Clothing.—There are certain sources of information available about the cost of clothing. R. F. George, in the paper referred to above, comes to the following conclusions:—

	s.	d.
Annual cost in 1936 for a man	47	6
,, ,, woman ...	34	0
,, ,, child (10 years)	30	0

NOTE.—Mr. R. F. George states at the beginning of his paper: "It should be emphasised at the very outset that under no circumstances can the "Poverty Line" be regarded as a desirable level. It seeks to assess the cost of a standard of living so low, that while persons below it are in extreme poverty, those just above it would commonly be regarded as very poor."

The Willesden Education Authority with the approval of the Home Office pay under the Children and Young Persons Act, 1933, £4 per annum for clothing for children (under 14 years) and £6 per annum for clothing for young persons (14 and under 17 years).

Enquiries made by this department amongst a limited number of families receiving school meals show that the cost of clothing per head of the family is 1s. per week. This is probably a low average and is accounted for by the fact that in most of the families there were older children whose clothes were made down for the younger.

In view of these figures the cost of clothing per head of the family may be put at 1s. 6d. per week.

Heating and Lighting.—The figures given for heating and lighting by R. F. George in his paper referred to above for an average family of four or five are:—

Heating	9d. per head per week.
Lighting	1·25d. per head per week.

Enquiries made in a limited number of Willesden families where the children were receiving school meals showed that the cost of heating and lighting averaged 1s. per head per week.

Sundries.—These include cleaning materials, replacements, haircutting, postages, stationery, recreation, unforeseen expenditure, etc. No figure for such sundries is included in the paper by R. F. George except for cleaning materials, which is estimated at about 2d. per head per week for a family of four or five persons.

From the enquiries made in a limited number of families receiving school meals in Willesden the average cost of sundries as defined above was 9d. per head per week.

Total Cost.—Having regard to all the preceding factors it is therefore deduced that the weekly cost of upkeep of the average member of a family living with few, if any, of the comforts of life is:—

	s.	d.
Food	6	1
Clothing	1	6
Heating and Lighting	1	0
Sundries, including cleaning materials, replacements, etc.	0	9
	9	4

Economic Circumstances of Families Receiving School Meals

The economic circumstances per head per week of families receiving school meals is a net figure obtained by deducting the outgoings from the income and dividing the result by the number in the family.

TABLE III.

CALCULATION OF ECONOMIC CIRCUMSTANCES OF FAMILIES.

No. in Family as Defined.	Probable No. Fed.	Economic Circumstances per Week per Head of Scale.	Economic Circumstances per Week of Family.	Additional Value per Week of Food provided by Education Committee.	Total Economic Circumstances including Value of Meals provided by Education Committee per Week.	Total Economic Circumstances per Head per Week.	Estimated Total Economic Circumstances required for Maintenance per Head per Week.
2	1	10/6	21/–	5/2	26/2	13/1	9/4
3	2	9/6	28/6	10/5	38/11	13/–	9/4
4	2	8/6	34/–	10/5	44/5	11/1	9·4
5	2	7/6	37/6	10/5	47/11	9/7	9/4
6	3	7/6	45/–	15/7	60/7	10/1	9/4
7	3	7/6	52/6	15/7	68/1	9/9	9/4
8	4	7/6	60/–	20/10	80/10	10/1	9/4
9	4	7/6	67/6	20/10	88/4	9/10	9/4
10	5	7/6	75/–	26/0½	101/–	10/1	9/4

Income per week includes:—

(1) Average income per week (average for last four weeks is taken) including amount paid for National Health and Unemployment Insurance by applicant.

(2) Contributions from children under 14 years earning.

(3) Relief received from Public Assistance Committee.

(4) Pension or treatment or special diet allowance in the case of ex-service men.

(5) Contributions from sons in Navy, Army or Air Force.

(6) Union Unemployment money.

(7) National Insurance Unemployment money.

(8) National Insurance Sick Benefit.

(9) Amount received from lodgers (children over 14 years of age working are reckoned as lodgers). Any amount over 12s. per lodger is reckoned as income.

(10) Letting, the whole amount received taken as income.

(11) Any other source.

Outgoings per week include:—

(12) Rent.

(13) Insurance.

(14) National Health Unemployment Insurance (parents only).

(15) Fares to and from work (parents only).

(16) Payment for care of children.

Number in family means parents, children attending school, children under school age and members of the family unable to work.

Breakfasts and dinners are given to children attending Public Elementary Schools if the net figure per week of the family obtained as above is below the following:—

No. in family.	*Net income per head per week.*
2	Not exceeding 10s. 6d.
3	,, ,, 9s. 6d.
4	,, ,, 8s. 6d.
5 or over	,, ,, 7s. 6d.

This means that such families are living per head per week on sums not exceeding the amount shown in the second last column of Table III.

The present economic circumstances scale was last revised in April, 1934, when the cost of living index for all items was 39. The cost of living index in August, 1938, was 56. (In December, 1939, it is 73.)

[The rest of the report deals with the administrative arrangements and costs of the new proposals if adopted in Willesden.]

Dr. J. A. H. BRINCKER, principal medical officer in the public health department of the London County Council, has retired on superannuation. A minute of the Council pays a tribute to his service since his entry as a part-time officer in 1905. He became a full-time officer in 1911; and after experience in the sections dealing with the school medical service, medical examinations and infectious and epidemic disease he was, in 1927, placed in charge of the division then formed to have responsibility for the control of all communicable diseases. In anticipation of the transfer to the Council of hospitals and other work under the Local Government Act, 1929, Dr. Brincker was promoted in that year to one of the three newly-created positions of principal medical officer and was placed in charge of infectious diseases work, including hospital administration and that of the children's and tuberculosis hospitals. His eminent position as an authority on infectious diseases has been recognised by his presidencies of the epidemiological section of the Royal Society of Medicine, of the Fever Hospital Group of the Society of Medical Officers of Health, and the Medical Officers of Schools Association.

Correspondence

MASS RADIOGRAPHY.

To the Editor of PUBLIC HEALTH.

SIR,—We have read with interest Dr. A. Robinson Thomas's article in PUBLIC HEALTH, September, 1939. We believe that the subject is one of great importance in public health work but that this method of making a rapid survey of a community will be discredited unless the best apparatus is used.

Any reduction in efficiency of a plant for miniature radiography capable of taking 240,000 pictures a year at the cost of only £1,000 is to be deprecated. Since the corresponding cost using large films is £24,000, it can be easily seen that the initial cost can be written off in the first few months. Dr. Thomas in his article suggests a focus screen distance of only 32 inches in place of about 5 feet used by us.* He uses 50 ma. in place of 350 ma., and an exposure of 0·3 seconds in place of 0·08 seconds. We do not consider that such a radical change of technique can be supported on either technical or economic grounds. The most elementary economics show that nothing but the very best equipment procurable is reasonable where such a large output of X-ray pictures is anticipated. These arguments apply specially to the reduction in size of lens from *f*/0·85 to *f*/1·9. On the photographic side it is difficult to understand why Dr. Thomas prefers an ordinary panchromatic to a faster film, and also why an X-ray developer is used instead of a fine grain developer suitable to the fine grain film.

Regarding high milliamperages, Dr. Thomas says: "the apparent improvement is slight and out of all proportion to the greatly increased cost of producing the higher milliamperages." We assume that here he refers to the higher initial cost of the plant and not as might be inferred from his words, to the actual current consumption. (The total current consumption by the apparatus used by us is probably less than that of the plant described by Dr. Thomas.) After twelve years of research, Collender has shown that the lens used at any time should undoubtedly be the largest that the instrument makers can produce, aberration free, for this purpose. Dr. Thomas states "a slight improvement *might* be obtained by using a faster lens, but there is no convincing evidence that such an improvement would really be noticeable." A comparison of the X-ray pictures reproduced in the *Lancet* with Dr. Thomas' reproductions in PUBLIC HEALTH, will show that the former are definitely diagnostic, whereas the latter are insufficiently clear to show whether the lung is normal or diseased. Dr. Thomas suggests that projection of his films is necessary for diagnosis, but in the case of the miniatures sent by Dormer and Collender to the *Lancet*, a diagnosis could be made without any magnification. He states "The projected image does not give sufficient detail to make an exactly accurate diagnosis, but if suspicions are aroused . . . then an ordinary radiographic examination should follow." We consider that this procedure defeats the whole purpose of the system. Suspicions can be aroused by fluoroscopic examination without using the miniature method at all.

We are, Sir, yours faithfully,

B. A. DORMER.
K. G. COLLENDER.

Durban,
Union of South Africa,
October 12th, 1939.

Lancet* (1939), **1, 1309, and **2**, 1026.

POLIOMYELITIS IN CARDIFF.

To the Editor of PUBLIC HEALTH.

SIR,—In the issue of PUBLIC HEALTH for December, 1939, an interesting commentary is made in your Editorial upon poliomyelitis in Essex and Cardiff. At one point of the analysis of the Cardiff epidemic, reference is made to the use of the Box Respirator for four cases and your editorial says that the "report does not indicate how far the apparatus was successful in preserving the life of the patient." May I point out that in the preface to my Annual Report for the year, 1938, I suggested that the report on the poliomyelitis outbreak in Cardiff should be studied in conjunction with the account by the Isolation Hospital Medical Superintendent of the treatment of these cases? This account does explain that four children with respiratory paralysis (complicated in one instance with bronchopneumonia) were in Box Respirators for periods varying from seven to twelve weeks and that all ultimately recovered.

I am, Sir,
Yours, etc.,

City Hall,
Cardiff.
December 19th, 1939.

J. GREENWOOD WILSON.

Obituary

WILLIAM JAMES BUTCHER, M.R.C.S., L.R.C.P., D.P.H.

We regret to record the death at the age of 61 of Dr. W. J. Butcher, formerly medical officer of health for the West Sussex South combined sanitary district in the Worthing area, and school medical inspector for the West Sussex C.C. He held his appointment from 1919 until his retirement through ill-health a year ago. Before the last war he served in Bedfordshire. Dr. Butcher was a regular attendant at meetings of the Society and was elected a Life Fellow on his retirement.

ANDREW NORRIS STEVENS, M.R.C.S., L.R.C.P., D.P.H.

The death occurred on November 20th, of Dr. A. N. Stevens, medical officer of health and previously assistant medical officer of Great Yarmouth for some 30 years. His earlier service was in Brighton and Hove. Dr. Stevens was in his 64th year and had been in ill-health recently. He had been a Fellow of the Society since 1908 and at one time served on the Council.

As we go to press, we learn with regret of the death on December 30th, of Dr. J. Middleton Martin, for many years county medical officer of health for Gloucestershire, until his retirement in 1938. An appreciation will appear in our next issue.

CIVIL DEFENCE RESPONSIBILITIES OF MEDICAL OFFICERS OF HEALTH

On December 15th, the President (Dr. F. T. H. Wood), Dr. Cyril Banks, Dr. Gordon Lilico and the Executive Secretary, representing the Society of Medical Officers of Health, were received at the Ministry of Health by Mr. A. W. Neville, Mr. H. A. de Montmorency, Dr. Thomas Carnwath (Deputy Chief Medical Officer) Dr. J. H. Hebb (Director-General, Emergency Medical Services) and Dr. Charles Seeley, and by Messrs C. J. R. Whetmath and S. D. Sargent, of the Ministry of Home Security.

The President spoke in amplification of a memorandum, submitted in advance by the deputation, which had expressed the concern felt by the Society over certain questions relating to the administration of civil defence casualty and hospital services, and regretted that means had not been found for consultation between the departments and the Society in matters where the practical local experience of medical officers of health might have been helpful in the formulation of new policies. Dr. Wood said that the main object of the deputation was not to go into past difficulties, many of which were smoothing themselves out in course of time but to ask the Departments to give opportunities for advance discussion of new circulars or schemes and for consultation over current difficulties.

Drs. Lilico and Banks also spoke on certain present points at issue including the questions of local executive control by medical officers of health of first-aid parties and aid posts, and of the need for clarification of the relationship between the Hospital Officer, Medical Officer of Health and Group Officer.

Dr. Hebb said that he hoped that the new arrangement by which he would act as chief officer in regard to medical matters concerning both the Ministry of Health and the Home Office would bring about close co-ordination between the Central Departments. In regard to local control of A.R.P. casualty services, he agreed that medical officers of health should be the officers immediately responsible for their administration and control subject to general direction from A.R.P. controllers.

After further discussion, Mr. Neville said that he agreed as to the desirability of advance consultation on these matters between the Departments and the Society whenever circumstances permitted. In view of the urgent nature of decisions which had to be made in time of war, he suggested that the consultative committee appointed by the Society should be a small one so that contact could be quickly established. It was agreed that consultation should be effected jointly with representatives of the Ministries concerned and should extend to consideration of matters which the Society thought desirable to bring forward.

The President said that in matters of real urgency, the Society recognised the need for a quick method of consultation such as could be reached by a small committee; he thought that the Society's committee should include a representative county medical officer of health, as the counties had special problems. As to less urgent matters, he suggested that the method usually followed by the Ministry of Health on the public health side, of sending the Society drafts of circulars and regulations and of asking for its observations, might be followed also in regard to civil defence matters. He expressed thanks to the representatives of the Ministries for receiving the Society's deputation.

SCHOOL HEALTH SERVICES IN WAR-TIME

The Board of Education have now followed up their circular on school dental services in war-time (which was summarised in our last issue) with Circular 1,490, dated December 14th, dealing with school health services as a whole. Paragraph 1 refers to previous circulars and memoranda issued by the Board regarding various aspects of the school services.

In paragraph 2 the Board say that they recognise the difficulties presented by the full resumption of services, but that while some local education authorities have made a determined effort to surmount these difficulties, in other areas the staff and premises have been allocated to other purposes. They give the combined opinion of the Board and of the Ministers of Health and of Home Security that the time has now come when the normal school health staff and premises should be returned to their previous use, subject to their being available immediately for the casualty service if need arise.

Paragraphs 3 to 6 refer to the problems of evacuation areas. It is suggested that medical, dental and nursing staff, who have not been transferred to reception areas, and clinics taken back from other purposes can do much to secure resumption of the health services for unevacuated children. Full provision should be made for the treatment especially of skin diseases, such as scabies and impetigo. The agreement of the Minister of Home Security is granted to the use of A.R.P. cleansing stations for the cleansing of school children. The need for an intensive effort by local authorities is urged and it is suggested that where many of the normal staff have been transferred to reception areas additional temporary staff should be engaged by the evacuated area. The work should be organised in such a way that by the end of three months all children will have been inspected and, if necessary, treated. The Board think that it should be practicable to arrange for the provision of meals and milk and to devise a scheme by which parents should send their children to schools or centres to receive milk or payment.

Paragraph 7 refers to neutral areas and says that it is hoped that all schools therein will soon be re-opened and the school health services function normally.

Paragraph 8 deals with reception areas. It is said that there is evidence that in some such areas the staff is still seriously inadequate to meet the needs of the evacuated children in spite of the transfers of staffs from reception areas. The Board reiterate their view that reception area education authorities should provide for evacuated children services of the same standard and scope as those for the local children; whatever additional staff is needed for this purpose will not involve any ultimate additional expenditure by the receiving authority.

Paragraphs 9 to 12 refer to the questions of provision of meals and milk. The Board urge that the periodical nutrition surveys should be resumed and that a close watch should be maintained for new cases of under-nourishment. Other questions regarding the school milk scheme are discussed.

In *paragraph 13 the Board* say that it has not been possible for their medical officers to visit enough areas to prepare any general survey of the present position, and they now ask the local education authorities to send in information on points which are set out in an appendix to the circular. Regarding the release of staff for civil defence purposes, the Board are authorised by the Ministry of Health to say that it was not their intention that members of the school medical staff should be removed for an indefinite period from their ordinary work; in cases where members of the staff are engaged in such important civil defence duties that their return would not be practicable, authorities are urged to consider the desirability of replacing them by temporary appointments. The Board, in concurrence with the Ministers of Health and of Home Security, express the hope that, where schools, clinics, feeding centres, or other premises normally used by the school health services have been taken over for civil defence purposes, these will be wholly or partially released for their former work.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1856. Price 1d. net encloses S.R. & O. of 1939, No. 1240). *Midwives Act*, 1936. Addressed to Local Supervising Authorities under the Midwives Acts, enclosing a further Order applying proviso (*c*) to Section 6 (1) of the Midwives Act, 1936, to the additional hospitals named in the Schedule to the Order.

Circular 1870 (encloses Forms A.G. 115*A* and and A.G. 116*A*). *Midwives Act*, 1936. *Compensation.* Issued to all Local Supervising Authorities in England under the Midwives Act, 1936. *Encloses application* forms (A.G. 115 (*a*) (rev.) and A.G. 116 (*a*) (rev.)) for payment of Exchequer Grant under Section 5 (6) of Midwives Act, 1936, in respect of compensation paid to, or laid out on behalf of, midwives during the period ending March 31st, 1940.

Circular 1872. *Town and Country Planning Act*, 1932. Sets out the Ministers' views, for the guidance of Local Authorities, *with regard to Interior Development* and Town Planning Schemes under the Town and Country Planning Act, 1932, during the war.

Circular 1882. *Government Evacuation Scheme.* Addressed to receiving Local Authorities. Outlines arrangements made for public health services in the reception areas. Appendix contains instructions on setting up of day or residential nurseries.

Circular 1883. *Emergency Hospital Scheme. Billeting of Doctors, Nurses and other Hospital Staffs.* Addressed to County Borough and County District Councils. Gives further details regarding billeting of extra hospital staff—additional to information given in Circulars 1855 and 1855*a*.

Circular 1884. Price 1d. net. Cancer Act, 1939. Extends to March 31st, 1941, the period during which the Councils of Counties and County Boroughs may submit to the Minister their arrangements under the Cancer Act, 1939.

Circular 1888. *Government Evacuation Scheme.* Addressed to receiving Local Authorities. Requests that lists of unaccompanied school children in the district be furnished to the evacuation areas concerned.

Circular 1892. Price 1d. net (encloses P.R. & O. of 1939). Price 1d. net. Transmits the Public Health (Preservatives, etc., in Foods) Amendment Regulations, 1939, and explains their general effect.

Circular 1893. *Emergency Ambulance Service.* To County Councils, County Borough Councils, Metropolitan Borough Councils, and other Schemes Making Authorities. Instructions to Local Authorities regarding the provision of ambulances during war-time.

Circular 1894. *Government Evacuation Scheme.* Addressed to receiving Local Authorities. Confirms that premises may be requisitioned for use as school premises for evacuated children.

Circular 1897. *Government Evacuation Scheme.* Addressed to receiving Local Authorities. Outlines procedure to be followed in settling claims for compensation in respect of damage caused by evacuated persons, to bedding, etc.

Circular 1900. *Air Raids.* Addressed to the Common Council of the City of London, Metropolitan Boroughs and other Welfare Authorities in the Metropolitan Evacuation Area. Suggests measures to be taken, in the event of air raids taking place in the metropolis, in caring for young children who become separated from their parents or guardians.

Circular 1902. *House Officers and the Emergency Medical Service.* To Teaching Hospitals and other Voluntary Hospitals known to employ House Officers. Informs Hospitals of the action to be taken with regard to House Officers employed on the Emergency Hospital Scheme.

E.M.S. Memo. No. 3. Price 2d. net. Emergency Medical Services Memorandum No. 3. Procedure on the Admission, Transfer, Discharge or Death of Casualties, and for the Provision of Out-patient Treatment.

Report. Price 4d. net. Report on the work of the Central Midwives Board for the year ended March 31st, 1939.

List 7. October, 1939. A revised list of Treatment Centres approved by the Minister of Health under the Public Health (Venereal Diseases) Regulations, 1916.

S.R. & O. of 1939. *No.* 1299. Price 1d. net Alkali, etc., Works Order, 1939.

S.R. & O. of 1939. *No.* 1395. Price 2d. net. The Therapeutic substances Amendment Regulations, 1939.

Book Reviews

Public Health Law. By JAMES A. TOBEY, DR.P.H., LL.D. Second Edition. 1939. London: Humphrey Milford. Oxford University Press. pp. xx + 414. Price 15s.

This is a book which should interest readers far beyond the boundaries of the U.S.A. It is true that law and administration in that country differ from ours in that they must fit into the fabric of a written constitution, and that that constitution recognizes the almost complete autonomy of 48 States. The enforcement of public health law is an outgrowth of police power, and most of it is regarded as falling within the province of State legislation. There is therefore a separate code of law for each State and although there is a large measure of uniformity there is also considerable variation from State to State. The same comment applies to the system of departmental administration, State and local boards of health being usually, but not invariably, established. In certain matters, such as inter-State food control, the Federal Health Service is executive, although in most aspects of public health work it has little power to interfere. The whole machinery of public health legislation and administration, therefore, appears fundamentally different from that to which we are accustomed. Yet there is much that is common. American public health law, like ours, has grown out of the ancient common law of England. Its form and interpretation have been moulded by judicial decisions given in very much the same spirit as permeates our own judiciary. In both countries the law is, in fact, sublimated common-sense, coloured by a sympathetic regard for the rights and freedom of the individual. Moreover, the growing provision of Federal subsidies for public health work is tending to promote uniformity of administration, if not of law.

The multiplicity of legislatures in the U.S.A. provides an opportunity for experiment, which has been widely used. By trial the people quickly learn from the experience of individual States whether practices like eugenic sterilization, notification of venereal diseases and compulsory vaccination are workable. In respect of the latter, they seem to have arrived at a practical solution in the recognition of a local power to enforce vaccination of school entrants, and, in the presence of an epidemic, all unvaccinated members of the community. Indeed, a characteristic of American law is the fairly wide freedom granted to localities to make ordinances or regulations within the structure of State legislation.

Dr. Tobey's book cannot therefore be an epitome of law such as our own text-books tend to be. It is all the more interesting and readable for that reason. It does, in fact, make surprisingly easy reading. It deals with the principles underlying the law and gives copious illustrations of their application. It is fully annoted with judicial decisions, often revealing the practical sense and powers of clear exposition of the American courts. A special chapter is devoted to the procedure of courts and the demeanour official witnesses should properly adopt. Although the long lapse of years since the first edition appeared in 1926 has made complete revision necessary, we are glad to see retained the admirable foreword Dr. Charles V. Chapin originally contributed to it.

The Sanitary Inspector's Handbook: A Manual for Sanitary Inspectors and Other Public Health Officers. By HENRY H. CLAY, F.R.SAN.I., F.I.S.E., Assistant in the Division of Public Health and Lecturer in Sanitary Engineering, London School of Hygiene and Tropical Medicine, etc., etc. 4th Edition. 1939. London: H. K. Lewis and Co. pp. xxii + 528. Price 17s. 6d. net.

It will be remembered that the first edition of this standard book was issued in 1933 in response to a demand for a manual which would comprehensively deal with the high measure of knowledge expected in candidates for the Sanitary Inspectors' examination. No better author of such a book could have been found than Mr. Clay, with his extensive, practical experience in a health department followed by his teaching work at the London School and as a lecturer and examiner for the Royal Sanitary Institute and the Institution of Sanitary Engineers. The success of his method of exposition is shown by the appearance of no less than four editions in 6½ years. The reputation of this book for being absolutely up-to-date is again well-sustained. In this instance, the chapters dealing with food have been rewritten to accord with the provisions of the new Food and Drugs Act, and the references to law, which are set in summarised form at the beginning of every chapter have been revised and extended throughout so as to cover recent consolidating measures. The new edition is larger than its predecessor by over 30 pages.

There is little we can add to our former view of this book that it is an indispensable work for the reference library of a public health department and a most reliable guide for the would-be sanitary inspector.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

BURNLEY C.B.: Deputy M.O.H., Dr. George Gemmill (Deputy M.O.H., Lincoln C.B.).

HORNSEY M.B.: A.R.P. M.O., Dr. C. Wheatley. Salary £675, rising to £750 p.a., plus £50 a year travelling allowance.

KENT C.C. (EMERGENCY MATERNITY HOSPITAL, COODEN): M.O., Dr. Margaret Salmond. Salary £800 p.a., plus board and lodging. A.M.O., Dr. Betty Walker. Salary £350 p.a., plus board and lodging.

NORTHANTS C.C. (BRACKLEY M.B. & BRACKLEY & BRIXWORTH R.D.s: A.C.M.O.H. & M.O.H., Dr. David J. Jones (M.O.H., North Breconshire C.D.s).

NORTHUMBERLAND C.C.: C.M.O.H., Dr. John Walker (Deputy C.M.O.H., Durham C.C.).

WEST SUSSEX C.C.: Dr. R. D. Smedley, who will be shortly retiring from the post of C.M.O.H., will be retained by the County in a consultative capacity at a salary of 350 guineas a year for a period of three years, in addition to his superannuation allowance of £688 a year.

THE SOCIETY: BRANCH MEETINGS

SOUTHERN BRANCH.

President: Dr. I. M. MacLachlan (Med. Supt., Isolation Hospital, Portsmouth C.B.).
Acting Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B.).

A meeting of the Southern Branch was held at East Park Terrace, Southampton, on November 17th, 1939. The President was in the Chair, and there were also present nine members and seven visitors.

Installation of the President.

Dr. H. D. Kelf invested Dr. I. MacLachlan with the Presidential Badge of the Branch.

Dr. MacLachlan thanked the members and said that it was usual at the first meeting of the session for a Presidential Address to be given. However, he suggested giving this at the next meeting instead.

Visit to Mount Pleasant First-Aid Post.

The meeting then adjourned to the Mount Pleasant First-Aid Post and Air Raid Precautions Medical Headquarters, where a tour of inspection was made, and a description of the building given by Dr. H. C. Maurice-Williams.

It was explained that this First-Aid Post was the principal one in Southampton, and was chosen for this purpose mainly because of the natural protection afforded by the strong concrete arches existing throughout the very large basement of these premises. Including the provision of showers and the adaptation of certain rooms for use as Medical Headquarters, the total cost of the alterations amounted to less than £3,000.

The members also examined one of the converted Corporation buses fitted up for use as a Mobile First-Aid Unit. Nine of these buses had been converted in Southampton. They were purchased from the Corporation Transport Department at a cost of £25 each, and the cost of conversion amounted to approximately £100 per vehicle.

The party then returned to East Park Terrace, and after tea, the meeting was continued.

Honorary Treasurer's Report.

Dr. H. L. Cronk submitted his report and Balance Sheet, showing that the Branch has a credit balance of £19 at September 30th, 1939, and investments of 68 at cost.

Discussion on Air Raid Precautions Medical Services.

Dr. Roberts, in opening this discussion, congratulated Dr. Williams on the excellent arrangements made at Mount Pleasant, and went on to compare the various services with those established in Portsmouth. He also described the model First-Aid Post constructed in Portsmouth at a cost of £7,000.

In the discussion which followed, Drs. Chesney, Cronk, Fleming, Bigby, MacLachlan, Maurice-Williams and Lieut.-Col. Cheyne took part.

Appointment of Acting Secretary.

The Chairman explained that, owing to the fact that Dr. McNab, who was appointed Secretary, had been called up, it was necessary to appoint an Acting Secretary in his absence. He said that Dr. Williams had kindly consented to do this work until Dr. McNab's return.

Dr. Cronk proposed that Dr. Williams's offer be accepted, and Dr. Fleming seconded this proposition.

Representative on the Council.

A letter was read from Dr. Kelf regretting that he was unable to carry out this important position to which he had been elected.

Dr. MacLachlan proposed that Dr. Williams be elected in his place. Dr. Cronk seconded this, and the members agreed unanimously.

Programme, 1939-40.

It was suggested that during the session, 1939-40, meetings should be held monthly, and that the next meeting be arranged for Friday, December 15th, at 2 p.m., at Portsmouth.

Dr. Chesney asked if Lieut.-Col. D. G. Cheyne could arrange for the members at one of their meetings to attend a demonstration of Military Hygiene.

Lieut.-Col. Cheyne agreed with this proposal.

Retiring President.

Dr. Chesney thanked the members for the support he had received as President during the past year, and hoped that the coming year would be as successful.

Dr. I. M. MacLachlan then conveyed the thanks of the Southern Branch to Dr. Chesney for the able manner in which he had carried out his duties as President and said he would endeavour to follow in his footsteps for the coming session.

The meeting adjourned at 5 p.m.

YORKSHIRE BRANCH.

President: Dr. James Sharpe (Dep. M.O.H., Leeds C.B.).
Hon. Secretary: Dr. James Mair (M.O.H., Harrogate M.B.).

An Ordinary Meeting of the Branch was held on Friday, October 27th, 1939, at 2.45 p.m., in the Civic Hall, Leeds. Twenty-two members were present.

The minutes of the last meeting were read, approved, and signed.

The retiring President installed into the Chair Dr. James Sharpe, President of the Branch for the session 1939-40, wishing him a successful year of office, notwithstanding the difficulties to be faced which would result through the war.

The President suitably replied and proceeded to deliver his Address which dealt with A.R.P. problems, having particular reference to the City of Leeds.

Discussion was permitted in which the following took part: Drs. Barr, Benn, Carter, Galloway, Gibson, Hill, McMath, McNaught, Pearce, and Sutherland, to which the President replied.

Votes of thanks (*a*) proposed by Dr. J. C. Pickup, seconded by Dr. Sutherland, to the President for his Address, and (*b*) proposed by Dr. J. M. Gibson, seconded by the President, to the retiring President (Dr. McNaught) for his services during the past year were heartily accorded and briefly acknowledged.

It was unanimously agreed that meetings of the Branch should be held on the usual dates as in the past.

A Council Meeting preceded the Ordinary Meeting.

The name of the National Baby Week Council has been changed to the National Baby Welfare Council.

PUBLIC HEALTH

THE JOURNAL OF
THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

No. 5. Vol. LIII. FEBRUARY, 1940

Subscription 31s. 6d. per annum, post free, in advance. Single copies 2s. 6d. post free.

"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 also available for a certain number of approved commercial advertisements. Application should be made to the Executive Secretary of the Society, at Tavistock House South, Tavistock Square, W.C.1.

Telephone: Euston 3923. Telegrams: Epidauros, Westcent.

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Editorial

Health of the School Child, 1938

The Report of the Chief Medical Officer of the Board of Education for 1938,* recently issued, appears at first glance to be one of the sufferers from paper rationing, as its size has been very much cut down owing to war conditions of which one, no doubt, is the great amount of extra work placed upon the Board's medical officers in recent months. The diminution has been mainly brought about by omitting the usual chapters on special subjects. However, the Report remains, as always, a most interesting document and it has its usual virtue of keeping very close touch, by ample quotation, with the work of the local school medical departments. The introduction, which bears evidence of coming from the erudite pen of Sir Arthur MacNalty himself, gives an interesting picture of the tasks which the school medical service must face under the stress of war and an account of some of the main problems involved in the shifting of a large proportion of the child population under the evacuation scheme. A note of hope is sounded in Sir Arthur's reminder that the four years of the last Great War saw little or no interference with the school child's normal routine and, in fact, many extensions of the school health services. Let us hope that some good things may be evolved from present difficulties.

Chapter I deals with nutrition, which has been the special interest of the Board's senior medical officer, Dr. Alison Glover. Several quotations from the reports of school medical officers, notably those "Nestors of the Service," Dr. Willoughby of Eastbourne, and Dr. Brewer of Swindon, give general indication that there has been steady improvement in the health and physique of school children. A later section deals with the special areas, where there has not been the same advance. There is a discussion of the discrepancies of clinical assessment, where it is incidentally mentioned that four English counties and eight English county boroughs return no child as being

*The Health of the School Child. Annual Report of the Chief Medical Officer of the Board of Education. 1938. London: H.M. Stationery Office. Price 1s. 3d.

of bad nutrition. The Board's medical staff in their visits to local school medical officers make a point of discussing the standards used and it is thought that these discussions will in time produce an effect tending to increase the percentages of children classed in the lower categories. Some illuminating figures and comments are quoted from Sir Frederick Menzies' report on the nutritional state of London school children.

Chapter II deals with the provision of meals and milk and has an interesting description of the experiment carried out by the London County Council with the "Oslo Breakfast." The experiment was held to show a very considerable advantage among the children on the special meal as compared with the "controls" who were receiving an ordinary hot dinner. Experiments were also carried out in London as to the substitution of halibut liver oil for cod liver oil and malt. Experiments with various supplementary nourishments in other areas are also described.

Chapter III, on physical education, describes steady improvements in facilities and methods, and makes reference to the work of the National Fitness Council and the Central Council on Recreative Physical Training. The war has stopped the former's work, but the latter is still ready to advise and assist education authorities.

Chapter IV ("Medical Inspection and Treatment") gives a picture of the actual routine and special inspections carried out during 1938 and a list of defects discovered. An interesting table shows the incidence of certain defects requiring treatment over a period of five years—1934 to 1938. There appears to be little alteration in the relative position of these. Defects of vision still show much the highest incidence at 74 per 1,000 inspections; and tonsils and adenoids still hold the next place, accounting jointly for over 40 defects per 1,000 inspections. Both the above conditions, however, do show a slight tendency to decrease. Attention is drawn to the increase in the incidence of skin diseases from 9·7 to 10·5 per 1,000 inspections in the course of one year. The increase in scabies is not held to be the complete explanation, as this condition is more commonly detected as a result of special than of routine inspection. School medical officers are asked to note this point for investigation and to comment in their reports for 1939. Dr. Frazer of Liverpool's report on the trial of Kathiolan treatment for scabies by one of his school medical officers, Dr. Burn, is quoted at length.

The last section of this chapter refers to children with defective hearing and reports an increase in the mass-testing of school children with the gramophone audiometer—experiences in Birmingham and London are quoted.

Chapter V describes the year's work of the school dental service. The report supports the contention that only when full conservative treatment is being given to all those who accept will the benefits become so obvious that an increasing number of those who have previously desired treatment by extraction only will be ready to participate in the fully developed scheme. This is linked up with the suggestion that, until the schools dental service is sufficiently well staffed to provide complete and optimum treatment for all those children who are willing to receive it, little progress will be made in dental education of the public. The statistics of school dental work for the year show a considerable increase in the number of special inspections. A table from the records of a large industrial firm, which has kept details of the condition of the mouths of applicants for employment for over 30 years, throws an interesting light on the progress in school dental work. For instance, in the year 1910, 7·3 per cent. of girls, aged 13 to 14, and 9·1 per cent. of boys were found dentally fit. These percentages had risen to 33·5 and 32·07 respectively in 1925; and to 60·3 and 46·7 respectively in 1935. A similar decrease in the percentage with cavities and with unsaveable teeth and a similar increase in the percentage with fillings is shown over the same period. With regard to annual inspection, the Report urges that there is no special virtue in a mere annual examination unless opportunity of treatment can also be given; here again, is an argument for an adequate dental staff.

Chapter VI deals with the care of the young child. The number of nursery schools now recognised is 118, with accommodation for 9,504 children, and there are at present in various stages of progress proposals from councils and voluntary bodies for 47 new nursery schools. The Swinton and Pendlebury experiment of adding a nursery wing to an open-air school is referred to. An outbreak of dysentery among nursery school children in camp in his district was reported by Dr. Sisam (M.O.H., West Berks United Districts) and this is held to bear out the Board's recommendation that a member of the school medical service staff should accompany nursery school children to their summer camp.

Chapter VII (Conclusion) expresses regret that special reports have had to be omitted, though the bases of the service—ascertainment and treatment—will continue to progress. There is a reference to the late Dr. Joseph of Warrington's evidence that infant and child welfare services had done much to improve the health of school entrants, but it is urged that the same intensive effort should be applied in the later years of pre-school life as is done in the first year.

The Control of Puerperal Sepsis

The Ministry of Health's recent memorandum* on the control of puerperal sepsis deals almost wholly with infection due to the haemolytic streptococcus and the bacteriological methods to be used in the discovery (and evaluation) of streptococci either in the attendant midwife or doctor, or in the puerperal patient herself. Thus it makes no attempt to cover the whole field of puerperal sepsis or the general measures—isolation, masking, use of antiseptics and the like—to be adopted for its prevention and control, but refers the reader to the comprehensive paper† on this subject by L. Colebrook. Streptococcal infection is from the public health standpoint the most preventable form of puerperal sepsis, and the authoritative advice of the Ministry about procedure under different circumstances will be carefully heeded by medical officers of health. It is now well established that the streptococci which cause puerperal infection are the same as those responsible for other human streptococcal infections, *viz., Streptococcus pyogenes* or Lancefield group A; that they are practically never found in the vagina *ante-partum,* and that they must therefore reach the genital tract from some outside source at or soon after confinement. The main habitat of *Str. pyogenes* is the upper respiratory tract, and control of streptococcal puerperal infection must aim at preventing the organism being conveyed either directly, or indirectly—by contaminated fingers, instruments, even the air—from the clinically or latently infected person to the puerperal woman. Thus it is recommended that the midwife should report at once any signs of acute or chronic inflammation of tonsils, pharynx, nose or throat—and presumably, also, fingers, whereupon she should be immediately suspended from duty and swabs taken for bacteriological examination. If group A streptococci are found, she must not resume duty "until she has recovered completely and three negative swabs at daily intervals have been obtained." Most of us would be content with two negative swabs at an interval of two to three days.

When puerperal pyrexia occurs, the risk of spread of infection will be greater if the patient has been confined in an institution where, if genital tract infection is suspected, the patient should be immediately isolated and a vaginal swab taken. In domiciliary practice the danger is less urgent, and many cases of puerperal pyrexia are not due to the haemolytic streptococcus; yet it is stated that "the bacteriological examination of a vaginal swab in puerperal pyrexia is a procedure which can rarely be omitted with safety." Would it not be a reasonable procedure to give sulphanilamide to the domiciled patient suspected of having genital tract infection, and then, if the pyrexia persists, either to transfer her to hospital or have a vaginal swab examined? The advice regarding the swabbing of contacts is sound. The Lancefield group A carrier is a potential source of danger, although of course such a carrier cannot be incriminated as the particular source of infection in any outbreak unless serological *typing* proves his strain to be identical with the infecting streptococcus, and even then the organism may have passed from patient to attendant.

The latter part of the memorandum on the methods to be used for obtaining and examining material and determining the Lancefield group of isolated streptococci will bring home to medical officers of health the need for a more adequate laboratory service than many local authorities can provide. In these days when reorganisation is in the air, surely some permanent scheme for the regionalisation of public health laboratories could be formulated, following the lead given by the emergency service which was instituted by the Ministry and the M.R.C. at the outbreak of war.

How to Lower Maternal Mortality

Whatever curtailment of public health activity may have to be faced in belligerent countries it is likely that preservation of the lives of mothers and children will assume greater importance. Our methods may, however, be submitted to stricter scrutiny, and we certainly have something to learn from the experience of other countries. The mortality from puerperal causes has given as much concern in America as in Great Britain. The rate has been and still is higher than ours, even when the heavy contribution of coloured women is eliminated, but during the present decade it has been falling more rapidly. In 1930 it was 6·73 per 1,000 *live* births; in 1937, 4·88. The fall, in contrast to that in England and Wales, has been almost continuous over this period and deaths from non-septic causes declined with greater rapidity than septic until 1935. In 1936 and 1937 America has shared our experience of a sharp fall in sepsis as a cause of death, suggestive of the therapeutic influence of the sulphonamides. The history and prospect of maternal mortality has been discussed recently by Dr. Louis I. Dublin, who is well known on both sides of the Atlantic as Statistician to the Metropolitan Life Insurance Company.*

His conclusions are sometimes at variance with

* Memo. 226 Med. H.M. Stationery Office. 2d.
† *J. Obst. Gynaec. Brit. Emp.* 1936, **43,** 691.

* *Amer. J. Pub. Hlth.* (1939) **29.** 1205.

the familiar tenets of British medicine, and deserve all the more attention for that reason. He has co-operated actively since 1918 with the Maternity Centre Association of New York, a voluntary body which then began a campaign for safer maternity, and, in particular, he has analysed its results from time to time.

This Association concentrated its early efforts on antenatal care. In the first study of its results (apparently in 1922) maternal deaths from the toxaemias of pregnancy were found to have been reduced to one third, infant deaths from prematurity to one third and stillbirths to about one half "of the usual number." The difficulty of finding satisfactory controls in such investigations is notorious, but it may be assumed that a statistician of Dr. Dublin's standing satisfied himself on this point. An important observation was that maternal deaths from other causes, which compose the bulk of the mortality, were not affected and that they were particularly high among those women who passed out of the hands of the Association to be confined in hospitals. Half the deaths among the latter were due to sepsis. The Association thereupon decided to extend its operations to include care at confinement and in the *post-partum* period, *i.e.*, to provide a well-rounded service such as that now extensively given by local authorities in this country. A further analysis of results up to 1929 showed that the maternal mortality from all causes in the group of women affected was one third of that in a control group. Death from eclampsia had been completely eliminated and from sepsis greatly reduced. Stillbirths were 42 per cent. and neo-natal deaths 32 per cent. lower. Dr. Dublin believes that this and other widely publicised findings, including the well-known study issued by the New York Academy of Medicine in 1933, have influenced profoundly the conduct of midwifery in the United States and are partly the reason for the decline of maternal mortality over the whole of that country by 27 per cent. between 1930 and 1937. This surmise is supported when the decline of the national rate is analysed by cause, eclamptic deaths having fallen by 39·5 per cent., septicaemic by 36·7 per cent., and those from puerperal haemorrhage by 14·5 per cent. Among women insured with the Metropolitan Life Insurance Company the rate from all causes has been halved between 1911 and 1938.

Dr. Dublin's view as to the influence of hospital confinement is important and differs from that which has been generally expressed in this country. In spite of the disquieting mortality in hospital among the first group of New York mothers mentioned above, he finds that there is a definite negative correlation between the proportion of institutional confinements and maternal mortality in the several States of the Union. This correlation would be higher but for the emergency cases rushed to hospital in a grave condition who swell the fatality lists. It would appear that the advances in obstetrical care and asepsis have been greater in hospital than in the home. This American view corroborates the mounting experience of British local authority institutions, where the maternal mortality rate is now very low. At the present time, when exigencies might conceivably induce the Government to discourage institutional confinement, it should be clearly understood that criticisms of the maternity hospital or home based on old occurrences are no longer justified by the facts. The maintenance of our good records, however, depends on our ability to retain the proper quality of medical and nursing staffs. Any deterioration in this respect might lead to the septic disasters which discredited maternity hospitals in the past and which even now occasionally happen.

Nevertheless, the high rate of mortality in America as compared with our own and that in Holland and Scandinavia requires explanation. There is no simple answer, but it may be noted that, while we have less institutional confinement, domiciliary care is largely in the hands of well-trained and carefully supervised midwives. For a large proportion of normal labours this may be a satisfactory and economic substitute for hospitalisation. The records of some well-organised extern obstetric units suggest that it is.

Dr. Dublin regards low economic status as the governing factor in maternal mortality. He maintains that the statistical evidence contained in the literature on the subject is fully convincing. This is directly contrary to our experience. The explanation of this discrepancy possibly lies in the relation between hospital confinement in America and the ability to pay for it. Till now there has been less admission to institutions of all kinds at reduced, or even nominal, charges than we provide. Under such conditions, if his view as to the advantages of hospital confinement is accepted, it follows that the poor who are deprived of it will suffer accordingly. That is hardly the position in Great Britain.

Dr. Dublin is optimistic as to the future. The stage is set for substantial and rapid improvement. Although the movement has been slow to develop he is perfectly sure that the work can be done efficiently and economically. It will be noted that the methods he favours are largely those which we are following. It would appear that any community, either in America or elsewhere, should at least be able to reduce its puerperal mortality when deaths from abortion are excluded, to 1·6

per 1,000 births (live or dead) as has already been done in L.C.C. institutions.

Health in Industry, 1938

The chapter* contributed by Dr. J. C. Bridge (senior medical inspector) to the Annual Report of the Chief Inspector of Factories and Workshops for the year 1938 contains some interesting reflections as to the health of the industrial worker and how it may be improved through the working of the new Factories Act of 1937.

Dr. Bridge feels that a year-to-year comparison of the general health of the industrial worker, as distinct from ill-health due to recognised industrial diseases, would be of much value and interest. He thinks that the problem of assessing the effect of factory life upon health is at present insoluble, because even records of absenteeism and sickness rates do not give a real measure of the effect on health of the time spent in the factory; for instance, a prevalent epidemic of colds or influenza, though not confined to the factory, would affect the above-mentioned rates. A pertinent question which may be answerable in the course of time is have shorter hours of work, or holidays with pay, improved the work of factory workers? He has little doubt, however, that health is maintained and improved when leisure from work is properly used.

Another question arising from the health provision in the Act of 1937 is to what extent will the positive requirements as to cleanliness, overcrowding and ventilation improve the health and reduce the incidence of infections such as the common cold? Dr. Bridge believes that there has been a general willingness among employers to conform with the new requirements of the Act. A striking feature has been the co-operation of employers whose enquiries have been directed towards what is the best way of doing this or that, rather than to the necessity of doing it. He mentions one example of good coming out of evil where a firm, in order to comply with Section 1 as to cleanliness, removed several tons of grease from the floor of their factory and sold it at a good price as a fertiliser.

Among the references to the specific hazards due to toxic substances, Dr. Bridge mentions as a feature of the year a further reduction in the cases of lead poisoning, which in 1938 were for the first time under a hundred. Other points of special interest mentioned are the importance of protection in certain processes by respirators and the special attention being given to silicosis and asbestosis. The Factories Department has continued its special investigation of dust concentrations to which workers may be exposed. Dr. Bridge has collected from his records certain figures which might throw light on the suggestion that there is some relationship between silicosis or asbestosis and cancer of the lung. Among 943 factory cases in which silicosis (with or without tuberculosis) was present cancer of the lung was associated in 23 cases (2·4 per cent.). In 17 of these 23 cancer was held to be the primary cause of death. Among 347 deaths investigated during the period owing to the possibility of silicosis being present, *post-mortem* examination revealed no silicosis but cancer of the lung was found in 17 cases (4·9 per cent.). Similarly, with 103 fatal cases associated with asbestosis, cancer was found in twelve cases (11·6 per cent.) and of these six deaths were primarily due to cancer. Dr. Bridge makes it clear that extended enquiry and the evaluation of age incidence and age distribution are necessary before any conclusions can be arrived at.

The last section refers to the examinations for fitness to enter industry of young persons between 14 and 16 years of age. The examining surgeons dealt with 362,366 young persons in 1938. In view of recent happenings it is perhaps significant that the biggest single cause among the 5,778 rejections was pediculosis, which was found in 2,230. Dr. Bridge suggests that the change in the status of the examining surgeons has resulted in an increased sense of responsibility and pride in the importance of the work, and he hopes that the analysis of the medical record cards which are now filled in may later on provide useful information as to the condition of health in young persons in industry. Appreciation of the help and co-operation received by examining surgeons from medical officers of health, school medical officers and tuberculosis officers is expressed.

*Also issued as a separate brochure.

Canned Foods in Relation to Health

Though very large quantities of canned foods are consumed annually in the United Kingdom, there are still many people who think that the only justification for eating such foods is convenience in preparation and serving; that their nutritive value is less than that of so-called fresh foods and that, if they suffer from any gastro-intestinal disturbance, the most probable cause is "something out of a tin."

At the present time, when war may give rise to difficulties in the supply and distribution of fresh foods, it is important that the public should have the confidence in canned foods that is justified by the care with which they are prepared and packed. Medical practitioners must often be asked to express an opinion as to the safety and nutritive value of canned foods. Sir William Savage has, therefore, performed a service by

contributing to the *Lancet* of November 4th, an article entitled "Canned Foods in Relation to Health," in which he discusses and gives an authoritative pronouncement on, every aspect of the subject.

Over 350 different commodities are marketed. Home production is now considerable but, apart from milk and vegetables, 85 to 90 per cent. of canned foods consumed in this country are imported. In 1937, imports exceeded 10 million hundredweights.

Very high standards of cleanliness and care in production are essential if unsoundness and, therefore, economic losses are to be avoided. The author considers three health problems in relation to canned foods: (1) Is the nutritive value adversely affected? (2) Are any chemical substances prejudicial to health added in the preparation of the food or from the container? (3) Are such foods more liable than similar fresh foods to cause or convey disease of bacterial origin?

On the nutritive side canned foods compare favourably with cooked, fresh foods, even as regards their vitamin content. Vitamin A is insoluble in water and heat stable in the absence of oxygen, so that canning is less destructive of this vitamin than ordinary cooking. Vitamin B_2 complex is very heat stable and is water soluble. The only loss, therefore, is in the preliminary washing. Vitamin D is heat stable and there is no destruction in canning. Vitamin B_1 is water soluble but has considerable resistance to heat in an ordinary acid medium. There is some loss in canning, but not more than in domestic cooking. Vitamin C is readily affected by heat, washing and storage, therefore, all cooking processes, whether domestic or canning, cause material loss of Vitamin C, and a high Vitamin C intake can only be obtained from fresh, uncooked foods. But many canned fruits and vegetables have an adequate amount and canning is not more prejudicial to the Vitamin C content than ordinary cooking.

As regards chemical contamination, the author has been continuously on the lookout for cases of tin-poisoning both in the literature and in his own experience, and has only come across one possible case, which was associated with a three-year-old consignment of tinned apricots where the tin content reached the quite exceptional figure of 5·6 to 8·8 grains per lb. As regards lead, the modern can needs a minimum amount of solder, and in the few instances where abnormal quantities of lead have been found, the fault has been in some stage of the preparation of the food before canning.

Canned foods, in common with all other foods, have been responsible for three kinds of food-poisoning, *viz.*, botulism, infection with living bacteria of food-poisoning type, and the toxin type of outbreak. No cases of botulism have occurred in Great Britain from tinned foods, and though formerly outbreaks occurred in certain parts of the U.S.A., scientific investigation and careful control of processing temperatures have now eliminated all risk from commercially-canned foods.

Canned foods play a very minor part in outbreaks of illness due to infection with living food-poisoning type bacilli, and undoubtedly these foods are very much safer in this respect than ordinary foods. In the toxin type of food-poisoning, canned foods are more often the vehicle, because though the processing temperatures are sufficient to kill the bacilli, they do not always destroy the the pre-formed toxins. Fortunately the case mortality of this type of poisoning is very low, less than 0·5 per cent. The number of outbreaks associated with canned foods is decreasing. They now very rarely occur from corned beef and arise mostly from fish products.

After considering all the data, the author is of the opinion that as a source of food poisoning, canned foods are at the present time definitely safer than ordinary foods. Medical Officers of Health will no doubt welcome such clear and definite statements from one whom they have long recognised as an authority on all questions of food in relation to health.

Please Take Note

The Society of Medical Officers of Health, being a democratic institution, is performing its true function only when it expresses the collective or at least the majority opinion of its individual members. In this time of war, the responsibility for formulating such opinion has to be undertaken by a small central body and it is therefore particularly important that all members should keep themselves informed of decisions reached at headquarters. Meetings of the Council cannot at present be held as regularly as in peace-time, and the General Purposes Committee have had to act on behalf of the whole public health service in expressing views on matters of great importance. In the résumé of the Committee's meeting of January 26th will be found references to the Civil Defence responsibilities of medical officers of health, to safeguards to the interests of those members who may be needed for service with His Majesty's Forces and to matters of public health policy, including Circular 1840 and pediculosis. We hope that members will read this report and make themselves aware of the Society's actions on their behalf.

Food Poisoning from Pasteurised Milk

The transmission of pathogenic bacteria or their toxins by pasteurised milk is so rare that every authenticated instance deserves notice. On September 25th and 27th, 1937, 29 persons living in a town in Oklahoma sickened with the usual symptoms of food poisoning within one and a half to seven hours after a meal, usually within two or three hours.* The outbreak was, therefore, presumably toxic in origin. The common article of consumption was pasteurised milk; those who shared meals with the subsequent sufferers but eschewed milk escaped. The evidence suggested that all the milk incriminated had been pasteurised and bottled on September 24th. Samples of milk remaining in the bottles were found to contain potentially toxic staphylococci. Six producers supplied raw milk to the pasteuriser, and four of these supplies were found to be similarly infected. Samples, however, both of the pasteurised milk in general and of portions of the milk which actually caused illness were demonstrated by the phosphatase test to have been efficiently treated and it is therefore assumed that this infection was destroyed and that re-infection subsequently occurred. Although the soluble toxin might not have been destroyed by heat, it has to be remembered that living staphylococci were isolated from the milk which had been pasteurised and bottled. The plant was found on inspection to be adequate as regards pasteurisation, but the cleaning and sterilising equipment was defective and bottling and capping were done by hand. Three out of five employees were found to have positive nose and throat cultures and one of these had pustules on his face and body. It is believed, therefore, that contamination occurred at the time of bottling and capping, either from hands or by coughing or sneezing across a group of still uncapped bottles. It is conceivable, however, that the bulk of the toxin causing illness might have been derived from the raw milk, have survived pasteurisation, and not have been elaborated by the later staphylococcal invasion. The complete elucidation of such epidemics, although it is facilitated by the brevity of the incubation period, is hampered by the difficulty of the laboratory technique involved in demonstrating that the strain of staphylococcus isolated is definitely toxic in this sense, and not just potentially so.

In this connection recent work in the U.S. Department of Agriculture† affords some evidence that the differentiation of enterotoxic staphylococci may be simplified and expedited by other means than the feeding or intra-peritoneal injection of sterile filtrates to kittens. A preliminary report indicates that enterotoxic strains incubated with horse serum at 37° C. for three hours and then stored overnight at 7° C. failed to agglutinate, whereas non-enterotoxic strains were completely agglutinated in 1 to 10 serum dilutions and almost completely in 1 to 20. If further work confirms the value of this mode of differentiation, epidemiological investigation will be greatly facilitated. This article also draws attention to the frequency of outbreaks of staphylococcal food poisoning from salt-cured ham and beef-tongue, this micro-organism apparently being able to withstand a higher salt concentration than salmonella.

*Hackler, J. F. (1939). *Amer. J. Pub. Hlth.*, **29**, 1247.
†Slocum, G. G. and Linden, B. A. (1939). *Amer. J. Pub. Hlth.*, **29**, 1326.

Tuberculosis and Social Conditions

It has long been known that there is a close connection between poverty and tuberculosis, and that young adults are especially liable to become victims of this disease. The report* by Drs. D'Arcy Hart and Payling Wright, recently issued, presents the results of a statistical investigation into the changes in some of the more important factors in social conditions correlated with the rate of decline in the number of deaths from pulmonary tuberculosis, especially in the age group, 15 to 24, during the last 90 years. The social factors under consideration are standard of living as estimated by real earnings, sub-standard housing (percentage of population living more than two per room,) internal migration between different county boroughs, changes in the volume of industrial occupation, and nutrition. The authors have been very thorough in the compilation of their material, most careful in its analysis and modest in stating their conclusions, which provide ample food for thought for all public health authorities and social workers.

In the first chapter, the rate of decline in deaths from respiratory tuberculosis is considered with reference to sex and age groups. It is shown that from 1850 to 1900 the decline was fairly steady for all groups, but that from 1900 the decline for the female age group, 15 to 24, has been retarded, as compared with the other groups, until 1933, since when it again approximated to the general rate of decline, but the mortality is naturally higher than it would have been had no retardation taken place. A similar but not so marked retardation is shown in the male age

*Tuberculosis and Social Conditions in England with Special Reference to Young Adults. By P. D'Arcy Hart and G. Payling Wright. London. National Association for the Prevention of Tuberculosis. Pages vii + 165. Price 3s.

group, 15 to 24, but it does not commence until 1913. This retardation in the decline of mortality from respiratory tuberculosis amongst young adults represents a serious depletion of a very valuable component of the nation, especially in view of the changing age composition of the population towards a preponderance of older persons by increased expectation of life and decline in the birth rate. Further consideration of the evidence showed that this phenomenon was more marked in urban than in rural districts, so the statistical records of 76 county boroughs and the metropolitan boroughs were taken as the main basis of the investigation.

In subsequent chapters the above-mentioned social factors are considered separately in relation to the demonstrated decline in the rate of decrease in respiratory tuberculosis mortality. It is shown that since 1900 there has been a slowing-up of the improvement in the standard of living which corresponds fairly closely with the decline in the rate of fall of deaths from respiratory tuberculosis. There is also something more than co-incidence in the fact that a rapidly-increasing degree of industrialisation especially of young women began about 1900 and was enhanced by the circumstances of the war of 1914-1918. After making the most stringent allowances for the effects of "internal migration," it is shown that this factor, while not negligible, does not greatly affect the conclusions reached from consideration of the other material.

The most striking fact which seems to emerge from this enquiry is the close relation between the degree of sub-standard housing and the decline in the rate of fall of respiratory tuberculosis in general, and especially in young adults. This is not surprising when it is remembered that one of the chief effects of sub-standard housing is increased personal contact of the inhabitants, with the consequent increased risk of infection.

The statistics of the metropolitan boroughs are considered in a separate chapter for two reasons. In the first place, many people live in one borough and work in another, so that housing and occupational statistics do not represent so truly the conditions of life, as similar figures for the county boroughs which are much more self-contained units in this respect. In the second place, certain evidence is more readily available than in the county boroughs for ascertaining the amount of income remaining after payment of rent. This is assumed to be in some measure a standard of nutrition as representing the money available for the purchase of food, though little idea can be gained of the nature or quality of the food. By this means it is shown that there is a direct relationship between the changes in assumed nutritional level and the changes in respiratory tuberculosis mortality.

In the general discussion which follows the detailed presentation of the evidence, the question is asked why these various adverse factors should act in so selective a manner on the young adult population. No answer in figures can be given, but the opinion is expressed that the emergence of the adolescent from the comparatively sheltered atmosphere of school into the stress and strain of industrial life and increased chances of infection has played an important part. A vicious circle is completed when these young people have to set out to their work from and return to sub-standard homes, where opportunities for recuperation are imperfect, and where they continue to live in undesirably close contact with possible sources of infection. The nutritional factor also has an important bearing on the problem.

It is small wonder then that the rate in the decline of deaths from respiratory tuberculosis shows retarded improvement in the generation which has to contend with such difficulties, at the time when it is subject to all the manifold biological changes inherent in the adolescent and young adult phases of life. The remedies would appear to be for the individual to house his family to the best of his ability, provided always that rent does not absorb too great a part of his income; improved conditions in industry and for the nation as a whole to push forward its campaign for a better standard of living for its working class population.

A Correction.—We draw attention to the misstatement which occurred in our leading article, headed "The Health of the People," on Sir Arthur MacNalty's report for 1938, on page 72 of our last issue. In the passage on "Food," near the end, it is stated "salmonella was found in the mesenteric glands of 500 healthy pigs after slaughter." Between the words "glands" and "of" the words "of 4 per cent." were omitted.

The Medical Research Council have been requested by the Ministry of Food, the Ministry of Health, and the Department of Health for Scotland to appoint an expert committee "to advise from time to time on the question whether it is necessary on medical grounds to modify or supplement rations in the case of invalids and other persons on special diets." The following have accepted the Council's invitation to serve on the committee: Sir Edward Mellanby (Chairman), Prof. L. S. P. Davidson (University of Edinburgh), Lord Dawson of Penn, F.R.C.P., Prof. F. R. Fraser (British Postgraduate Medical School, London), Prof. H. P. Himsworth (University College Hospital, London), Dr. R. D. Lawrence (King's College Hospital, London), Dr. R. A. McCance (University of Cambridge), and Dr. J. C. Spence (Victoria Infirmary, Newcastle-on-Tyne). The committee will hold its first meeting at once, when the question of diabetic diets will be particularly considered. The recommendations will be transmitted by the Medical Research Council to the departments concerned.

The Hospital Problem—Before, During and After the Existing Emergency*

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Origin of the Voluntary Hospitals

The first hospitals in this country were introduced with Christianity in 597 and were entirely under the religious orders until the Reformation, when Henry VIII swept them away with the monasteries and convents, leaving England without a single hospital out of the seven to eight hundred it was said to have possessed before.

Rallying points of social service in mediaeval life, the monasteries were virtually the local authorities of their day, for in the temporal sphere of their activities they were the doctors, schoolmasters, distributors of alms and protectors of the poor. Practically every monastery and convent had its hospital annexe for the sanctuary of the sick, and examination of monastic remains impresses the fact that such provision was an important aspect in the life and service of the settlement.

The oldest hospital in England to be still in existence is probably St. Bartholomew's Hospital at Rochester, which, founded as a leper hospital in 1078, is now a general hospital. So far as is known, the first general hospital in England to be constructed as such was that built in 1084 by Lanfranc, an Italian whom William the Conqueror made his Archbishop of Canterbury. It was built in the side of the city walls at York, and, called St. John, was the forerunner of many other hospitals so named.

Little, however, is known of these earlier hospitals and the voluntary hospital system as we now know it may be regarded as having commenced with the foundation of St. Bartholomew's Hospital in 1123 and of St. Thomas's Hospital in the year 1200, both situated in London and both, strangely enough, owing their origin to a layman and a laywoman. Historians agree that St. Bartholomew's was founded by one Rahere who was said to have been Court Jester to Henry I. According to one account Rahere became pious and philanthropic in his old age; he joined a religious body and succeeded in obtaining from his royal master a piece of land called "Smithfield" in the west of the City of London (originally "Smoothfield" or spot where the Jousts and Tournaments were held). There he built a Priory and Hospital for "poor diseased persons till they get work." A spital for the treatment of the aged and infirm sick was added afterwards, and the staff of the spital, as of the Priory, were the religious brethren or monks.

The Royal Hospital of St. Thomas, like that of St. Bartholomew, owes its origin to the devout and generous spirit of the twelfth century, which witnessed the birth and growth of so many religious houses.

The work of both these hospitals was seriously jeopardised when Henry VIII suppressed the monasteries and confiscated their properties. With the abolition of the religious houses the only effective agency for the relief of the poor was removed and it is not surprising to find that crime increased; the streets of London became infested with beggars and the citizens found the sick and infectious lying and dying on their doorsteps. It is said that 72,000 criminals were executed for theft and robbery during Henry's reign, which would be an average of 2,000 in each year. Then, as now, inconvenience to a large percentage of the community led to representations being made in high quarters. By Royal Charter dated June 6th, 1553, the Lord Mayor and Commonalty of the City of London were incorporated in succession as perpetual Governors of St. Bartholomew's, Christ's Hospital, Bridewell (really a house of correction) and St. Thomas the Apostle. All the estates and revenues previously held by these charities were secured to them in perpetuity.

For the rapid expansion of hospital provision, however, we must move to the eighteenth century. Prior to then accommodation was indeed sparse and up to 1710 23 of the principal English counties appear not to have had any general hospitals at all. How far this rapid expansion was due to this factor, how far to that, makes interesting speculation, and doubtless religion, public precaution, the gradual growth of medicine and the needs of the industrial evolution all played a part.

The Growth of Social Conscience

Bearing in mind the increasing humanity of legislation and general outlook at this period, especially as affecting the poor, one may also safely assume that this great acceleration was a tangible manifestation of an increasing sense of social responsibility. As we have already noted most of the earlier hospitals, some of which still

*Presidential address to the Northern Branch, Society of Medical Officers of Health, Newcastle-on-Tyne, November 18th, 1939.

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function, commenced as religious institutions, but the majority of existing voluntary hospitals have arisen as the result of charitable benefaction or bequest. One must also remember the large number of hospitals erected at State instigation under the Poor Law Acts, many of which have assumed a new significance since the Local Government Act of 1929. Indeed the acquisition of these hospitals by the local authorities appears to have acted as a stimulus to a re-invigorated State consciousness of the present-day hospital problem. To briefly enumerate some of the more prominent hospitals is sufficient to form a picture of the growth of the movement generally.

The first wave of scientific charity since the Reformation was the foundation of the Westminster Hospital (1720). "Guy's" was founded in 1724. Its founder, Thomas Guy—originally a bookseller in Lombard Street—is credited with having made his fortune by the sale of "Bibles, Seamen's tickets, and South Sea Bubble Stock," nearly the whole of which, amounting to a quarter of a million, was spent upon the building and its endowment.

St. George's Hospital was founded in 1733, the London Hospital in 1740, and King's College Hospital in 1839.

It may be of interest to quote the foundation dates of several other well-known hospitals: Queen Charlotte's Lying-in Hospital, 1739; the Middlesex, 1745; the London Lock Hospital, 1746; the City of London Maternity Hospital, 1750; the Cancer Charity of the Middlesex Hospital, 1792; the London Fever Hospital, 1802; the Royal Chest Hospital, 1814; the Royal Ear Hospital, the Royal Westminster Ophthalmic Hospital, and the Royal Waterloo Hospital for Children and Women, all in 1816; and the Charing Cross Hospital, 1818.

About the beginning of the nineteenth century hospitals were established to serve special purposes. The first special hospital for children appears to have been the Kensington Children's Hospital founded in 1840, followed by the Hospital for Sick Children in Great Ormond Street in 1852. Between 1825 and 1889 a considerable number of special hospitals for women were established.

Another great advance was the rise of the technical hospitals, these institutions being the material outcome of the experience of the general hospital, where, with the progress of science, it soon became recognised that it was impossible to do justice to specially complicated cases, side by side with fever, accident and lunacy. Thus we find as early as 1835, two years before the accession of Queen Victoria—the founding of St. Mark's Hospital for Cancer, etc., the Royal National Orthopaedic Hospital. 1838, and in 1841 a Hospital for Consumption and Diseases of the Chest.

Nearly every year, in fact, during the whole reign of Queen Victoria saw some new technical foundation. To mention a few of these, the Victoria Park Hospital for Diseases of the Heart and Lungs, 1848; the London Homoeopathic, 1849; the Free Cancer Hospital (Fulham) in 1851; the National Hospital for Diseases of the Heart, 1857; the Royal Eye Hospital, 1857; followed the next year, 1858, by the Royal Dental Hospital, and the year after, 1859, by the National Hospital for Paralysis and Epilepsy. The National Dental Hospital in 1861, a Hospital for Diseases of the Throat, 1863, another for Epileptics and Paralysis in 1866, the Central London Hospital for Throat, Nose and Ear in 1874, and so forth.

As with London, so with the Provinces. One of the first to be established was the Royal Hampshire County Hospital, Winchester, in 1736, followed in 1740 by the York County Hospital; 1741, the Royal Devon Hospital, Exeter; 1745, Royal Salop Infirmary, Shrewsbury, and the Royal Infirmary, Liverpool; 1746, Worcester General Infirmary. Five years later, *i.e.*, 1751, came the Royal Victoria Infirmary, Newcastle, and, in 1752, the Manchester Royal Infirmary.

There were many other large foundations prior to 1800 including the Leeds General Infirmary in 1767, the Durham County Hospital in 1792, and Sunderland Royal Infirmary in 1794. Indeed a high percentage of the well-known hospitals in this country, some already noted, and others in such important centres as Salisbury, Oxford, Leicester, Norwich, Hull, Nottingham, Wakefield, Doncaster, Sheffield, etc., owed their origin to the eighteenth century.

The Cost of Sickness and Disablement

With regard to the general question of sickness and disablement in England and Wales it is of interest to note that during a recent year the Approved Societies expended in sickness and disablement benefits the sum of approximately fifteen and a half million pounds. This amount covers an estimated number of twenty-six and a half million weeks sickness, or an equivalent of twelve months' lost work of about 510,000 persons.

Notwithstanding the steady growth of hospital accommodation it still remains true that in many parts of the country there is a considerable shortage of available beds, and in our own north-eastern district a recent survey showed waiting lists totalling over 4,000 at the various general hospitals, and this figure is probably an under-estimate. These long waiting lists not only mean prolongation of suffering but involve considerable expense to either local or national funds and a considerable loss of working time and efficiency.

The Emergency Hospital Service

It was in such circumstances that the Ministry of Health has recently been confronted with the problem of securing adequate bed accommodation for possible casualties in the present emergency. The scheme of the Ministry was set out in a White Paper issued on July 14th by the Ministry of Health and the Department of Health for Scotland.

It has been estimated that 300,000 beds should be provided for possible casualties. The number of hospital beds in England and Wales is about 500,000 and in Scotland 67,000; of this total of 567,000, 153,000 are in mental hospitals. This means that from 414,000 beds other than mental 300,000 beds had to be made quickly available, primarily for civilian casualties and possibly for the immediate requirements of the Services.

One great difficulty has been the fact that, speaking generally, most up-to-date hospitals are situated in the large towns, many of which must be considered as being in vulnerable areas and consequently beds in such hospitals could only be earmarked for the initial reception and treatment of casualties, leaving the bulk of serious and prolonged treatment in very many areas to be carried out in small towns not normally hospital centres.

Briefly the following procedures have been adopted to obtain the 300,000 beds required:—

(1) Clearance from general hospitals of patients who could be sent home or transferred to other institutions. This was estimated to free 100,000 beds.

(2) Provision of additional beds in existing hospitals and institutions to the number of 110,000 beds.

(3) Building of new accommodation in the form of "hutted" annexes or complete temporary hospitals. One hundred separate hut schemes have been settled providing some 40,000 beds in England and Wales, whilst in Scotland about 9,000 further beds will be provided by the erection of huts. As soon as sufficient progress has been made with this first block of huts it is proposed to construct further such accommodation to the extent of 50,000 beds.

By these three means it will be seen that 309,000 casualty beds will be provided.

I wish to place especial emphasis on the provision of additional beds in existing institutions as in so many instances this means in Public Assistance Institutions and Hospitals owned by local authorities, where, in addition to erecting extra beds in existing wards, a great amount of what was day-room accommodation has been converted into, and equipped as, hospital wards. Also many of the "hutted" schemes are in the grounds of publicly owned institutions.

In general, hospitals have been classified into three categories:—

Class (I).—Institutions which are capable of giving full surgical treatment;

Class (II).—Institutions such as poor law institutions and convalescent homes which are capable of providing nursing facilities; and

Class (III).—Infectious Diseases Hospitals.

Many Class (II) hospitals are being up-graded to the status of Class (I). Class (III) hospitals are not likely to be used for casualty purposes.

So far as the County of Durham is concerned five public assistance institutions are being transformed from Class (II) to Class (I) hospitals. This has entailed a great deal of work and, of course, considerable expense. In the first place, many buildings have been strengthened as a precaution in the event of air raids, and then such questions as stretcher-access to wards, the provision of sluices and sanitary fittings, bathing facilities, water supplies, duty room accommodation, etc., have had to be considered. An X-ray department has had to be created at each up-graded hospital and operating theatres, with their essential annexes (sterilising and anaesthetising rooms), in the proportion of one theatre to every 300 beds, have had to be established.

Whilst it cannot be contended that these adaptations produce a first-class hospital in the modern sense of such a term, they will at least enable first-class work to be done with reasonable facility. The cost of the adaptations is being borne by the Ministry of Health, in voluntary hospitals up to 100 per cent., and in publicly owned hospitals up to 70 per cent. with a maximum liability to the local authority of one-tenth of a penny rate.

Perhaps one should mention that most emergency hospitals are "protected" by the close proximity of a first-aid post which, it is hoped, would control the admissions to hospital during the stress of the immediate aftermath of a severe air raid.

During the emergency the hospitals come under the general direction of the Minister of Health although existing hospitals continue to be administered by their own governing bodies. Dr. Hebb, of the Ministry of Health, has been appointed Director-General of the Emergency Medical Services and his staff are supported by consulting advisers, leading physicians and surgeons representing all aspects of professional work. For purposes of the general administration of the hospital scheme a whole-time medical officer, known as the Hospital Officer, has been appointed in each of the eleven Civil Commissioners' Regions into which England and Wales have been divided. He, in turn, is assisted

by Group Officers who are primarily concerned with matters of staff, professional treatment and the allocation of hospitals for specialised work in a given district.

Vast quantities of hospital stores and equipment have been ordered and distributed. It may be of interest to remark that surgical instruments, operating theatre equipment and X-ray apparatus to an amount of £500,000 have been ordered and, to a large extent, delivered. Two hundred thousand beds have been purchased. Blood-banks have been established and enough tetanus antitoxin to provide 600,000 doses has been acquired.

It is proposed that any laboratory work should be carried out at existing recognised laboratories.

The allocation of certain hospitals for special purposes is proceeding, for example, orthopaedic, chest injuries, injuries to the face and jaws, psycho-therapy, etc.

So far as nursing staff is concerned a Civil Nursing Reserve has been established from which it is anticipated the greatly expanded staffs which will be necessary may be drawn. Likewise attention is being given to the all-important matter of adequate medical staff.

It will readily be appreciated that the up-graded "Base Hospitals" in the smaller towns will require to be medically staffed by specialist officers from the large-town hospitals whose utility has become inversely affected by their degree of vulnerability and which have thus virtually become Casualty Clearing Stations. In these ways it is anticipated the needs of the emergency period will be adequately met.

The Effect of the Emergency Scheme on the Future

At this point, and in conclusion, we may don the mantle of Elijah for a moment and briefly scan the future.

Numerically there will be some 200,000 more hospital beds in the country at the end of the war than at the beginning. As already stated 100,000 of these beds have been provided by crowding-up existing wards in hospitals and institutions and using day-room accommodation for wards. Considerable transference of original patients and inmates was affected to free certain institutions for hospital purposes and in some instances it must be confessed a degree of mild overcrowding exists in the institutions now housing these transferees—this will need to be corrected as soon as possible. However, it must be borne in mind that most of the receiving institutions had a number of spare beds and to that extent were not being used to full economic efficiency before the war.

Balancing these factors it will probably be the case that the termination of hostilities will find the country with net increase of some 150,000 hospital beds which can be used for major medical and surgical work. The new "hutted" annexes will account for 100,000 of these beds, but these huts are well-constructed, linked together with covered ways, are well-designed for facility of work, and altogether may be regarded as good accommodation.

Never were patients so anxious to seek hospital treatment as the ever-mounting admission figures show—testimony to the public recognition of the rapid advances in medicine and surgery, many of which can only be properly exhibited in hospital.

What an opportunity will present itself to foster this tendency; to get rid of the preposterous waiting lists; to provide hospital facilities for types of cases which, from time to time, all of us from our various experiences have wished could have hospital attention had accommodation been available. Will this opportunity be grasped? Will we in the North country use our portion of the legacy—a considerable portion—wisely? To stimulate thought in this direction is the object of this address, and there is unquestionably food for long thought and sincere realism.

Since this paper was delivered as an address Lord Nuffield, whose philanthropy is so outstanding, not only for the munificence of the giving but alike for the wisdom of the purpose, has again most handsomely entered the field with what is described as "the nucleus of a central hospitals fund for the Provinces." Lord Nuffield hopes that through the new fund for the Provinces and the King's Fund in London there will ultimately emerge a truly national hospital service "which will embrace all that is best of both public and voluntary effort with the maximum of economy to the State and to the private purse." This should prove of the greatest encouragement to the objects herein advocated.

One last observation I would make—can the hospital problem ever be satisfactorily solved apart from sensible regionalisation of facilities which would determine adequate treatment as near home as possible and the best use of any individual unit? In my view this is absolutely necessary. Perhaps the co-operation, the regionalisation if you like, which is essential in the present emergency may remain as a sign-post for the future, and thus out of evil may come the good, that the co-operation and wide thinking dictated by the national necessity in war may be volitionally applied to the more wholesome pursuits of peace.

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The Reduced-Price Milk Scheme Examined and Criticised.*

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The Ministry of Health's Circular 1840, to which was appended an explanatory memorandum, was received by Local Authorities in August 1939. It explains a scheme prepared by the Milk Marketing Board, and approved by the Minister of Agriculture and Fisheries, for increasing the demand for milk in England and Wales by supplying it at reduced rates to nursing and expectant mothers, and children under 5 years of age. The scheme enables 1 pint daily of liquid milk to be available through Local Authorities for every necessitous mother, and child under 5, at a cost of 2d. a pint (1s. 4d. a gallon), the difference between what the necessitous recipients can pay and 1s. 4d. a gallon being made up by Local Authorities, and the sum of 1s. 4d. a gallon being divided equally between the Milk Marketing Board and the retailer.

Milk is a food of high nutritional value, which because it is capable of being produced in sufficient quantities in our own country has an added value in time of war. It may also be a medium for the spread of disease, particularly among children, and its production and distribution should be supervised with a care equal to that bestowed upon water supplies. Circular 1840 is published by the Ministry of Health, which presumably regards the scheme as both useful and workable; yet those Medical Officers of Health with whom I come in contact have received the schemes with indifference, anger or despair, depending upon their temperamental constitution, and the economic conditions under which the populations in their respective areas live. When a circular explaining such a laudable scheme causes such reactions, it is desirable that it should receive the close attention of our Society, so that its merits can be examined from every point of view.

The Scheme and the Interests of the Milk Producer

How will the scheme affect producers, whose aim is to find the most profitable market for milk? All milk in this country, with unimportant exceptions, is marketed under the supervision and control of the Milk Marketing Board, which was promoted by the National Farmers' Union and established in 1933. The Board consists of 17 members of whom 15 are producers' representatives, so that it is an organisation of milk producers. During the first five years of its existence, the amount of milk disposed of increased by 21·4 per cent. or 187·7 million gallons, while in the same period the consumption of liquid milk increased by only 89·6 million gallons. Milk produced in excess of the liquid consumption must be sold for manufacture into butter, cheese, condensed milk, milk powder and cream, and in 1937-1938 this excess amounted to almost 30 per cent. of all milk produced. The competition of low-priced imported dairy products keeps the price of home manufactured articles down, and the values obtained for manufacturing milk must be related to these prices. The average price obtained for manufacturing milk in 1937-1938 was less than 7d. a gallon, compared with an average price of 1s. 4¼d. for milk sold as liquid milk. The Milk Marketing Board scheme being one of price pooling, the amount the producer receives is considerably less than the price at which liquid milk is sold, due largely to the low price at which an increasing amount of surplus milk has to be sold for manufacturing. This manufacturing surplus was responsible, in 1938, for reducing the producer's return by 2⅜d. a gallon, so that naturally the policy of the Milk Marketing Board has been to expand the sales of liquid milk to the utmost in order to diminish this surplus.

This scheme is one method of expanding the sales of liquid milk. It will introduce it to a large section of the community who have not in the past used liquid milk substantially, and who may continue to use it from habit, after they have ceased to obtain it at cheap rates, n greater quantities than was their custom formerly. The Milk Marketing Board will be saved the cost of advertisement, supervision, selection of suitable potential customers and maintenance of offices and staffs in each area, as these will be met by Local Authorities, whose Medical Officers of Health will act as the Board's honorary local agents. The financial risk taken by the Board is nil, as the prices received by the Board for the milk will equal that which they would otherwise have received if the milk had been sold as manufacturing surplus milk, with, in addition, a subsidy from the Ministry of Agriculture and Fisheries, of an amount which the Board are unready to

*A paper read to the Yorkshire Branch of the Society of Medical Officers of Health, December 29th, 1939.

disclose, but which I think can be assumed to amount to not less than 4d. a gallon.

From the point of view of the Milk Marketing Board (that is, the producers), the scheme will serve as an admirable advertising campaign for increasing the consumption of liquid milk, with an assured increase in income from the moment the campaign begins.

The Milk Retailer

How will the scheme affect the retailer, whose aim is to purchase milk through the Board and re-sell it to the consumer at a profit? The retailer has in the past been allowed about 11d. a gallon for his services. For this he bottles, and sometimes pasteurises the milk, delivers it, collects his empty bottles, washes them, and replaces them when broken (as they are before they have been used ten times), and maintains his filling, bottle-washing and possibly pasteurising plant. In this scheme, he is allowed only 8d., and although this is a penny more than he is allowed in the " milk in schools " scheme which retailers find unprofitable, he is not likely to be any better off, because whereas in the former scheme the money is collected for him by the teachers, and the milk is delivered in large quantities to a relatively small number of schools, in the new scheme he will deliver the milk in small quantities to a large number of individual houses, frequently in streets he does not normally visit, and he will himself have to collect the recipient's contributions.

From the point of view of the retailer, the scheme is unprofitable, and it may be expected that it will not interest some of the retailers whose methods are most pleasing to Local Authorities interested in supplying milk of the most satisfactory quality.

The Necessitous Consumer

How will the scheme affect the necessitous consumer, whose interest is in securing the maximum of nourishment with the minimum of expense? It will enable every necessitous household to receive a pint of milk every day for approximately 5½ years (including the pregnancy) for every child born. The proportion of the population that will benefit will vary from area to area. In those favoured by wealthy senile dements it will be small. In hard-hit industrial areas, with what to-day are described as valuable reserves of man-power, the proportion will be large. I can give you the proportion in Dewsbury, an area where 55 per cent. of the working population is employed or unemployed in the woollen industry, 12 per cent. in shopwork and distributive trades, 10 per cent. in the mining industry, and 7 per cent. in cleaning and dyeing. During the last few months the area has enjoyed relative prosperity after many lean years.

This month (December, 1939) investigations were made into the family incomes and liquid milk consumption of 234 consecutive families in which infants were attending the clinics and receiving dried milk foods, the great majority of the infants being under 1 year of age. The financial position of a family does not appear, in Dewsbury, to influence the method of feeding. The investigations were made at two successive sessions at each of all the four clinics, situated in different parts of the town where they are held once weekly. Financial investigations into family incomes are made usually at intervals of four weeks so that half the available material has been investigated. It should, therefore, give a reasonably true picture of the incomes and liquid milk consumption of 85 per cent. of the families in Dewsbury containing children under 1 year of age, as 85 per cent. of such children attend the clinics in Dewsbury. As far as the family incomes of the 15 per cent. who do not attend the clinics are concerned, I am assuming that they are sufficiently well off to secure adequate supervision privately and accordingly I have considered them as being in the highest financial group. Under a family income scale in operation in Dewsbury, families are placed in one of four groups. Group I families receive dried milk foods free; Group II families receive them for 6d. a packet, which is equivalent approximately to 1d. a pint for a corresponding quantity of liquid milk; Group III families receive them for 1s. a packet, which is equivalent approximately to 2d. a pint for a corresponding quantity of liquid milk; Group IV families (there is no upper limit to the incomes in this Group) receive them at a price which is equivalent approximately to 3d. a pint for a corresponding quantity of liquid milk.

The following table, which is self-explanatory, shows the results of the investigations.

These incomes have not been checked, so that there will have been a tendency to record incomes as being lower than they were in reality. This error is likely to be less than usual, as attenders at the clinics know that in previous weeks employers were being asked to confirm certain statements of income, and accordingly, at the time of the investigation, the statements were likely to approximate to the truth.

It will be seen from this table that those families which receive dried milk foods at reduced prices or free (Group I, II and III) represent 41 per cent. of the families with babies in Dewsbury, and in none of these groups does the total purchase of liquid milk for the family reach 1 pint a day, while the average size of the family is between

CONSUMPTION OF MILK IN DEWSBURY IN RELATION TO FAMILY INCOME.

Group No.	Percentage of Families.	Income per Family.	Income per Head.	No. of Persons. In Family.	No. of Persons. Under 5.	Liquid Milk Purchased per Week. Per Family.	Liquid Milk Purchased per Week. Under 5.	Liquid Milk Purchased per Week. Per Head.
	Per cent.					Pints.	Pints.	Pints.
Group I = free ...	21	34/5¼d.	7/2d.	4·81	1·95	4·63	2·38	0·96
Group II = 1d. pint ...	11	43/5d.	8/9½d.	4·94	1·77	5·48	3·09	1·11
Group III = 2d. pint...	9	42/11¾d.	10/10¼d.	3·96	1·40	5·96	4·26	1·51
Group IV = 3d. pint ...	44 A 15 B	Over 46/11¼d. ?	Over 13/2½d. ?	3·55 ?	1·23 ?	8·11 ?	6·59 ?	2·28 ?

A = Clinic attenders. B = Non-attenders.

3·96 and 4·94 persons. In none of these groups could a refusal to supply under the scheme 1 pint daily for each child be justified. (In passing it is interesting to note that Groups I and II, representing 32 per cent. of the families into which children are born in Dewsbury, at a time of relative prosperity, fall into the lowest category of Orr's classification of income groups, constituting in his opinion 10 per cent. of the population of England and Wales, and in his investigation consuming 1·1 pints of fresh milk per head per week. In Dewsbury, these groups consume 1·02 pints per week.)

From the point of view of the Dewsbury consumer, the scheme would provide necessitous cases with a source of nourishment which at present they find to be almost completely beyond their means.

The Effect upon the Local Authorities

How will the scheme affect Local Authorities who will be called upon to organise, operate and, to a large extent, finance the scheme?

They will be responsible for advertising the scheme to consumers or, to use the language of the circular, " adopt methods to ensure that the scheme is brought to the notice of all possible applicants." This will necessitate newspaper notices and posters for the benefit of any people missed by health visitors and clinics.

Local authorities will be required to draw up income scales, and submit them to the Ministry of Health. In Dewsbury, the income scales for dried foods have, as shown by the recent investigation, proved to be fair and reasonable, so that similar scales for equivalent amounts of liquid milk should be adopted. This means that to 21 per cent. of children born, milk would be supplied free, to 11 per cent. it would be supplied at 1d. a pint, to 9 per cent. it would be supplied at 2d. a pint, and 59 per cent. would be excluded from the scheme as not being considered to be " necessitous cases."

Local authorities will be required to draw up a list of " approved milk vendors." The explanatory memorandum states that " in some areas, especially when satisfactory supplies of pasteurised milk are not available, authorities may wish to supply milk of Tuberculin Tested standard." This rather vague sentence at first sight conveys the impression that the milk to be supplied must be pasteurised or Tuberculin Tested. The word " especially," however, makes the sentence even more equivocal, and renders it unlikely that if these standards were insisted upon, and the opposition of vendors aroused, the support which local authorities might expect from the Ministry of Health would be forthcoming. Indeed, two pages further on (in Form I), the standard of milk to be supplied has sunk to the modest level of having a source and quality that " are in all respects satisfactory," of being supplied in properly covered and sealed containers or bottles of a capacity of 1 pint each, and of being supplied from an approved dairy adequately provided with facilities for bottling milk, and having the necessary appliances for cleansing and sterilising all bottles, utensils and appliances. It will be noticed that there is no definition of milk " in all respects satisfactory," and that an approved dairy does not necessarily contain a pasteurising plant. It should also be noted that local authorities will bear the entire extra cost of supplying Tuberculin Tested milk.

Local authorities will distribute standard forms to be filled up by applicants and returned to the Medical Officer of Health at least one week before the date on which delivery of milk is required to begin. The local authority will assess what contribution, if any, the recipient is to make, and will give her an authorisation card valid for one month which she will present to a selected " approved milk vendor." If the applicant desires to have the authorisation continued for another month, she must apply at least one week before the month ends. As Milk Marketing Board

prices may change according to the calendar month, authorisations should be given for each calendar month and as applicants are unlikely to worry about applications for renewal during the first half of the month, it is obvious that all clerical work in the Public Health Department associated with the scheme will be concentrated in the latter half of each month.

It will also be noticed with surprise that unless a supply in excess of 1 pint per head per day is required, it is not considered that a preliminary medical test is necessary. It is ten times more difficult in Dewsbury to get a child between the ages of 1 and 5 years to attend a clinic than it is to get a child of under 12 months to attend. This scheme presented a golden opportunity to keep them under the supervision of clinics during these important years, but it has been thrown away prodigally.

At the end of each month, each "approved milk vendor" will submit to the local authority his claim for each household, with a signed certificate from the recipient, stating that she or her children have received the amount of milk for which payment is claimed. The Borough Treasurer will then pay the vendor a sum that will make the recipients' contributions up to 2s. a gallon or whatever happens to be the current retail price for milk under the scheme. The Treasurer will then, within three weeks of the previous month end, claim from the Milk Marketing Board the sum of 8d. for every gallon supplied —or if the retailer is being paid more than 2s. per gallon, a sum in excess of 8d. equal to the amount in excess of 2s. that the local authority is paying the retailer.

When all this verbiage is simplified it means, that the local authorities and the necessitous recipient will together raise the sum of 1s. 4d. per gallon which will be split equally between the retailer and the Milk Marketing Board. If the retailer receives an extra *x* pence for each gallon, these extra *x* pence will be paid to him by the local authority. The retailer will pay the *x* pence to the Milk Marketing Board and the Milk Marketing Board will refund the *x* pence to the local authority.

It will also be noticed that the scheme gives the Milk Marketing Board the right to withhold sums due to a local authority if the Board is not satisfied that the milk has been consumed in accordance with this scheme. Neither in the scheme nor in the Circular are there to be found any suggestions embodying methods of ascertaining who drinks the milk supplied. Yet if a member of the Gestapo branch of the Milk Marketing Board enters a house and finds the milk being wrongfully consumed, the Board has the right to inflict what amounts to a fine on the local authority with, it will be noted, no right of appeal.

Eventually local authorities will find out what burden the scheme imposes upon the rates. In Dewsbury, where at present a state of relative prosperity reigns, the Corporation are supplying dried milk foods in quantities, equivalent to 250,000 pints of liquid milk a year. Much of it is supplied free or at reduced rates, and the cost to the Corporation is £1,350 or a rate of 1·1d. The new scheme would involve almost a threefold increase in the amount of milk distributed, and with the present income scale for dried foods which could be suitably applied to liquid milk, the cost to the Corporation would be approximately £4,000 a year or a rate of 3·3d.

In a period of trade depression such as has been experienced for a considerable time in the immediate past in Dewsbury, the cost might well be £7,500 a year or a rate of 6d. Local authorities whose areas contain few poor children would, of course, have a much lower cost to face.

From the point of view of local authorities, the scheme is open to objection on the grounds that it is both unfair and unwise. It is unfair because it requires local authorities to set up at their own expense an organisation to assist in disposing of the Milk Marketing Board's surplus supplies. Further, it imposes upon them a financial burden which will vary from authority to authority, but which will be greatest in the case of these authorities least able to bear it. It is deplorable that there should be want in the midst of plenty, but surely it is unreasonable to fine the poorer local authorities for allowing it. The right of the Milk Marketing Board to withhold payments from a local authority, if it so desires, without there being any right of appeal, is incredible.

It is unwise because it fails to seize this opportunity to insist on the pasteurisation of milk. It is left to the Medical Officer of Health to decide what are the minimum standards that "are in all respects satisfactory," and if he assumes that the Ministry of Health is behind him in demanding high standards, he may find, when he needs its support, that it is too far behind him. The excellent results that have been achieved by the supply of dried milk foods will make many Medical Officers of Health hesitate to change over to liquid milk, in view of its deterioration on keeping, and the risk of its contamination in the house. When the liquid milk is not even "safe" to begin with, his desire to abandon dried foods will be even less. The fact that attendance at clinics is not a necessary preliminary to the normal supply of milk under the scheme indicates that in the opinion of those responsible for the Circular, the work of the doctor and the health visitors at clinics can be carried out as efficiently by the milk roundsman which, in my opinion, is incorrect.

In conclusion, I wish to say that every Medical Officer of Health in the country welcomes any sound scheme that would increase the milk available for mothers and children. This scheme, however, appears to have resulted from using Ministry of Health paper for furthering the Milk Marketing Board's interest.

If a useful and workable scheme is to be produced, that can be adopted by areas where the need is greatest, revision of the financial provisions and reconstruction of the scheme's clumsy machinery are essential. Until then the scheme will remain without pride of ancestry or hope of posterity.

CIVIL DEFENCE AND SCHOOL HEALTH SERVICES

The Ministry of Health have issued Circular 1950, dated January 8th, in support of the Board of Education's Circular 1490 (dated December 14th, 1939) which was summarised in our last issue.

Circular 1950 states that the Minister of Health entirely concurs in the view taken by the Board of the importance of re-establishing the school health services to the fullest extent possible, and associates himself with the statement made by the Minister of Home Security that A.R.P. premises may be used for these purposes wherever they are suitable. This refers particularly to the use of A.R.P. cleansing stations for the cleansing of school children. The Minister expresses confidence that with the co-operation of aid post personnel the cleansing facilities will be most useful in providing health services for children in evacuation areas and he requests the scheme making authorities to co-operate as fully as possible with the local education authorities to this end.

The Minister also supports the suggestion made in the Board's circular that school clinics, feeding centres and so on, which have been used for civil defence purposes, should be totally or partially released for the purpose of the school health services as far as this can be done without impairing the efficiency of civil defence. It is said that it was not intended that the establishment of aid posts in clinics should prevent them from being used for the ordinary health purposes except for the temporary interruptions which might occur in the event of actual air raids. If, indeed, the establishment of a post in a clinic is interrupting the ordinary work, authorities are requested to consider as a matter of urgency what alternative arrangements can be made. One suggestion is that accommodation may have to be provided for the full-time personnel of the aid posts while sessions are taking place in the clinics. The Minister thinks it may be practicable for joint accommodation to be arranged without interfering with the efficiency of the aid posts as such or with the essential work of the clinic; indeed, it is thought that the work of the clinic should provide a useful training for the personnel of the post. Local authorities are accordingly requested to ask medical officers of health to review all the first aid posts which have been established in school health service premises and to consider to enable the normal work to be resumed.

Correspondence

MASS RADIOGRAPHY.

To the Editor of PUBLIC HEALTH.

SIR,—I am sorry that Dr. Dormer and Mr. Collender are hunting me for heresy and would assure them that from the point of view of ideal radio-photographic reproduction, I am largely in agreement with their view. Indeed, from a technical standpoint, it would be an impertinence on my part to dispute the matter with two gentlemen who have done so much original and valuable work on the subject under discussion. There is, however, another aspect of the matter with which, working where they are, they cannot be fully conversant, and that is the administrative and financial difficulties of getting such a scheme working in this country. It is always comparatively easy to get a private company to expend money in order to save expense elsewhere, but it is not at all easy to get public authorities to take the same view. The reason for the latter is nearly always that one department X may be responsible for expenditure under one heading and is not interested in spending money to save expenditure by another department Y in the same administration.

It may therefore be taken for granted that when introducing any new line of attack in preventive medicine, the initial costs must be kept to a minimum in order that it shall not be summarily rejected on grounds of expense. Once it has been adopted, and a precedent formed, there is then often much less difficulty in expanding the method as improvements are made.

It is on this account that I have modified the factors and technique advocated by Dormer and Collender, so that adequate reproduction may be obtained at a minimum of cost. With regard to the actual pictures themselves, I can only say that those illustrating my article, were perfectly adequate, diagnostically, in the original, but were not very well reproduced.

With regard to their examination, I think projection of these small film images is better than direct examination for making a diagnosis, as this method is so much less fatiguing when examining them in large numbers, and fatigue is probably one of the most fruitful causes of error in X-ray diagnostic work.

Lastly, I consider it essential in suspicious cases that an ordinary radiographic examination should follow, for it can be taken for granted that at the moment, no physician would accept the diagnosis of a chest lesion on a miniature radiograph alone.

I hope therefore, Sir, that your correspondents will acquit me of any desire to lower the standard of radiophotographic reproduction but will, on the contrary, give me the credit of endeavouring to place the method in the realm of practical politics at this present time. Meanwhile, may we hope that the ideal of to-day may be the commonplace of to-morrow.

Yours faithfully,

R.N. Auxiliary Hospital, Newton Abbot, Devon. A. ROBINSON THOMAS.

December 30th, 1939.

LEAGUE OF NATIONS HEALTH COMMITTEE

At its first war-time session, held recently, the Health Committee of the League of Nations was called upon to plan its future activities. The session was attended by: Professor J. Parisot (France), President; Dr. Th. Madsen (Denmark), Honorary President; Surgeon-General H. S. Cumming (U.S.A.), Vice-President; Dr. W. Babecki (Poland); Dr. J. Balteanu (Rumania); Dr. M. Ciuca (Rumania); Professor A. Gigon (Switzerland); Dr. N. M. Goodman (United Kingdom); Dr. B. Johan (Hungary); Dr. Hussamettin Kural (Turkey); Dr. R. Pierret (France), Director-General of the Office International d'Hygiene Publique; Sir Alexander Russell (India); Dr. R. Sand (Belgium).

The official report of the proceedings states that the object of the session was to readjust the work of the Health Organisation to the new conditions created by the war, so as to enable it to play its proper part in assisting populations which will necessarily suffer as a result of the conflict. The report continues:—

Influence of the War on Public Health.

1. *Epidemics.*—To judge by past experience, the present conflict is bound to affect the general standard of health. Movement of troops and population, lower standards of living and hence of hygiene, destruction and its consequences, such as the possible contamination of drinking water, produce conditions highly favourable to the spread of infectious diseases. Moreover, the nature and course of epidemics may change, and certain diseases may be imported into regions hitherto immune.

2. *Protection of Health.*—Moreover, a number of belligerent and neutral countries have already evacuated threatened populations from war zones. These migrations give rise to medico-social problems, since the sick must be cared for and collective protection afforded to the healthy. Health authorities are therefore concerned with questions of environmental hygiene in reception areas and with individual standards of hygiene among evacuees. In addition, sanitary engineering problems frequently arise when it becomes necessary to lay out camps, to install baths and showers, possibly to organise disinfestation, and, in any case, to provide for water supply and sewage disposal.

Lastly, the authorities are also faced with problems of food supply and the mobilisation of economic resources. Foodstuffs must be utilised in accordance with the rules of modern dietetics, especially when collective and individual diets have to be planned, either for the whole population or simply for evacuees, chiefly children and expectant mothers.

Role of the Health Organisation.

Health administrations, like the health committee itself, consider that the Health Organisation has a part to play—a practical part, consisting, not only in giving information and guidance, but also in affording technical and material assistance and in securing international co-operation. The Health Organisation must plan ahead; and it was therefore necessary, in the health committee's opinion, to organise its work on different lines from peace-time conditions so as to turn documentary material and past experience to full account and to have means of action at hand. The committee therefore endeavoured to introduce a greater measure of elasticity in the machinery of the Health Organisation, to entrust new duties to it in relation with war-time problems, and to review the work in and in order to decide which part of it should be further prosecuted and which studies might appropriately be relegated to the background for the time being.

Machinery of the Health Organisation.

To enable it to act without delay, should it receive a request for assistance, it was provided that the health section should be empowered to take immediate action in consultation with the president of the committee. An emergency sub-committee was also set up and given the necessary powers to act on behalf of the health committee and to co-opt experts if necessary.

Emergency Activities.

In the past, the Health Organisation has lent its assistance to various countries at their request either in anti-epidemic action or in organising health services. It has thus gained experience and collected documentary material which has been supplemented by the studies carried out by the Epidemiological Intelligence Service and by certain technical commissions, such as the Housing and Rural Hygiene Commissions. Reference should also be made to the work done between 1932 and 1934 on the influence of the economic depression on public health. The committee has decided that this experience should be mobilised forthwith and it instructed its emergency sub-committee and the health section to take stock of the armoury of preventive and curative weapons made available by modern epidemiology, chemotherapy and serotherapy, so as to define the principles to be followed in the control of those epidemic diseases which must be regarded as most important in the present circumstances. In this connection, the committee emphasised the importance of immunisation against diphtheria and scarlet fever, and it was understood that the Copenhagen Serum Institute should consider the possibility of standardising diphtheria vaccine.

A similar role has been entrusted to the health section with regard to the protection of the health of evacuees, the aim being to supply the responsible authorities with information, technical advice and, if necessary, material assistance.

The committee was of opinion that its former work should be carried on to the fullest extent so far as this can be done without placing too heavy a burden on the resources of the Health Organisation. It has received assurances that health administrations are anxious for this work to continue; at the same time, it has sought to limit its usual peace-time activities to essentials. The permanent services built up by persistent efforts will not be interrupted, since their reconstruction would be exceedingly difficult. This applies to the Epidemiological Intelligence Service, the Singapore Bureau and Biological Standardisation.

On the same grounds, it was also thought desirable to continue certain studies on which a considerable amount of work has already been expended—the work would have been done in vain if it were discontinued at this stage. This applies to: the inquiry into the radiological treatment of cancer of the cervix uteri, the preparation of the unification of the various national pharmacopoeiae, the studies undertaken by the Malaria Commission on malaria immunity and the biology of certain strains of plasmodium, the co-ordination of investigations into nutrition in the East entrusted to the Coonoor Laboratories (India), and the analysis of the annual statistics of rabies. In this last connection the committee wishes the health section to extend the scope of its inquiry to include the anti-rabic vaccination of dogs.

Especially the committee urged that national committees and national institutes should continue their work on nutrition, physical fitness and housing. The health section will ensure the necessary liaison and co-ordination.

Obituary

JOHN MIDDLETON MARTIN,
M.D. (CANTAB.), L.S.A., D.P.H.

Dr. Middleton Martin, whose death on December 30th was announced in our last issue, was a leading figure in the public health world, especially in regard to county matters. He was born at Exeter in 1870, and after a distinguished career at Cambridge University and University College Hospital, qualified in 1896. After he had taken his D.P.H. he went at once to Gloucestershire, where he was to spend the rest of his professional life, as M.O.H. to the Stroud rural district, to which was soon added Stroud U.D. and Nailsworth R.D. and the charge of the joint isolation hospital. Then, in 1903, came his appointment as the first medical officer of health for the County of Gloucestershire.

It is difficult, perhaps, for the present generation to realise the opportunities for initiative and development which were given to Dr. Martin and his fellows. Dr. Martin did pioneer work in organising the school medical service for Gloucestershire and his other contribution was the system which he brought into operation for co-ordinating all health agencies and medical services in his county. The Gloucestershire scheme, in fact, is an often quoted example of a method of co-ordination of official and voluntary services in a predominantly rural area. His farewell review of the public health services in the county in his report for 1936 was a monument to his own achievements.

Dr. Martin retired two years ago and was subsequently elected a Life Fellow of the Society, of which he had been a member since 1901. Except for his presidency of the West of England Branch however, he gave more of his time to the Association of County Medical Officers of Health, of which he was one of the most valued members. Likewise he did good service at the B.M.A.

We offer our sympathy to his widow and daughter and to his brother, Mr. Arthur J. Martin, M.INST.C.E., who is a Vice-President of the Royal Sanitary Institute.

JAMES ALEXANDER STEPHEN,
M.A., M.B. (ABERD.), D.P.H., J.P.

We regret to record the death on New Year's Day of Dr. J. A. Stephen, who retired in June, 1938, from the post of Regional Medical Officer for Maternity and Child Welfare for the City and County of Aberdeen and the County of Kincardine. He was in his sixty-seventh year.

Dr. Stephen, after qualifying, practised in Elgin and developed an interest in public health which led to his appointment as medical officer of the boroughs of Lossiemouth and Burghead. After he had seen war service, there came in 1919 his appointment as assistant medical officer for maternity and child welfare in Aberdeen, which later was extended to include the adjoining counties under the regional scheme inaugurated by Dr. Parlane Kinloch. The report on maternal mortality and puerperal sepsis in Aberdeen, 1918-27, issued by the Scottish Department of Health, was largely Dr. Stephen's work.

Dr. Stephen was a leading figure in maternity and child welfare and despite the difficulties of distance was at one time a regular attendant at meetings of the Society's Maternity and Child Welfare Group of which he was President for 1929-30. His personality endeared him to his colleagues and he will be much missed. He had been a member of the Society since 1920.

THOMAS BUXTON FLINT, M.R.C.S., L.R.C.P.

Dr. T. B. Flint, whose death we regret to announce at the age of 70, was medical officer of health for the Borough of Buxton from 1906 to 1935 and had been a member of the Society throughout that period.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities. The Editor will be grateful if members of the Society will notify him at once of any new appointment.

CROYDON C.B.: A.S.M.O., Dr. Ellen M. Hegarty.
ERITH M.B.: Dep. M.O.H. and A.S.M.O., Dr. Cecile H. D. Asher.
FARNBOROUGH AND FLEET C.D.: Dr. W. C. D. Walmsley (A.C.M.O.H., Berkshire).
GREAT YARMOUTH C.B.: M.O.H., Dr. Donald Wainwright (Dep. M.O.H., Great Yarmouth).
GUILDFORD AND GODALMING M.B.'s: Acting M.O.H., Dr. Patricia Milligan. Also Acting M.O. for the Joint Hospital Board.
HORNSEY M.B.: A.R.P. M.O., Dr. C. Wheatley. Salary £675, rising to £750 p.a.
LEIGH M.B.: A.M.O.H., Dr. H. Leslie Settle.
LINCOLN C.B.: Dep. M.O.H., Dr. R. S. Hynd (Dep. M.S., Baguley San.).
NOTTINGHAM C.B.: A.M.O. M. & C.W., Dr. Margaret E. Sutherland.
ST. HELENS C.B.: A.T.O., Dr. Wladimir Griffel.
STAFFS C.C.: Dep. M.O.H., Dr. Gerald Ramage (Sen. A.M.O.H., Stockport C.B.).
TIPTON M.B.: M.O.H., Dr. Ian F. Macleod.

Dr. Robert Sutherland (M.O.H., Brighouse) has been elected Hon. Secretary and Treasurer of the Yorkshire Branch of the Society, in succession to Dr. James Mair, retired.

Dr. T. P. Sewell (A.M.O.H., Stretford M.B.) has been appointed D.A.D.H., Northern Command, with the rank of Major, R.A.M.C.

We regret that the appointments of Drs. Salmond and Walker to the Cooden emergency maternity hospital were wrongly ascribed in our last issue to the Kent C.C. Cooden, of course, lies in Sussex and the hospital is not administered by the Kent C.C.

Book Reviews

Tuberculosis and National Health. By H. HYSLOP THOMSON, M.D., C.M., D.P.H., County Medical Officer of Health, Hertfordshire. 1939. London: Methuen & Co. Pp. 244. Price 10s. 6d. net.

The aim of this book, we read on the cover, is to present a study of tuberculosis in relation to national health. It contains a wealth of information and seems more suited for reference than for the education of a learner.

On page 2 in the first chapter, dealing with racial and animal tuberculosis, an interesting observation by Wells on Tuberculosis in Voles is quoted. Wells has found that this form of disease is fatal to guinea-pigs but not to rabbits and the type of bacillus has not yet been determined. Further investigations might be interesting.

There is a good statistical account of the incidence of bovine tuberculosis in man; as concerns pulmonary disease, the number of patients showing bovine bacilli in the sputum varies in England and Wales from 0·5 to 1·6 per cent., and in Scotland from 4·6 to 8·5 per cent., a rather remarkable difference.

On page 59 remarks of Sir Arthur MacNalty are quoted which some of us may have forgotten. An increase in deaths from tuberculosis occurs during influenza epidemics, but the peak of this death rate coincides with the peak of the influenza death rate, suggesting that the increase is due to an infection of tuberculous subjects with influenza and not to an exacerbation of tuberculosis. There is a welcome study of the incidence of tuberculosis in mental hospitals, a subject which always merits attention. In one mental hospital the tuberculosis death rate varied from 18·5 per 1,000 in 1911 to 117·6 per 1,000 in 1918, a striking figure. Schizophrenics seem especially vulnerable. Dr. Thomson wisely remarks on page 68. "It is difficult to envisage all individuals who are positive reactors as being infected by one of the three recognised methods." It has been said before in other words but there is no harm in repetition.

The author's statements are generally documented, but on page 69 he states: "There is increasing evidence to support the view that bacilli introduced via the gastro-intestinal tract will produce a primary pulmonary infection." Such a possibility cannot be denied, but an air-borne infection must be far more likely and it would have been interesting to read the "increasing evidence." On page 74 again "It has been conclusively proved by statistical evidence that the chief cause of the endemic persistence of tuberculosis is contact infection in the home of children under the age of five." One would have liked to hear more about the proof. There is always a danger that emphasis on the infection of children will lead tuberculosis officers to spend time examining children and finding very little, whereas, from the point of view of prevention and treatment, it is the adults and young adults of the household that should attract attention.

In discussing early diagnosis the author rightly emphasises the importance of sputum examination, but does not mention in that paragraph the almost equal importance of skiagraphy. Any doubtful case should be referred to the tuberculosis officer who ought to have, and generally has, adequate facilities for complete investigation, and often also a ripe experience which enables him to give a useful opinion.

The author does not seem sufficiently to stress the chief difficulty in dealing with tuberculosis—that it is an insidious disease and may progress far before symptoms draw attention to its presence.

A reviewer has the inclination to give prominence to the passage with which he disagrees and the foregoing comments must not be held to detract from Dr. Thomson's work as a whole. This book is indeed a valuable contribution to our book shelves and libraries.

Diet in Health and Disease. Edited by Sir HUMPHREY ROLLESTON and ALAN A. MONCRIEFF. With an introduction by Professor E. P. CATHCART. (*The Practitioner* Handbooks). Eyre and Spottiswoode. London. 1939. Price 14s. net.

Books on dietetics can be divided broadly into erudite works which discuss all the recent findings in biochemistry in relation to their bearing on the selection of diets, and those which provide for less sophisticated readers the same material in a more palatable, though not necessarily in a more practical, form. This book falls into neither of these categories. It is a series of essays written by experts in the practical application of dietetics to the management of various classes of diseases. These essays originally appeared in *The Practitioner*, and they have now been expanded and collected into book form. The result is a thoroughly satisfactory volume which will be read with interest by many different types of readers.

The first chapter, on practical dietetics, is written by no less an authority than Professor V. H. Mottram, and into short space he has packed a great deal of information in a very readable form. Professor Mottram does much to dispel the impression that where normal individual adults are concerned the choice of, or modification of, a diet must inevitably revolve around the calculation of calorie equivalents. It would be invidious to single out special chapters for mention, but it ought to be said that the public health worker will find much to interest him in the section on diet in the acute fevers, in pulmonary tuberculosis, in the infant and child, and in relation to pregnancy and lactation.

It would be difficult to find a better practical introduction to the subject of dietetics than this handsomely produced volume, and editors and publishers alike are to be congratulated on it.

Illustrations of Bandaging and First Aid, with 290 pictures of triangular and roller bandaging. By LOIS OAKES, S.R.N., D.N., Nursing Editor, *Nursing Illustrated*. 1939. Edinburgh: E. and S. Livingstone. pp. 248. Price 6s., net.

Medical Officers of Health who are concerned with the teaching of the principles of first aid to the personnel of aid posts, air raid wardens and so on, should find this clearly illustrated book a most useful supplement to the practices carried out by their personnel. The illustrations are absolutely first-class and convey very lucidly the methods of applying the appropriate bandages for injuries, splints for fractures, etc.

The Society of Medical Officers of Health.

NOTICES.

TUBERCULOSIS GROUP.

The Annual General Meeting of the Tuberculosis Group, which has been postponed from last November, will be held on Friday, February 16th, at 12 noon, at the offices of the Society, Tavistock House South, Tavistock Square, London, W.C.1.

A meeting of the Group Committee will be held on the same day at 10.30 a.m.

DENTAL OFFICERS' GROUP.

The next meeting of the Group will be held at the rooms of the Society, Tavistock House South, on Saturday, February 24th, 1940, at 2.30 p.m. Mr. George Thomson will deliver an address on "The History of the School Dentists' Society."

GENERAL PURPOSES COMMITTEE.

In order to acquaint members with action taken at headquarters pending the next meeting of the Council, a résumé is published below of the proceedings of the General Purposes Committee at its meeting on January 26th. (A similar résumé of the last meeting was published in PUBLIC HEALTH, December, p. 68.)

The meeting on January 26th was attended by Dr. Cyril Banks (Chairman), Drs. Vynne Borland, G. F. Buchan, James Ferguson, Prof. R. M. F. Picken, Drs. J. A. Stirling, Ernest Ward and H. Gibbons Ward.

Civil Defence—The Committee were gratified to learn of the Government departments' acceptance of the proposal for discussion of civil defence matters, as they arose, with representatives of the Society. It was decided to appoint those who had been nominated for the deputation to the Ministry, with the addition of Dr. Borland as a London representative, as a standing consultative committee.

The Committee were also informed that the Society had already been consulted on new proposals for the treatment of gas-contaminated persons, which would be modified in accordance with the views expressed by our representatives.

The question of the number of trained nurses to be allotted to first-aid posts was again discussed on a further letter from Miss Goodall (Royal College of Nursing). It was agreed to communicate the following expression of opinion to the Royal College and to the Government departments:—

> As a result of a further sounding of opinion among its members, the Society considers that, with a view to maintaining efficiency and discipline in first-aid posts, a trained nurse should be present in each post during the whole daily period of 24 hours and that shifts and reliefs should be arranged accordingly.

It was also resolved to make representations to the Government departments on the following points: a higher rate of pay for A.R.P. personnel holding positions of extra responsibility; the desirability of instituting a full contractual obligation for volunteer personnel with a view to securing the efficiency of casualty services; and clarification of a recent circular regarding transfer of expended equipment.

Circular 1840.—It was reported that no reply had yet been received from the Ministry of Health to the Society's representation, made at the end of November, that the scheme for supplying milk at a reduced price to mothers and young children should be indefinitely postponed. There was reason to believe, however, that the Ministry would not be able to meet the Society's request. The matter was again discussed on a resolution received from the Yorkshire Branch, who drew special attention to the need for bringing the scheme into proper relationship with the existing work of the maternity and child welfare service. The Committee felt that this point and the other objectionable aspects of the scheme, especially the administrative burden which would be involved, had already been adequately dealt with in the Society's letter to the Ministry and that a reply must be awaited before further action could be taken.

Pediculosis.—The Committee again considered Dr. Duncan Forbes' proposal (see his letter in PUBLIC HEALTH, December, p. 60) for added legal powers to deal with families in which children were vermin-infested and his further proposal that infestation should be made compulsorily notifiable. There was also a resolution from the North-Western Branch supporting the proposal for legal powers and suggesting that the Society should issue a statement to the public to remove any misconception about the alleged condition of evacuees in this respect. A lengthy discussion by the Committee evolved the view that it would be wiser for the public health service to concentrate on educational methods rather than to seek compulsory powers, for dealing with this problem, and that a public statement at this stage would be out-of-date and impolitic. As one member said, the real objective was to get every mother to keep her children clean when they had once been cleansed; the problem of the elder sister with a "perm" which she did not want to spoil by washing or combing was referred to.

Public Health Medical Officers and War Service.—Two important matters affecting members of the public health service who may be needed in the Fighting Services during the war were considered. The first was the question of the extent to which local authorities are prepared to make up the difference between civil and Services pay in the case of their medical officers who join up. Medical Officers who obtain the rank of Major as hygiene specialists are not likely to suffer, but the number of such specialist posts is limited and the majority of younger men who may be called upon to play their part will have to commence service as Lieutenants with promotion after one year to Captain. On the pay of these latter ranks a considerable financial sacrifice may be involved for medical officers earning between £500 and £900 per annum whose authorities do not make up the full difference between their Service pay and their full-time salaries. It was decided to request the British Medical Association to represent to the local authorities which had decided on qualified payment, or had reached no decision, the special position of their medical officers in this respect in relation to the need for a proportion of the public health service to take their part with the Fighting Services.

The other matter was that of the filling of appointments in the public health service which would fall vacant during the war, to the detriment of those members who would normally be candidates but were now absent on active service. It was reported that the B.M.A. had already asked one borough not to make a permanent appointment in succession to their retiring M.O.H. but one for "the duration" only. The Committee felt that, despite the difficulties involved, the Society should agree to the principle that no war-time vacancies in any section of the public health service should be permanently filled, and

resolved to ask the B.M.A. to put forward this principle to the Ministry of Health and the local authorities.

An Annual Luncheon.—The Committee were glad to learn that the President had expressed his approval of a proposal by Dr. G. F. Buchan that, in view of the cancellation of the Annual Dinner for this session, a luncheon should be held in the spring or early summer with the President in the Chair and the Minister of Health as guest. The Committee decided to leave the preliminary arrangements for this function in the hands of the President, the Chairman of the Committee and the Hon. Treasurer.

Venereal Disease in War-Time.—The question of civilian venereal disease services in war-time, raised by Sir Francis Fremantle at the Annual General Meeting was deferred for further consideration when more evidence became available as to current incidence, but it was agreed that venereal disease schemes of local authorities including public education should be developed rather than restricted at the present time.

Shortage of Essential Supplies.—The Committee expressed the hope that members of the Society would get in touch with the central office about any difficulty in obtaining supplies of foods, drugs or apparatus required by health departments. This arose from a letter suggesting co-ordination of such supplies if any real difficulties occurred through war conditions and it was thought that the Society might usefully collect information.

Other Matters which were considered by the Committee included a question raised by a member as to the vitamin content and dosage of cod liver oil (referred to the M. & C.W. Group) and amendments suggested to the Central Council for Health Education's diphtheria immunisation leaflet.

SOUTHERN BRANCH.

President : Dr. I. M. MacLachlan (Med. Supt., Portsmouth Isolation Hospital).

Hon. Secretary : Dr. H. C. Maurice Williams (M.O.H., Southampton).

A meeting of the Southern Branch was held at the Infectious Diseases Hospital, Portsmouth, on December 15th, 1939. The President was in the Chair, and eight members and visitors were also present.

Clinical Cases.—The President described a case of cerebral malaria, and Dr. H. C. Maurice-Williams described a case of anthrax in a man who had been unloading hides in the docks.

Discussion on Treatment of Puerperal Infections.—A discussion on the question of the treating of puerperal infections in small Isolation Hospitals was raised by the President, Dr. MacLachlan. It was emphasised by him that puerperal infections should only be admitted to proper units capable of dealing with such conditions.

The President proposed, and Dr. Fleming seconded that the following resolution be forwarded to the Council of the Society for their consideration :—

> "That the Ministry of Health be asked to issue instructions that puerperal infections should on no account be admitted to an Isolation Hospital without proper means of treating and isolating such cases."

Presidential Address.

Dr. I. M. MacLachlan then gave his Presidential Address, entitled "Infectious Diseases—Bits and Pieces." Dr. Maurice-Williams proposed, and Dr. Fleming seconded, that the paper was of such interest that it should be sent to the Editor of PUBLIC HEALTH with a request for early publication.

Future Meetings.

It was decided that there should be no meeting in January, but the February meeting should take place on the last Friday of the month at Gosport, and the March meeting at Winchester.

A communication was received from Lieut.-Colonel D. G. Cheyne stating that the Military Authorities would be pleased to allow members to visit a Militia Camp, and suggested February or March for the meeting. After discussion, it was decided that the Secretary be asked to write to Lieut.-Colonel Cheyne asking if it would be convenient for them to visit on the last Friday in April at Blandford.

YORKSHIRE BRANCH.

President : Dr. James Sharpe (Dep. M.O.H., Leeds).

Hon. Secretary : Dr. James Mair (M.O.H., Harrowgate, M.B.).

An Ordinary Meeting of the Branch was held in the Civic Hall, Leeds, on Friday, December 29th, at 2 p.m. The President occupied the Chair and was supported by eight members.

The minutes of the last meeting were read, approved, and signed.

Dr. Pearce mentioned that Dr. Pickup's absence was due to the recent death of his sister, and the Honorary Secretary was directed to write to Dr. Pickup extending to him the sympathy of the Branch.

The Honorary Secretary reported that Dr. Munro, Medical Officer of Health, Beverley, was retiring on December 31st, and the Branch recommended that Dr. Munro, if eligible under the present rules of the Society, be elected a fully-paid life member.

The Honorary Secretary and Treasurer (Dr. Mair) announced that as he was retiring at the end of January, he was compelled to resign these offices.

His resignation was received with regret, and it was agreed to defer the appointment of his successor until the next meeting.

Dr. J. F. Galloway then read a paper on "Ministry of Health, Circular No. 1840 (Supply of Milk at Reduced Rates to Nursing and Expectant Mothers and Children under Five Years of Age)." After a discussion taken part in by the President, Drs. Russell, McNaught, McMath and Pearce, all of whom agreed with Dr. Galloway's contentions, the following resolution, proposed by Dr. Buchan and seconded by Dr. Pearce, was unanimously carried :—

> The Yorkshire Branch of the Society of Medical Officers of Health regret that the scheme for increasing the demand for milk in England and Wales as set out in Circular 1840, is not so correlated with the work of Maternity and Child Welfare Authorities that the better health of mothers and children can be secured, and they urge the Council of the Society to represent to the Ministers concerned the necessity for revising it so as to bring it into proper relationship with the existing work for the health and welfare of the mother and child.

On the proposition of the President, a hearty vote of thanks was accorded Dr. Galloway for his paper.

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Editorial

The Future of Hospitals

Soon after the last war the Minister of Health made the following reference to the Consultative Council on Medical and Allied Services of which Lord Dawson of Penn was chairman :—

> To consider and make recommendations as to the scheme or schemes requisite for the systematised provision of such forms of medical and allied services as should, in the opinion of the Council, be available for the inhabitants of a given area.

A very valuable interim report on the "Future Provision of Medical and Allied Services" was submitted to the Minister in 1920. The necessity for a regional scheme of hospital provision was stressed, the main feature of which was that a hospital, called a Primary Health Centre, should be established in every considerable town, linked up directly with a larger hospital or Secondary Health Centre sited in the large town or city best situated to be the natural centre of the regional activities. Paragraph 17 of the report is as follows :—

> Underlying our recommendations is the dominant purpose of providing the best services for the health of the people. Our recommendations are designed to secure :—
>
> (1) Provision of buildings and equipment.
> (2) Services suitably correlated and available for all.
> (3) Opportunity for the best work and the furtherance of knowledge.
> (4) Co-ordination of preventive and curative medicine.
> (5) Freedom of action for doctor and patient.

Under existing conditions doctors are frequently without such provision or opportunity; they have imperfect access to such resources as those of bacteriology, biochemistry, radiology, electrotherapeutics, and they have inadequate means of assistance from consultants or specialists. Consequently they cannot always do justice to their patients or themselves.

The scheme of services we have outlined may on superficial reflection be deemed by some people to be so ambitious as to be impracticable. We are well aware that the realisation must be slow and, from the difficulty of adapting existing institutions and methods, may be imperfect. Apart from the lack of material equipment, trained personnel in adequate numbers is not at present available, though the acceptance and approval of this scheme by the profession and the public should give the educational stimulus to its production. To construct any part well, and to avoid mistakes in local effort, the

whole design must be before the mind. This is an undertaking which can be at once begun and steadily proceeded with, and at a rate proportional to the enlightenment and determination of local public opinion—lay and medical. Any effort, however small and localised, can confer benefit, if it be designed in relation to the scheme as a whole.

A primary health centre, with its organised services established by local enterprise, will serve its community well if it is conceived in the right spirit, put up in the right place, and organised on the right lines.

Few will be found to quarrel with the opinions expressed and equally few will contend that the intervening 20 years have seen much progress towards the realisation of a unified hospital service.

However, there has been, consequent on the passing of the Local Government Act, 1929, a marked increase in the number of beds and even more in the quality of the service provided by local authorities' hospitals. These have, for the most part, been developed in accordance with the spirit as well as the letter of the Act and now constitute an entirely changed public hospital service from that which obtained at the time of the 1920 report. The rapid transition from admittedly inferior poor-law hospitals to well equipped and staffed municipal hospitals is incontrovertible evidence that, granted the right outlook on the part of an authority and its medical advisers, public control is compatible with the highest traditions of hospital service. But with rare exceptions there has been no real interdigitation of the existing voluntary and the new municipal hospitals. Overlapping in the services provided, lack of agreement on policy, mutual distrust and jealousy and in many cases open competition have in spite of Paragraph 13 of the Local Government Act, been distressingly common.

The position in 1919 was bad enough but the aftermath of the present war will probably be worse: the absolute necessity of carrying on until the disruptive forces arrayed against us are irrevocably smashed will undoubtedly entail such financial stringency that, unless we are to stand by and see the laboriously won achievements in social service sacrificed in whole or part, we must rationalise the whole system and cut out ruthlessly all unnecessary trimmings and duplications. The voluntary and municipal hospitals must become one general hospital service on which all our other social services, Maternity and Child Welfare, School Medical, Tuberculosis, etc., must be based. The position and its potentialities are too grave to allow sentiment, tradition or any personal considerations such as status and reward, to postpone this long overdue and inevitable development.

In the *Lancet* of October 28th, 1939, a Plan for British Hospitals was outlined in a special article. The anonymous writer (who has since been revealed as Dr. Stephen Taylor, a member of the editorial staff) stated a case for the perpetuation in peace-time of the regionalisation and decentralisation instituted as a war-time measure by the Ministry of Health and suggested control of all hospitals by a National Hospitals Board with finance on a national and management on a regional basis. Although we would join issue with him on many of his opinions, there can be no question that his main thesis is sound and deserves to be examined impartially as a possible basis by all who have the future of medicine at heart. The article evoked a spate of correspondence, laudatory or condemnatory according to the individual writer's personal bias. Most of the critics animadverted on the Ministry's emergency hospital scheme and stressed its obvious shortcomings. It is common knowledge that this scheme was devised to meet circumstances which, although universally thought to be inevitable, have not in fact eventuated even six months after the outbreak of war. In principle the scheme was sound although in detail, particularly in the London region, there are many glaring defects. In London division into reasonable sectors, with some regard to existing boundaries and the number of beds available in the inner and outer zones, was not carried out owing to the alleged necessity to have a Voluntary Teaching Hospital at the apex of each sector. But this does not justify wholesale condemnation: rather should it make us determined that full, free, unbiased deliberation between all branches of the profession and all bodies interested should be an essential prelude to any future scheme. The Emergency Scheme is what its name implies: it was devised without reference to many individuals, authorities and organisations best qualified to advise and it is grossly unfair to deduce from its failings that with full collaboration and good will a thoroughly satisfactory hospital service is a Utopian impossibility. One of the main points on which the *Lancet's* Commissioner's scheme appears to us to be faulty is that in it there is no place for the General Practitioner. Perpetuation of the existing cleavage between domiciliary and hospital personnel must at all costs be avoided. At present the practitioner has access to neither voluntary nor municipal hospitals and, while the existing basis of private practice persists, it is difficult to encourage such access. Ignoring London for the moment, and it must be remembered that the large teaching hospitals are not in any way representative of the vast bulk of voluntary hospitals, what is the

position in a provincial town of 100,000 inhabitants? There is a voluntary hospital of about 120 beds staffed by, say, two housemen and eight general practitioners selected by the Board of Management from the doctors of the town, few, if any, being of actual consultant status. Such appointments are highly prized and the holders set their faces strongly against any suggestion that doctors not on the staff should be allowed to treat their cases in hospital. There is probably a municipal hospital of some 300 beds with a resident staff of four and a visiting consultant staff of accepted status coming, usually, from the nearest teaching centre. The local practitioner is in many cases allowed to treat his own patients in pay-beds but not others. Experience has shown that, as he is only willing to visit such of his patients as can offord to pay and will not attend his panel or district cases and cannot in any case attend at regular stated hours, throwing open the wards to the private doctor is far from conducive to efficient running of the hospital. We agree that under present conditions the attitude of both voluntary and municipal hospitals is justifiable but we contend that no new hospital scheme should be envisaged which does not link the practitioner up closely with the hospital and with the Public Health activities of the area. This may not be possible without a change in the conditions under which general practice is now carried on, but that is another story.

The *Lancet's* Commissioner stresses the wide variation in staffing between voluntary and municipal hospitals. He gives the staff of a voluntary hospital of some 500 beds as 20 senior and 30 juniors, and of a municipal hospital of similar size as five or six. The former is obviously a large teaching hospital, presumably in London, and the writer is, probably through lack of knowledge, doing scant justice to the municipal hospitals of the London County Council, the actual staff of a hospital of 550 beds under that authority being three seniors and four juniors, most if not all of whom have their Fellowship or Membership, and five housemen. Moreover, there are eleven consultants paying routine visits. Middlesex County Council fills the senior positions in its hospitals by full-time consultants, the salaries offered being such that men of the highest status are attracted to the posts. There need be no insurmountable difficulty about staffing hospitals with men of high standing either on a full- or a half-time basis. Many of the best products of the teaching schools are now preferring the substance of a salaried post with every opportunity of doing good work under excellent conditions to the shadow of Harley Street success with all that it connotes. Admittedly the question of hospital control by lay or medical committee or by medical superintendent is a vexed one. The Commissioner favours a medical committee and says rather naïvely that, "Were they freed from the monetary claims of private practice their decisions would probably be as wise and unbiased as anything human can be." That is the essence of the contention that the medical profession could render much better service to the community and would begin to regain much of the ground it has lost in the opinion of the public if it were freed from the slavery of pounds, shillings and pence.

We have neither the space nor the temerity to put forward a scheme for the hospital service of the future but we do congratulate the *Lancet* and its Commissioner on the publication of such a much-needed and provocative article. We trust that all interested—and that should mean the whole profession from the Minister of Health downwards—will give full and impartial thought to the problem of how our war-time arrangements are to be modified and adapted to meet the needs of peace. We have a duty to the community to be single-hearted and to build for their good and as we said before, personal gain and preferences must of necessity be subordinated to the common good.

A New Evacuation Scheme

Part, at least, of the Government's Home Defence policy was founded on the anticipation that the outbreak of war would be rapidly followed by bombing of important centres from the air on such a scale that the lives of civilians would be gravely endangered. For reasons upon which the non-military mind can merely speculate, that expectation has not been fulfilled. It should not be forgotten that evacuation was designed to meet this possibility; that it was thought that the enemy might play for a rapid decision by means of a *Blitzkrieg* and that the process would be devastating but short in duration in proportion to its severity. The course of events in Finland has shown that such a surmise was not fanciful, and there is no ground whatever to assume that it is not now going to materialise. If, however, the air assault does now develop, the situation will differ from that for which evacuation was prepared, in that there is much less likely to be a certain date on which it will be clearly advisable to disperse the town populations; and that bombing may be more fitful and continued over a longer span of time than was thought. Evacuation as carried out in the autumn was an emergency measure, effected with commendable smoothness and efficiency. That the country would have time to hear the grumbles of the receivers about what they had received, and that

the evacuated should have the occasion and the inducement to drift back before A.R.P. had been put to the test, was not on the programme. It is unreasonable to criticise a Government at war for not being fully prepared for the dual domestic problem of what to do with evacuees if it should be necessary to keep them away indefinitely from their home towns, and what to do with them if they insisted on coming home before the event the prospect of which occasioned their dispersal. The Governmen has been accommodating its outlook to the situation which has developed, and the result is a new plan for emergency evacuation, fitting into a long-term policy for those who are already and will remain evacuated.

Preparations had been made before the war for the evacuation of about three million persons from the dangerous areas, including one and a half million school children. In fact less than half the children went at the moment of crisis. Of the 700,000 school children dispersed, 400,000 have remained away from their home towns, which, everything considered, is not a bad record for a voluntary movement of so drastic a nature. When it is realised that as many as 40 per cent. of the parents are paying the full 6s. a week contribution toward the cost of maintaining their children, it seems evident that this number of about half a million is likely to remain evacuated so long as any risk of bombing continues. The new plans of the Ministry of Health* are designed to better the conditions of these children and make the burden upon their hosts more tolerable. The fee for billeting all children over 14 years of age will now be 10s. 6d. per week. The provision of hostels for physical and mental misfits will be pushed on, and accommodation will be increased for the sick where it is needed. Camps for school groups will be increasingly used and local education authorities are being pressed to provide communal meals. Above all, an effort will be made to distribute the housing of this stable body of child evacuees over a larger number of domestic hosts.

It is realised, however, that there is likely to be renewed desire for dispersal if and when bombing from the air begins and that an exodus from towns will take place whether it is organised or not. The Ministry is therefore preparing to evacuate more school children at short notice (not less than 36 hours). The scheme applies only to school children and only to those whose parents now register them for the purpose. Evacuating authorities are called upon to prepare a register of children whose parents signify their consent, and to furnish such parents with the information and guidance necessary for successful evacuation. In the receiving areas a new register of hosts is to be compiled, including those already housing evacuees. The railways and other transport organisations are preparing their plans for a new emergency, based on estimates of numbers which are subject to correction as soon as consents are numerically known. One of the objects of concern to the Ministry is the prevention of such happenings as caused justifiable complaint in the autumn. In an earlier issue we published an account by Dr. Webster† of the findings among evacuees in his area, and we suggested that things might not be so bad in other areas.‡ We are pleased to include in this number (page 125) a balanced review by Dr. Brothwood of the experiences of the whole receiving area of the administrative county of Lancaster. While this account is much less depressing than some which had previously appeared, it is obvious that quite a number of children were allowed to pass into billets in an undesirable condition. Stress is therefore laid on medical examination in the Ministry's memorandum. While the original recommendation that evacuating authorities should arrange for medical and nursing surveys of the children before dispersal still stands, it may be found necessary to conduct such examinations wholly or partly after arrival. In the latter case, the medical and nursing staffs of the evacuating authority should accompany the children to their destination. The receiving authority should make arrangements for diverting infected or diseased children from private billets, reserving for this purpose hostel or sick bay accommodation for about 5 per cent. of the total number expected. Quarters should be set aside at the receiving station for the joint use of the medical and nursing staffs of the two authorities, unless examinations are known to have been completed before entrainment. An important point on which the Ministry lay great emphasis is that the responsible officers of associated evacuating and receiving authorities should be in constant touch with one another in advance, working out details to their mutual satisfaction. If this could be ensured much of the detailed written advice with which officers are inundated might be omitted. The scheme will, of course, stand or fall on the availability of suitable homes for billeting purposes in the receiving areas. As Dr. Brothwood indicates, billeting is not successful with unwilling hosts and the exercise of compulsory powers is therefore to be deprecated. Health departments will welcome an increase of hostels and communal billets and expect to be consulted in the organisation of these and of communal meals to a much greater extent than Memo. Ev. 8 suggests.

*Government Evacuation Scheme. Circular 1965. Id. Memo. Ev. 8. 4d. H.M.S.O.

†*Public Health*, 1939, **53**, 33.

‡*Ibid.*, 23.

The Case for Diphtheria Immunisation

The Chief Medical Officer's report for 1938 contained the strongest official statement which has so far appeared in support of active immunisation against diphtheria. Sir Arthur MacNalty there wrote:—

> Artificial immunisation against diphtheria continues to make uninterrupted progress in this country although but slowly. Its value is undeniable and is as yet not sufficiently appreciated, nor is the toll of death which diphtheria exacts among the child population. . . . Diphtheria occupies the lowest place in order of magnitude [amongst the causes of death in childhood] up to the age of two years; thereafter it advances relentlessly, and in the fourth year assumes priority of place and here it remains until the age of 11 or thereabouts. Diphtheria, therefore, is the principal killing disease of school age. . . . As yet, no specific remedy against measles or whooping cough has been found; with diphtheria it is far otherwise. There are on the market a number of prophylactics of proved worth and there is only lacking the willing co-operation of the public to bring about an immense reduction in the incidence and number of deaths from the disease.

Now the revised edition of the Ministry's Memorandum on the Production of Artificial Immunity against Diphtheria* (originally issued in November, 1932) clearly summarises the present state of knowledge about the disease and its prevention. Prominence is given to the experience gained by large-scale work in Canada and the United States, which shows that if a proportion of three-quarters of the child population under 15 years of age (the proportion previously recommended has been 50 to 60 per cent.) is naturally or artificially immune the disease will practically disappear. A recent editorial in the *British Medical Journal*† has drawn attention to an American study by Dr. Seckel of Chicago of the efficacy of mass-immunisation and the scientific criteria of its success; these are considered to be (1) that after wide-scale immunisation the incidence must drop sharply to a low level never before observed in the population at risk; or alternatively (2) that the incidence must subsequently remain at a low level for a considerable period. As an example of (1), we have the Canadian experience; and of (2) the fact that in New York City large-scale immunisation was begun in 1929 and that subsequently the six-to-seven-year cycle, which had been apparent since 1895 and would have brought a peak of incidence in 1934, was for the first time broken. Seckel's third criterion is a comparison of the experiences of immunised and non-immunised children, on which a good deal of evidence is already available.

In our view large-scale immunisation in Great Britain should have been instituted as soon as the evacuation policy was decided. This was, in fact, urged in the Society's memorandum on civil defence and evacuation questions submitted to the Ministry a full year ago. Even in the present Memorandum of the Ministry the only reference to the desirability of increasing the immunity level in our own country by a process which is now so well-proven is a lukewarm repetition of the former statement that the advantages of this form of protection should be brought to the notice of parents and guardians and that where practicable the necessary facilities should be offered to them. In the accompanying circular 1903, the strongest expressions are that the Memorandum will be of particular interest to reception areas and a reminder of the necessity of obtaining the written consent of parents and guardians! One can imagine the different way in which a commercial undertaking would have handled the "marketing" of a process of which the value and reliability were so guaranteed by all the existing evidence. The latest report of the Medical Research Council points out the curious paradox that this country has been foremost in improving the reagents protective against diphtheria, but that the practical extinction of diphtheria by their use has been the achievement of other countries.

It is impossible to avoid a feeling of disappointment that public opinion should not have been more fully informed in a matter where intensive effort would surely have borne such fruit in saving of life, sickness and expense. Meanwhile it has been left to the individual medical officers of health and to the enlightened local authorities to carry out their own campaigns, sometimes in the face of organised opposition. The most successful up to 1937 were enumerated in the Chief Medical Officer's report for that year; in our cities and towns the level of immunity in the child-population was nowhere higher than 45 per cent. (Chester), and in the greatest city of all was estimated at only 5·3 per cent. We have surveyed the annual reports for 1938 and find the position to be substantially unchanged, apart from the new efforts in Guernsey and Dudley* and from a remarkable claim by Dr. W. B. Stott, M.O.H. for Cuckfield urban and rural districts. Dr. Stott, who also acts as school medical officer for the East Sussex C.C. in his districts, estimates that in the rural district (total population, 24,440) 90 per cent. of the school children and 25 per cent. of the under-fives were protected by the end of 1938, and in the urban district (total population, 13,600)

*Memo. 170/Med. Revised edition, 1940. H.M. Stationery Office. Price, 1d. net.

†*Brit. Med. J.*, 1940, **1**, 306.

Public Health*, December, 1939, **53, 52.

84 per cent. of the school children. We await with interest further details of this campaign and of the test imposed on a previously vulnerable child-population by the reception of London evacuees last September. The fact that the general diphtheria incidence has not so far risen this year in comparison with previous years owing to the new contact, brought about by evacuation movements, between town and country must be attributed either to an unsuspected high level of natural immunity or to pure good luck; it certainly cannot be credited to the active protection of our children.

Food Education

A recent circular from the Board of Education (No. 1497, dated January 31st), asks Local Education Authorities to co-operate with the Board and the Ministry of Food in a forthcoming campaign to promote the right use of food and to prevent waste in its preparation and consumption. The Board recalls its previous circular 1460 of December, 1937, which urged L.E.A.s to provide increased instruction in household catering and cooking as factors in national well-being, and says that the outbreak of war has made it a matter of even greater importance to maintain, and if possible improve, the standard of nutrition, while at the same time conserving our food resources. The present circular goes on to suggest that L.E.A.s can give most valuable help not only by maintaining and developing the domestic sciences instruction to the schools but by a special effort to organise the instruction of housewives in the principles of war-time catering and cookery, including choice of foods, their preparation and nutritive values. They are therefore asked to prepare for the use of their staff, premises and equipment to reach as wide a public as possible, and it is stated that expenditure on housewive's classes will rank for grant. Supplies of rationed foods will be arranged for and the formal opening of the campaign will be preceded by publicity.

Not many medical officers of health or school medical officers can boast the same first-hand experience of marketing and cookery as is shown in that useful publication of our own past President, "Dr. Nash's Cookery Book," nor do we suggest that the D.P.H. curriculum should include a period at the kitchen range, but we feel that there is a definite responsibility upon the public health service to use its influence and its special appreciation of nutritional factors in support of this campaign. We hope that the L.E.A.'s will consult, and will be well advised by, their school medical officers on the scientific aspects of nutrition which can be practically applied in the teaching of housewives. On such matters as school meals the report by Dr. George F. Buchan, which we reprinted in our January issue, is a notable example of the way in which a school medical officer can and should advise his authority: and in this issue (p. 131) Dr. Brockington, referring to that report, suggests a practical method of supplementing the war-time dietary.

The lag in applying nutritional knowledge to the production of our people's daily meals in their homes has been due in the past to the lack of an agency which could translate the findings of the scientists into something which could be clearly grasped by school girls and housewives. One of the most useful tasks ever undertaken by the British Medical Association was its special report of 1933 on nutrition and the subsequent pamphlet, "Family Meals and Catering"; it is good news that the Association—we believe at the suggestion of the Central Council for Health Education—has appointed a Committee on War-time Problems of Nutrition whose membership as announced in the *British Medical Journal* for January 20th (p. 104), will command respect. The object of this Committee will be "to consider how best resources may be used at least to hold the ground already gained, and how to apply the knowledge that has accumulated since 1919 to the war situation that started in 1939." If, as we expect, the findings of the Committee are set out in a form which can be understood and applied on a wide scale through the campaign announced by Circular 1497, it will have performed a valuable national service.

From the historical standpoint, it is interesting to turn back to the Society's records during the last war. The first mention of food supplies and their proper use is in an interesting report in PUBLIC HEALTH of a meeting held on June 25th, 1915, when Dr. Meredith Richards read a paper entitled "Thrift in Food Supplies." Proteins, fats and carbohydrates were then the ruling factors (the importance of vitamins and salts was only vaguely understood) and the speaker quoted "Neutral Observer" of *The Times* and held up as an example that gentleman's reports of the way in which German women were already being given special instruction in the kitchen. The meeting passed a resolution that the attention of medical officers of health should be specially drawn to the paper and discussion. There is every indication that in this war both the Government departments and the medical profession will try to give early guidance to the people on the proper care of the "inner man" and the best use of our food resources.

Annual Luncheon, April 5th—See notice on page 135.

A Pause for Reflection*

By E. W. CARYL THOMAS, M.D. (STATE MED.), B.Sc. (LOND.), D.P.H., BARRISTER-AT-LAW,
Medical Officer of Health, Harrow U.D.C.

No apology is needed for these philosophical and historical reflections on the real nature of progress in relation to public health. For it is often advisable to pause and inquire whither we are going in our hurried endeavours to make progress, and if we have a philosophy to guide us. In the same way we cannot understand the nature of our work for the improvement of the race without tracing its causes in the past, causes whose effects face us to-day.—*Extract from the Annual Report of the Chief Medical Officer of the Ministry of Health, for the year* 1938.

In living through each day we act largely as automata: many of our movements and actions are, to a great extent, reflex, and volition takes its part only when circumstances demand a departure from automatic unthinking action.

A comparable state of affairs obtains in the course of our work, though the basis this time is not our previous learning and practice and formation of habit, but the decisions of those who have done our thinking for us, and which come to us in the form of Government Circulars and Memoranda, or in the teachings of those who are accepted as being in a position to make authoritative pronouncements. With this background, we give advice, and make decisions, not because we stop to think, but because the case before us is on all fours with those that we have had before and about which the answer is known.

Some Points to Think Over

An infant, after its birth, is immediately torn from its mother, and deposited in a cot. Is this really in the interests of the infant, whose chief requirement at this time surely is warmth?—or in that of the mother? It is then put on four-hourly feeds with nothing at night, and a change is made only when this practice demonstrably fails. Do the advantages of breast feeding so markedly outweigh those of the bottle?—and are the vast majority of mothers really capable of feeding their infants?

Are we really satisfied that when we condemn a house that more harm than good is not being achieved? Our yard-stick in this very often is dampness. What diseases are we satisfied are associated with dampness of the dwellings?—and do we not evict persons who have been in a damp house for years even though they and their families stubbornly refuse to suffer from these diseases, and drive them into premises for which they have to pay double their former rent, thus so depleting the family income that the nourishment of the whole family suffers. We condemn meat because the animal suffers from tuberculous lesions in a sufficient number of organs that the condition of the carcase complies with the appropriate section of a Government Memorandum. In such cases do we really feel that the muscles of the limbs of the animal are so riddled with tubercle bacilli as to constitute a danger to the consumer?

Smallpox cases are not treated in the ordinary isolation hospitals, in spite of the protection to the community afforded by the 6 ft. 6 in. fence which is still insisted upon.

Departures from existing practice are sometimes made, but while it takes the life-time of a generation to inculcate principles, it takes longer to abolish them, so that a practice like that of fumigation dies only a lingering death when stimulated by public opinion.

At times we have to act without official guidance. This may not be difficult when we know at what we are aiming, but the situation is less satisfactory when we do not know. A case in point is the medical examination for superannuation purposes. What exactly is the purpose of this examination? It has been said that the passing of even the most exhaustive examination will not afford a guarantee for over three years. In the case of some recently examined recruits, it was less than three months. The subject was recently discussed by the Middlesex County Council when the Actuary was consulted as to whether the acceptance of persons who fail to reach a standard comparable to that required by a *commercial* insurance company for a first-class life, but who, nevertheless, may attain some other specific standard of fitness, would have any material effect on the solvency of the fund. The Actuary was of the opinion that the attainment of that standard is not of the highest importance provided a reasonable medical examination is made on entering the service, the principal object of the examination being that the applicant should be capable of discharging the duties of the particular position for a reasonable period. The Actuary did not define "reasonable period," but the report continued, "it may, however, be assumed that this period would not, normally, be less than ten years, because if the County Medical Officer was of opinion that any individual was unlikely to serve with efficiency for this period he

* Presidential Address to the Home Counties Branch, Society of Medical Officers of Health, January 19th, 1940.

would probably be rejected as unfit for employment at all."

The Position of the Medical Officer of Health

Our text, however, can be considered from a broader aspect, namely, the position of the Medical Officer of Health. The turn of the century saw a change in the objectives of the health services. The Croydon outbreak brought forcibly home to us the extent to which the original activities of the local sanitary authorities in regard to the control of infection, the establishment of healthy surroundings, and the purity of foodstuffs had become over-shadowed by the social or personal services for individuals. Except in rural districts the Medical Officer of Health is to-day little concerned with the sanitary condition of the community in matters such as water supply, refuse disposal, drainage and the like. Of recent years, the chief activity of the Medical Officer of Health in regard to sanitary conditions has been in connection with the demolition of worn-out property. In the light of the criteria on which the assessment is made it is questionable whether to-day he should be concerned with these properties. It is a far cry from the Nuisance Section of the 1875 Act or the wording of the 1890 Housing of the Working Class Act, "properties in a state so dangerous or injurious to health as to be unfit for human habitation" to the standards laid down by the 1930 Act—"in determining whether a house is fit for human habitation regard shall be had to the extent, if any, to which, by reason of disrepair or sanitary defect, the house falls short of the provisions of any byelaws in operation in the district or of the general standard of housing accommodation for the working-class in the district"—not matters on which a medical man is more capable than others of judging; while the definition of sanitary defects does not call for the background of medical knowledge for elucidation.

Side by side with the diminution of the duties of the Medical Officer of Health in regard to environmental hygiene is the progressive development of the services provided for the individual. To tuberculosis, venereal diseases, mental deficiency, was added, by the Local Government Act, the general hospital service, and a recent addition is the cancer scheme—but always these developments are placed in the hands of the councils of the counties or county boroughs. While such services as necessitate the provision of institutions are rightly placed in the hands of the larger authorities—though it is questionable whether many should not be on a regional rather than on the present geographical basis—the question must be faced as to what is to be the ultimate fate of the Medical Officer of Health of a county district, because in default of expansion of existing, or initiation of fresh services, less demand is made on his time.

Although the present Maternity and Child Welfare Services might be looked upon almost as an outcome of the last war, it is difficult to imagine the growth of any comparable services which can be undertaken by county districts, while many fear that the financial limitations will, after the war, impose a barrier to any fresh expansion of social services on any lines. In such circumstances the Medical Officer of Health of the county district will have time on his hands, which it is possible he can occupy by taking a more active part in any clinical work in his area, or perhaps some can be rendered redundant by the combinations of authorities appointing the one Medical Officer of Health who would then remain as the administrator.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities. The Editor will be grateful if members of the Society will notify him at once of any new appointment.

BEDFORDSHIRE C.C.: A.M.O., M. & C.W., Dr. Elizabeth E. Brown (A.M.O., M. & C.W., Durham C.C.).

BINGLEY U.D.: Acting Part-time M.O.H., Dr. A. J. M. Findlater.

DURHAM C.C.: Dept. C.M.O.H., Dr. George Wilson (Dep. S.M.O., Durham C.C.).

EALING M.B.: A.M.O.H. & R.M.O., Maternity Hospital, Dr. A. C. Robertson.

ERITH M.B.: M.O.H. & S.M.O., Dr. R. A. Leader (M.O.H., Stone U. & R.D.s & A.C.M.O.H., Staffs C.C.). Salary £800 p.a.

GREAT YARMOUTH C.B.: Dep. M.O.H., Dr. J. F. Russell.

GREENWICH MET. B.: Dep. M.O.H. & T.O., Dr. Edgar R. Bennion (A.T.O., Staffs C.C.). Salary £750, rising biennially by £50 to a maximum of £1,000.

HAMPSTEAD MET. B.: Temp. T.O., Dr. J. Sullivan (formerly M.O.H., Fulham Met. B.).

LINCOLN C.B.: A.M.O., M. & C.W., Dr. Beryl Lye.

MACCLESFIELD M.B.: A.R.P. M.O., Dr. F. E. Lomas.

MANSFIELD WOODHOUSE AND WARSOP U.D.s: M.O.H. (also A.C.M.O.H., Notts), Dr. P. P. Fox (M.O.H., Harwich M.B.).

MERTON & MORDEN U.D.: M.O.H., Dr. A. W. Johns (M.O.H., Erith M.B.). Salary £800, rising by annual increments of £75 to £1,200 p.a. Car allowance £50.

MUSSELBURGH B.C.: M.O.H., Dr. G. Y. Richardson (C.M.O.H., Midlothian C.C.).

STIRLING C.C.: A.C.M.O.H., Dr. W. H. Findlay.

WANDSWORTH MET. B.: Temp. T.O., Dr. J. M. L. Burtenshaw.

WEST HARTLEPOOL M.B.: A.M.O.H. & A.S.M.O., Dr. W. S. Peden (R.M.O., Swansea Borough Isolation Hospital) and Dr. John Warrack. Salary £500, rising to £700.

Psychological Effects of War*

By G. C. F. ROE, M.R.C.P., L.R.C.S., D.P.M., D.P.H.

Medical Officer of Health, County Borough of Halifax.

Many able speakers have had the honour of addressing this Branch. They have done so in an environment more favourable because more peaceful than that conceded to me.

They have therefore been able to bring to their subject a lucidity worthy of the audiences they have addressed. I address you under the least auspicious circumstances that can be imagined. War brings many grim figures on to the stage. Since the last War the flames of Hades have lost their terror and Satan no longer occupies the limelight. But the modern military aggressor with his colossal war machine of death and destruction fills the void quite satisfactorily. However, I do not intend to-day to delve into the mind of the aggressor. Mine is a less ambitious task—that of endeavouring to analyse the psychological effect of modern war on our people. The subject is complex and time will not allow of my making more than a brief and, I fear, inadequate survey of the matter. What do we mean by psychological emergencies? What exactly is injured by the shock, stress, strain and fear of war? The answers to these questions are fundamental if we are to understand what we are making provision for. Now the first condition of clear thinking upon this subject is that we shall refuse to become the slaves of words. Words we must have, classifications we must have, but let them remain our servants. I have proposed to myself—I am afraid in great haste—certain definite objects this afternoon and it will be for you in your kind indulgence to say how far I succeed—if indeed I succeed in any measure—in establishing the conclusions I ask you to accept.

I will endeavour to satisfy you:—

(1) That the Psychoses and Psychoneuroses are are different and distinct psychological entities.

(2) That it is the Psychoneuroses for which we have to make provision.

(3) That a practical clinical classification of these entities is essential.

(4) That the mental insight of the patient plays an important part in these cases. Finally I will place before you a brief résumé of treatment.

I am not to-day concerned with Freud's and Janet's theories. We have no time for unearthing infantile sexual conflicts. A correct diagnosis is the core of successful treatment. Exact aetiology is in war-time a bagatelle by comparison. It is axiomatic that a period of great stress and danger must produce more psychoneuroses. War is mentally devastating for many individuals. The potentially insane may pass from sanity to insanity. The fact that in the last war the incidence of admissions to mental hospitals declined is perhaps one of the chief arguments used by those who advance the optimistic view with regard to the effect of war on mental health. I would remind you that a large proportion of psychotic casualties of the last war did not become notifiable until after the war. Moreover, war produces psychoneurosis rather than psychosis. I am concerned to make this point clear.

Classification of Cases

I now pass on to a classification of cases. Classifications are sometimes useful, sometimes dangerous—sometimes merely ornamental. No classification of psychological cases has met with universal approval—but we must have some sort of classification if we are ever to understand the problem. I want to point out that in the majority of circumstances—especially in air raids—general practitioners will have to deal with these cases and I submit the following classification which has the merits of simplicity and logicality:—

The Psychoses (omitting G.P.I. and Epilepsy).

Type.	*Note.*
1. Manic Depressive	May recover but liable to recur. Lack insight. Insane.
2. Paranoia	Do not recover. Lack insight. Insane.
3. Dementia Praecox	Do not recover. Lack insight. Insane.

The Psychoneuroses.

Type.	*Note.*
1. Anxiety States ...	Not insane. Have insight.
2. Neurasthenia ...	Recover but may be C3. Have insight.
3. Hysteria	Possess insight.
4. Obsessional States	Possess insight.
5. Mixtures ...	Respond to treatment. Possess insight.

With regard to the psychoneurotic group—which mostly concerns us—delusions are rare. Delusions are reality-avoiding mechanisms of phantasy and projection, but they only rarely enter into the mental picture of psychoneurotics. Automatisms, stupor, mutism, immobility and

* Paper read to the Yorkshire Branch, Society of Medical Officers of Health.

hallucinations (especially of sight and hearing) may occur. Generally speaking, the psychotic is born, not made, whereas the psychoneurotic is made, not born. Inherent causes play an important part in the former, and environment is the chief aetiological factor in the latter. Let me say, however, that many factors contribute to psychoneurosis, but I am suggesting that the extrinsic predominate. The main types of psychoneurosis fall within the categories I have mentioned but the symptoms vary. When the even tenor of our lives is assaulted by bomb and mine explosions the symptoms range from mild states of mental disequilibrium to the severest psychoneurotic illness. The sudden attack and the futility of individual resistance render air raids peculiarly prone to elicit psychic shock. Reflexes are excited which serve no useful purpose, have no real value and may be harmful rather than useful.

Mental Insight

You will ask what is the touchstone of differential diagnosis between the psychotic and the psychoneurotic. I think I can put it in a word —insight. The psychoneurotic patient has got insight into his condition. He knows that he is ill. In the psychotic absence of insight is a striking feature.

Treatment

Now I approach the last part of my subject—treatment.

The difficulty of dealing with treatment is that it is a very personal matter. Having made a correct diagnosis the details of treatment are a matter for the practitioner concerned. I must perforce pass over treatment with hurried and superficial survey, recording merely orthodox methods. It is of fundamental importance for practitioners and personnel in charge of first aid posts to understand that the severity and duration of neurosis depends on the early treatment which it receives. If the wrong type of case is sent to hospital the neurosis may be accentuated. In the last war "shell-shock" was a common diagnosis but it must be remembered that "shell-shock" was no new mental disease but a culmination of various anxiety conditions already existing.

(1) *Reassurances*

Reassurance should be tinged with discipline and suggestion. Too much sympathy may fix a neurosis. The majority of these can be treated at home. As regards hospital cases it is essential to provide occupational and recreational therapy. A hospital mental welfare officer should act as a connecting link between the patient's home and the hospital.

(2) *Electrical*

Faradism is useful in suggesting return of sensibility and in initiating movement, especially in motor cases.

(3) *Prolonged Narcosis*

I ask you to consider how vital it is to an upset brain that it should have a prolonged period of rest, which can be obtained by the administration of drugs, as follows:—

(*a*) *Morphia.*—I do not labour the case for morphia in war circumstances because it is not seriously disputed.
(*b*) *Luminal.*—Useful.
(*c*) *Phenobarbitone.*—Very useful.
(*d*) *Bromides.*—Useful.
(*e*) *Opium.*—Very useful.

(4) *Hypnotism*

In war circumstances a waste of time.

(5) *Psycho-analysis*

Cannot be applied under war conditions.

(6) *Rest*

Very important. Psychoneurotics must secure adequate sleep.

(7) *Liberal Mixed Diet and Tonics*

Indicated in the majority of cases.

Before I sit down, give me leave to say that it would be a black prospect if out of this war we plucked no hope that we might avoid the horrors of another war 20 years hence. If this could be attained a precious salvage will be redeemed from the pit of despair. War from our point of view is dysgenic but brute force straddles our path like a Colossus. Its success would be a world calamity. Let us be thankful if we can play a part, however small, in preventing such a calamity.

At the last meeting of the Royal Sanitary Institute and Sanitary Inspectors Examination Joint Board the position of students for the Sanitary Inspectors Examination was considered with regard to the fact that they might be called up for military service at any time after their 20th birthday. If this happened before an opportunity for taking the examination occurred, it might be that the training already received would be to a certain extent wasted, as the candidate might find it impossible to get leave from his military duties when he could take the examination. The Board have therefore decided to admit candidates who are at least 19 years and 6 months on the first day of the examination which they wish to take, instead of 20 years as provided by Regulation 1 previously.

The Register of Orthoptists for 1940, published by the Board of Registration of Medical Auxiliaries, Tavistock House, Tavistock Square, W.C.1, is now available, free of charge, to any medical practitioner upon request.

Experience of Evacuation in a County Reception Area*

By W. C. V. Brothwood, M.A., M.D., D.P.H.

Chief Assistant Medical Officer of Health, Lancashire County Council.

Evacuation is now almost a matter of history. Nevertheless, it is still a subject worthy of consideration. History tends to repeat itself and the historical approach to any subject, and particularly to public health, is by no means to be despised.

In the Administrative County of Lancaster there are evacuating, neutral, and reception areas. This paper makes no attempt to deal with the problems encountered by the evacuating authorities. It concerns itself almost entirely with events in the reception areas, and more particularly the reception areas in respect of which the county council are the education and maternity and child welfare authority.

There were evacuated into the area of the administrative county some 30,000 unaccompanied school children, 161 expectant mothers, 5,800 mothers and young children. In the area of the county council as an education and maternity and child welfare authority there were 17,000 unaccompanied school children, 4,600 mothers and young children, and 39 expectant mothers. These individuals had to be received and cared for after their reception.

Experience at the Time of Reception

The manner of reception at detraining points varied considerably. At several points detailed arrangements had been made. Doctors and nurses were present. Rooms were ready for first-aid work. Food and drinks were provided. Additional sanitary conveniences had been supplied. Children were submitted to medical inspection, and those with defects suitably disposed. For example, cases of scabies and chicken-pox were admitted to hospital, and dirty heads received treatment. The importance of this preliminary "sorting" of children evacuated hurriedly without previous medical inspection cannot be exaggerated. A considerable amount of annoyance and actual physical suffering to householders is avoided thereby. The benefits outweigh any difficulties occasioned by the delay in getting children away from the detraining points.

At some detraining points, owing to lack of sufficient staff, inadequate facilities, and the too-frequent arrival of trains, it was impossible to do more than carry out a hasty inspection of the children. As a result a few children were admitted to private houses when they ought to have been removed to hospital for a short stay and treatment.

It was originally intended that all children should be inspected prior to leaving their own district. This method will bring the best results, and for an future exodus steps should now be taken to make it perfectly clear that all children are in fact examined.

All the available facilities of the county council were placed at the disposal of the reception authorities for the work of actual reception. Some 14 assistant county medical officers and 40 health visitors took part.

It may not be inappropriate to say a few words about the billeting arrangements. In general, the work was very well done. Reports show, however, that there were a few undesirable happenings which could have been avoided, *e.g.*, the billeting of children in a home with an open case of tuberculosis, and in homes where health visitors could have informed the local authority that the householders were incapable of looking after their own children. Further, children were billeted in homes which were childless. As a general practice I believe this to be undesirable. In only a few cases can the children be sympathetically received and understood.

You may recall an amusing cartoon in "Clinical Excerpts," in which a domestic servant addresses her old-maid mistress who is still in bed in these terms: "Please, miss, you've got to have two children—the man's downstairs." The infliction of two children would be a tragedy not only for the old maid but for the children themselves.

There is now a movement to establish school camps for evacuee children. They will be residential, and all the activities of school will take place therein. The idea has much to commend it. It will not, however, reduce very much the number of children billeted in private houses.

It is convenient to deal with the problems consequent upon the reception of evacuees under the following heads:—

(*a*) Personnel.
(*b*) Unaccompanied school children.
(*c*) Mothers and young children.
(*d*) Expectant mothers.
(*e*) Hospital accommodation for infectious diseases and other conditions.

*A paper read (prior to the publication of Memo. Ev. 8) to the North-Western Branch, Society of Medical Officers of Health, February 9th, 1940.

Personnel

It is clear that the advent of 17,000 school children and 4,600 mothers and young children into the county council area called for additional staff or a change in the method of working. Requests were made with some frequency to evacuating authorities for the assistance of doctors and nurses. It was, however, some weeks before any substantial assistance could be given. During this period there was in the reception areas an almost complete cessation of routine medical work. As the number of evacuees decreased the amount of of assistance we received increased, until in some areas we were overstaffed. Evacuating authorities have now recalled the surplus.

Our difficulties were increased by the fact that at the outbreak of war three assistant county medical officers and one dental surgeon who operated in reception areas were called to the colours. In addition to their work as assistant county medical officers, the three doctors were medical officers of health of one or more county districts which were reception areas. One of tnem was the medical officer of health of one urban and two large rural districts.

The staff loaned to us were detailed as far as was possible to work amongst evacuees from their own authorities. In some areas, however, it was clear that for them to be used to the best general advantage they would have to undertake additional work, including the care of children normally resident in the reception area. An example of the arrangements made is that of an assistant school medical officer who in addition to looking after some of his evacuees and the normally resident children in three sanitary districts, also acted as medical officer of health of the districts. Another example is that of a dental surgeon who took over the area of a county council dental surgeon who was called to the colours. He spends about 90 per cent. of his time with county children and only 10 per cent. with evacuees. It can be said that on balance the evacuating authorities do not lose by these arrangements. Nevertheless, they merit the gratitude of the reception authorities for agreeing so readily to the arrangements made.

An interesting arrangement was made with the Borough of Crosby whose evacuees were received into the Formby Urban District and parts of West Lancs rural district. Owing to the proximity of these districts to Crosby, it was possible, after the lapse of a few weeks, to arrange for Crosby to take over the supervision of the whole of its evacuees.

Unaccompanied School Children

All the facilities of the school medical service were made available for this class of evacuee. Additional sessions were set up at school clinics, and in a few areas new temporary clinics were established. In rural areas treatment was provided at child welfare centres, where convenient, and where these did not exist, treatment was given at the school by the school nurse on her weekly visit. For interim treatment in these rural areas it was necessary to rely on the householder, or, if the condition called for nursing assistance, on the district nurse. It may be of interest to mention that the County Medical Officer agreed with the Superintendent of the Lancashire County Nursing Association that a sum of 1s. 4d. was a reasonable amount to pay for a visit plus any dressing required. This, of course, was not binding on the local authority.

Very good use was made of the clinics by the foster parents partly because they did not desire to undertake more responsibility than necessary and partly because the clinics acted as information bureaux.

Condition of Children on Arrival

In one or two residential areas it was necessary to set up clinics which would not have been required by the ordinary population. This was for the daily treatment of scabies, dirty heads, etc.

A great deal has been written about the state of the children on arrival. It is said that the majority of them were dirty, lousy, covered with sores and bedwetters by choice, and that some of them were all these things. The picture is too highly coloured. It must be admitted that some children were dirty, lousy, etc., but not to the extent that the general public has been led to believe.

One large reception authority found that 500 of 20,000 had dirty heads, and that it was necessary to set up a cleansing station—a state of affairs never previously known! The percentage is 2·5 only. It is interesting to note that one school medical officer came to the conclusion that most of the dirty heads remained dirty not because they were neglected, but because inefficient combs were used. It is important that tact should be used in informing foster-parents that a child's head needs cleaning. A curt note such as one might address to a responsible parent must be avoided.

With regard to bedwetting, some years ago one of the assistant county medical officers reported that in his area—which is now a reception area—enuresis was a common complaint, and that he found that in some infant schools 5 per cent. of the children were subjects: if it had not been for this medical officer's careful enquiry, we should have had no idea that the condition is so prevalent in Lancashire, because parents do not boast about it. Foster-parents do, however, publicly lament the fact that an enuresis victim has been billeted upon them. I do not know what weight should be given

to the several factors leading to enuresis. It seems certain, however, that amongst the evacuees the psychological factors were predominant.

Scabies was introduced to one or two county areas where previously it had not been known. In several instances the householders themselves became infected and this caused an uproar.

The sending of one or two cases of vulvo-vaginitis also caused a stir.

To sum up the matter of these alleged dirty evacuees, there is no doubt that some of them were dirty. At the same time I do not think they were appreciably dirtier than a sample we ourselves could have provided from certain of the county districts which are thickly populated and industrial in type. We must remember that a large number of evacuees were received into areas which may be classed as residential. The classes did not mix and there was an occasional outcry. It is doubtful if evacuation has done anything to promote a sympathetic understanding between poor town dwellers and country residents.

Just a few words on nutrition. There is no doubt that in this respect evacuees were inferior to the children normally resident in the area. It was possible while passing through a residential district just north of Preston to pick out the evacuees. They had not the colouring and the posture of the children normally resident. In one area a school medical officer reported that 13 per cent. were in a state of subnormal nutrition. All medical observers agree that the children have improved considerably since they came. In a number of instances chronic chests, including asthma, have cleared up.

The improvement is due to a variety of factors—fresh air, regular habits, more sleep, and better food. In this connection there are two points worthy of mention. In one large reception area where an investigation was made it was found that the proportion of evacuees taking milk had increased fifteen-fold. This was almost entirely due to householders providing money for the evacuees to take part in the milk-in-schools scheme. The second point is that very few foster-parents were willing to pay for communal meals for their evacuees. This may have been due to the fact that at 5d. a meal they were too dear.

We did not receive any special classes of children into the county council education area. With regard to "difficult" children for whom separate homes should be provided, these were few and in due course they returned home.

Dental Condition

A word or two on the dental condition of the evacuees may be of interest. In the case of children who had been in homes, *e.g.*, Styal Cottage Homes, the teeth were perfect. The old-fashioned copper amalgam fillings had proved infinitely more durable than the more pleasing-looking silver amalgam.

In West Lancashire the average treatment received by each casual was the removal of one permanent and three temporary teeth.

One dental surgeon reports that he notices no difference in the quality of the teeth of evacuees and children normally resident. He was surprised to find so many carious permanent incisors in country districts.

Arrangements have now been made for evacuees to be included in our routine dental inspections, and for emergency treatment to be given by private dental surgeons.

Mothers and Young Children

The number of mothers and young children evacuated to the county maternity and child welfare area was comparatively small, about 5,000. The facilities already provided by the county council were sufficient to meet all needs. Health visiting was intensified.

One or two features are worthy of mention. These mothers and children very rarely settled down and there was a very rapid return home. In one area, out of 370 there is now only one mother left. She will stay only until her husband has made up a quarrel with her.

The arrival of mothers and young children without prams was a serious drawback, as also was the absence of baths in most rural areas.

From reports received it does not appear likely that the billeting of mothers and young children will ever be successful. There are too many factors militating against its success. One possible way of achieving success on a large scale is for the woman to find daily work and for the child to be placed in a day nursery. In the area of the county as a maternity and child welfare area there are only one or two areas where the establishment of a day nursery would be justified. The possibility is being explored at present in conjunction with the local authorities concerned. If it is decided to set up one or more day nurseries, the county council will provide the necessary medical and nursing visiting staff. Experience in other areas has shown that close supervision is essential.

Expectant Mothers

In all 161 expectant mothers were received.

The responsibility for making arrangements for their care was placed upon the local supervising authority. In the administrative county reception areas this is the county council.

A number of the larger County Districts, however, are autonomous for maternity and child welfare purposes, and these were in a position to undertake the care of those expectant mothers evacuated to their areas and also to receive a few from the adjoining areas of the county council. The Borough of Colne, for example, has its own very efficient maternity hospital.

The county council established two maternity homes, one in a home for aged priests (with eight beds) and another in a convent (with 40 beds). These homes had to be equipped and staffed. There was a little difficulty in obtaining suitable staff for the homes. We placed two of our best salaried midwives in charge of them. It was to be thought undesirable to employ temporarily midwives who had surrendered their certificates, notwithstanding the Minister's permission to do so.

With regard to ante-natal work and medical assistance when necessary, the arrangements already in existence were sufficient. There was no need to appoint salaried part-time consultants. It was thought that a cheaper and equally efficient way would be to employ existing consultants on terms already agreed for ordinary peace-time purposes.

Hospital accommodation for complicated cases would have been a problem if we had received large numbers of expectant women. The provision of an emergency maternity hospital would have been necessary. As it was, it was realised that the maternity units in reception and neutral areas would be able to take all abnormal cases.

The two homes which were established have now been closed. The premises, however, have been earmarked so that they may be taken over promptly if the need should arise again.

In a few of the very rural areas remote from clinics, it was necessary to make arrangements with the District Nursing Association to undertake ante-natal work and with the nearest hospital taking maternity cases for the delivery.

Our figures are too small for any statistical purposes, but it might interest you to know that in Blackpool there were over 1,000 births with four maternal deaths.

Hospital Accommodation

We were informed just before the war that it was very likely we should receive in the administrative county about 150,000 individuals—100,000 school children and 50,000 mothers and young children. These would have been added to the normal population of 720,000 in the reception areas.

As a consequence it was necessary to review the hospital accommodation, and particularly that for infectious diseases.

With regard to infectious diseases, the County Medical Officer consulted with the medical officers of health of the reception areas and with the joint boards. The aim was to be in a position to provide, if required, beds on a basis of three to four per 1,000 of the population including the evacuees.

The arrangements made varied with local circumstances and while things were settling down there were several temporary expedients. Briefly, the steps taken were :—

(*a*) The securing of additional beds and bedding so that hospitals with available accommodation could take more cases.

(*b*) The earmarking of premises which could be used to accommodate any overflow of cases from the infectious diseases hospitals. These premises were chosen in close proximity to the existing hospitals so that they could be regarded as an annexe and be staffed and administered by the main hospital.

(*c*) The establishment of auxiliary infectious diseases hospitals at which cases of minor infectious disease could be treated, *e.g.*, measles, chickenpox.

(*d*) The restriction of admission to the peace-time infectious diseases hospitals to cases really needing nursing. Mild scarlet fever cases, unless occurring amongst evacuees, were not to be admitted. It was decided that all cases of infectious disease amongst evacuees should be sent to hospital.

There are two developments worthy of mention. In the first place, in two very large areas of the county a " pooling " of beds has been arranged in respect of those hospitals dealing with major infections. For these areas, which include county boroughs, there has been set up in the office of the County Medical Officer a bureau, to which daily returns of bed states are made under three heads—diphtheria, scarlet fever and others. The medical officers of health of the local sanitary authorities covered by these hospitals, in the event of the hospital to which their cases are normally taken being full, get in touch with the bureau and are told where vacancies exist.

In the second place, two large buildings have been taken for the reception of cases of minor infectious diseases. One in layout and equipment is almost ideal for the purpose. This has nearly 200 beds. The other auxiliary hospital has about 60 beds.

Both these auxiliary hospitals are administered by the county council. In addition to evacuees, service cases are for the present being received.

It was anticipated that many cases of infectious disease would occur, and that some valuable epidemiological data would be collected. Actually,

there have been no major outbreaks and little of interest has occurred.

With regard to diphtheria, the medical officers of health of evacuating authorities found themselves unable to give any precise information as to the number of evacuees which had been immunised. In one reception area where a careful inquiry was made it was found that 50 per cent. of the evacuees had been immunised. After evacuation, there arose in one or two districts cases of diphtheria, and some of these were attributed by the medical officers of health to immunised evacuees who were found to be " carriers." There has, however, been no detailed inquiry.

It is interesting to record that in one Fylde village an extensive outbreak of measles spared all evacuees, as did an outbreak of mumps in an adjoining village.

Non-infectious Cases

With regard to hospital accommodation for non-infectious diseases, use has been made of the hospitals already serving the areas, supplemented where necessary by the establishment of " sick-bays."

At first it was thought that there might be a shortage of hospital beds by reason of the Ministry's reservations. It was soon made clear, however, that all available hospital accommodation had to be pooled and used to the best advantage to meet the individual needs of the area whatever they happened to be.

As in the case of infectious diseases, there is in the office of the county medical officer a bureau covering the 26 hospitals in the administrative county. Daily returns of bed states, etc., are made to the bureau.

A number of local authorities set up sick-bays. Experience showed that most of them were unnecessary and but few now remain. It must be said, however, that when they were established there was every reason to suppose that they would be needed, and in any future evacuation they should again be provided, preferably on a regional basis.

I have outlined the problems confronting us in the Administrative County and have indicated some of the steps which were taken to meet them. I have avoided, in general, any mention of Local Authorities by name, for where there are no names there can be no pack drill. I should, however, like to put in a plea to all Evacuating Authorities for speedy medical and nursing assistance if another evacuation takes place.

As public health officials we are not concerned very much with the psychological reactions of householders to compulsory billeting. I am certain, however, in my own mind that adult females cannot be billeted on householders successfully and that other arrangements should be made. I feel also that the idea of residential camps for children should be developed so that billeting on private individuals is resorted to only when they are willing to receive them.

Public health services have in several directions been tested to the full. It is, I think, true to say that the services, with some extension here and some modification there, have met the demands placed upon them.

I believe the large scale social experiment of evacuation has had one effect which will endure for our time at least. Not only the general public, but highly placed non-medical administrators also, have had demonstrated to them the large part played by the Medical Officer of Health in the welfare of the people. The extent of his work and the vast field he covers had not been adequately appreciated previously.

THE PUBLIC HEALTH IN WAR-TIME

Sir Arthur MacNalty, Chief Medical Officer of the Ministry of Health, giving a Chadwick Trust lecture in London on February 20th, on " The Public Health in War-Time," said that all measures directed towards the maintenance of national health and the prevention of disease bulked largely in the war effort of this country. Fortunately, in successive years of peace we had learned that the attack on disease was more than a question of doctor and patient. It comprehended a thousand matters of environment and social reform in which many agencies played their part. All this complex organisation was bent now to health problems in a country at war, and our experience of co-operative effort was of considerable aid in this unprecedented work.

The civil authority had the responsibility of hospital provision for civilians and for men of the fighting services so far as they were not provided for by their own hospitals. It had organised a vast emergency medical and nursing service, and had coped with countless medical problems of the evacuation scheme. The civilian arm had yet to receive its baptism of fire. If that stern ordeal came, he had little doubt it would endeavour to keep the flag of national health flying in the storm of war as zealously as it did in the sunshine of peace.

Sir Arthur said that in every war of which there were records, from the days when Sennacherib invaded Judah onwards, the wastage from disease had outnumbered many times the losses from killed and wounded. In the last war, admissions for disease in Egypt and Palestine, Macedonia, Italy and Mesopotamia were 14·6 times as numerous as those for wounds (988,393 compared with 66,271). Even in France, where perfection of

instruments of war and constant fighting greatly augmented the numbers of wounded, the admissions for disease were still much the more numerous (980,980 compared with 574,803). In former days when military hygiene was either non-existent or in its infancy, the incidence of and mortality from disease among troops on active service must have been proportionately much higher.

Civilian Health.

Apart from the pandemic of influenza which swept its tidal wave of destruction in Great Britain throughout the winter of 1918-19, the record of civil public health in the last war was good. The population increased and the infant mortality rate was lowered. The war itself saw the beginnings of those personal health services which had done so much within the last thirty years to improve the health of the community. The public health service had a stern apprenticeship to war duties. It co-operated fully and efficiently with the fighting services; it was on the alert to deal with epidemics and war diseases and at the same time it maintained environmental hygiene, started new health services and with depleted staffs looked after the civil population.

National health had to be secured in the present war. One of the Ministry of Health's first tasks was to secure co-operation between the health services and the fighting services. The Ministry and local authorities were doing their best to see that infectious disease accommodation was available for military and Air Force cases, with due respect to their increased concern for cases arising among civilians.

To meet the new menace of air attack the Ministry of Health had to take two other important measures of protection. One was the organisation of an emergency medical service, in itself a stupendous task. The other was the evacuation scheme.

The conditions of modern warfare were so different from the last great war that there were no precedents or experience as guidance. Consequently experiments had been necessary in the subjects of medical services and evacuation. This state of affairs had naturally exposed the Ministry of Health to much criticism. The medical profession and the hospital services of Great Britain had been revolutionised from the highest motives of patriotism. On September 3rd, 1939, doctors, nurses and officials stood at their posts prepared to deal with the casualties of a *Blitzkrieg* from the air. Then came anti-climax. Days lengthened into weeks and weeks into months and no intensive air raids came. There was naturally a declension of spirits and some dismay at an upheaval involving personal hardship and financial losses in many instances, which events seemed to prove to be unnecessary.

"In this matter," said Sir Arthur, "the Government are rightly impenitent. They could have taken no other course and they would have been exposed to blame if the war had been ushered in by intensive air raids and numerous civilian casualties for which imperfect provision had been made.

"In the months which have elapsed since war began the Ministry have been busy in consultation with representative leaders of the medical profession in making adjustments in personnel and so forth to ease the situation. Many of the hospital beds have been occupied by civilian cases, others are occupied by sick service patients from France, closed hospital wards in London have re-opened, and part-time services for consultants have been set up. In all this work to meet the changing circumstances of the time, one consideration has been paramount—the keeping of the Emergency Medical Service in being with powers of speedy expansion to meet the demands of air raid casualties."

Children's Health.

In a reference to the medical aspect of the evacuation scheme, Sir Arthur said that it was not always appreciated that the shifting of so large a proportion of the child population and others entailed considerable and far-reaching planning and organisation. It was not surprising in this national game of General Post that misfits occurred and that concern was expressed at the standards of cleanliness and conduct found in certain of the evacuees. But blame for these things should not be assigned to the inadequacy of the public health and school medical services. They were rather arguments for the increased support and extension of these services. The Annual Reports of the Chief Medical Officer of the Board of Education for years had recorded the state of cleanliness of school children, had noted improvement and deplored the degree of uncleanliness which still persisted.

"In some districts," he concluded, "it is found necessary to cleanse children several times in the course of a year. The root cause of these conditions lies in the home of the child. They mean that slum clearance has not yet gone far enough, that low standards of living still persist and the lessons taught in the school and clinic sometimes fail to reach the older generation.

"As with the Emergency Medical Service the Government Evacuation Scheme should not be condemned because events have pursued a different path from the expected one. Who can say that these necessary and far-reaching precautions played no inconsiderable part in the present freedom in this country from enemy air raids? Furthermore, they accustomed the nation to the problems of evacuation—problems which the progress of the war may require us to face again at a moment's notice, but with better and wider placed resources."

Professor E. P. Cathcart is delivering two Oliver-Sharpley lectures on "The Mystery of Alimentation," on March 12th and 14th, at 2.30 p.m., at the Royal College of Physicians, Pall Mall East, S.W.1.

Air-Commodore H. E. Whittingham, who has recently been promoted to the acting rank of Air Vice-Marshal, has been appointed Director of Hygiene to the Royal Air Force Medical Service.

Dr. James Bennett, who was due for retirement shortly, as Medical Officer of Health for the Lymm district, has consented to continue in office for a further period of 12 months.

Correspondence

SUPPLEMENTARY MEALS IN SCHOOL.

To the Editor of PUBLIC HEALTH.

SIR,—I have read with great interest Dr. Buchan's report to his Council on school meals reprinted in your January issue. Would you be kind enough to permit me to make a few observations on the constituents of his dietary. As you said recently in a leading article "we are as yet only on the fringe of knowledge" and many figures assessing the requirements of various foodstuffs can be looked upon as little more than a courageous guess. For this reason it is far from easy to produce any form of supplementary meal which is likely to please all parties. I would, nevertheless, with diffidence and hesitation, like to ask Dr. Buchan whether he does not feel that his daily dietary might contain more first-class protein and less bread. In his table, he shows that with breakfast, dinner and one-third of a pint of milk, he is providing a total of 26·5 grammes of animal protein which he says represents nearly the total requirements of a child of ten years. I am inclined to think that this is on the low side. The British Medical Association (1933) diet for such a child contains 35·1 grammes, the League of Nations (1936) Report and the Advisory Committee on Nutrition (1937) Report (admittedly for children 12 to 14 years) both give the figure as 56 grammes. I hesitate to put forward my own findings in association with those of such notable Committee Reports, but you may remember that in my publication in your journal last year (July, 1939), the rate of growth among the children of families whose diet was known, suggested that the B.M.A. (1933) diet fell at least short of 64 per cent. of physiological needs. The correlation between growth and animal protein (April, 1939) showed that this deficiency is mainly in respect of animal protein foods. With these figures in mind, I do feel that we are not justified in placing the animal protein requirements of a child of ten below 50 grammes a day.

In this connection, we should particularly bear in mind the fact that animal protein is the first constituent to disappear from the diet as family income declines with the growing family and it is the child of such a family who will be most likely to participate in supplementary meals. It is, of course, appreciated that animal protein is expensive and the virtual doubling of the animal protein content of Dr. Buchan's daily dietary would cause the cost to rise appreciably above 7·14 pence a day. It is possible that this difficulty might be met to some extent by the use of dried separated milk. This form of milk may be obtained economically, and in the view of the following quotation from the Advisory Committee on Nutrition, 1937, Report, its use can no longer be deprecated. The Report says:—

> "In view of the cost of distributing liquid skimmed milk, we suggest that the dried state is the most convenient form for general use. Moreover, in this state it can be kept for long periods and it has the additional advantage of being safe. Dried skimmed milk is particularly suitable for puddings, bread, cakes and confectionery."

I would suggest that 27 grammes of animal protein could be added by the addition to each child's daily diet of 3 ozs. of separated milk powder; this would bring the total in Dr. Buchan's diet to just over 50 grammes.

The second point I should like to ask Dr. Buchan is about the quantity of cereals in his meals. It is, of course, practically unknown for a working class family to exclude bread from the diet. Indeed, in poorer families bread constitutes the large bulk of the diet. Would it not, therefore, be of value to exclude this commodity. The need to limit the intake of cereals is the more necessary since they dull the appetite for more important foods. It is, of course, exceptionally difficult to exclude bread from the diet of children and particularly those who have become accustomed to large amounts at home, but this cannot be an insuperable difficulty. It should be remembered that potatoes, an equally valuable source of energy, are now known to provide appreciable amounts of certain protective foods, so that in some meals they can be given as an appropriate substitute for bread.

I am, Sir,
Yours faithfully,
FRASER BROCKINGTON,
Deputy County Medical Officer of Health.

Office of the County Medical Officer of Health,
Shire Hall, Warwick.
February 5th, 1940.

We learn with great pleasure of the election of Dr. Waller S. Leathers, professor of public health and director of The School of Hygiene, Vanderbilt University, Nashville, Tennessee, as the next president of the American Public Health Association.

Professor Leathers has been a Fellow of our own Society since his visit to England in 1925, and many of our members who have happy recollections of meeting him at that time will wish to congratulate him on the honour which has been accorded him by his colleagues in the United States.

The National Society of Day Nurseries, 117, Piccadilly, W.1, have issued two new booklets, "How to Start and Run a Nursery," and "Toddler's Diet Book for Mothers and Children." The latter is by Lady Reading and includes notes by Dr. Alan Moncrieff on war-time diets. The price of each is 6d.

Dr. T. N. V. Potts (County Medical Officer of Health for the West Riding C.C.) will deliver a Chadwick lecture at the Livingstone Hall, 42, Broadway, S.W.1., on Tuesday, March 12th, at 2.30 p.m., on "The Rôle of Women in the Public Health Service To-day." Miss Zoe Puxley, a Chadwich trustee, will preside.

The Royal Institute of Public Health and Hygiene has awarded the Harben Gold Medal for 1940 to Sir Leonard Hill, F.R.S., M.B., as having "rendered eminent service to public health"; and the Smith Award for 1940 to Sir William Savage, M.D., D.P.H., the late County Medical Officer of Health for Somerset. This award is given triennially to the Medical Officer of Health who has, in the opinion of the Council, "achieved most noteworthy work in the discharge of his duties."

FIRST AID POSTS AND WELFARE CENTRES

On February 19th H.M. The Queen visited the Kensington first aid post in Addison Road at which an infant welfare centre has been established. This visit has drawn attention to an interesting experiment by which first aid post personnel have been encouraged to take a part in the welfare work now carried on in the same premises as the post.

There are normally eight welfare centres in Kensington, five of which were closed after the evacuation of mothers and children from London. One of the closed centres was shortly afterwards re-opened, but at the beginning of the year four of the centres still remained shut. Two of these were re-opened in January within the premises of first aid posts near the original centres. Precautions were taken to ensure that there should be no interference with the primary duty of the post, none of the rooms in which first aid would be given being used for welfare centre purposes. Should a raid occur during a session, the mothers and children would leave the post for an adjacent shelter.

This combination of A.R.P. and maternity and child welfare seems to be an ingenious solution of a double problem which must be causing perturbation among many local authorities in evacuation areas. On the one hand there is a lack of staff to deal with the normal peace-time work among the returned evacuees and on the other a large number of A.R.P. personnel kept in forced inaction owing to the absence of air raids. The A.R.P. staff are now fully trained in their duties and anxious for fresh activities. Recreational facilities, although useful, do not solve the problem, which calls for work of constructive value. Without this work there is the risk of staleness or of the volunteers leaving their posts to find more active occupation elsewhere.

The temporary accommodation of welfare centres at first aid posts has the advantage of economy in heating, lighting and rent, and increases the staff available for the welfare sessions by the health visitors attached to the post, assisted by the A.R.P. personnel. In Kensington the latter are assisting at the welfare sessions with enthusiasm, thus gaining a useful insight into the health services.

At the conclusion of her visit the Queen offered her congratulations to Dr. James Fenton (M.O.H., Kensington) on the idea and on its obvious success in practice.

The Kensington method of combining the function of first aid post and welfare centre is, it will be noted, in line with the suggestion made by the Ministry of Health circular 1950, of January 8th, in regard to a similar arrangement for school clinics taken over for A.R.P. purposes.

Dr. W. A. Bruce Young has tendered his resignation, on grounds of ill-health, to the Winchester City Council, whom he has served as Medical Officer of Health for 25 years.

Dr. S. Nicol Galbraith is resigning his appointment as Medical Officer of Health for the S.W. Kent united district, owing to ill-health.

Obituary

JOSEPH BUCK, M.D., L.R.C.P. & S., D.P.H.

We much regret to announce the death on January 23rd of Dr. Joseph Buck, formerly Medical Officer of Health for the Hunslet Rural District. He was one of the most senior members of the Society, of which he had been a member since 1896. He was born at Whitby in 1863 and at the age of 16 apprenticed to a local physician, who was M.O.H. of Whitby at that time. Later, he was an assistant in Leeds, and in 1888 took his first qualifications in Edinburgh and Glasgow. In 1893 he secured the part-time appointment of M.O.H. at Hunslet, which work he carried on, together with a busy general practice, until he retired eight years ago.

Dr. Buck was a man who endeared himself by his personal character to public health colleagues, and he was a former president of the Yorkshire Branch of the Society. He was elected to Life Fellowship of the Society a few years ago.

ALEXANDER DEY, M.B.E., M.B., C.M. (ABERD.).

Dr. Alexander Dey, whose death occurred on January 7th, at the age of 85, was one of the most senior members of the Society, of which he became a Fellow in 1903, and was almost certainly the oldest Medical Officer of Health in active practice when he retired from his appointment as M.O.H. of Glendale Rural District, Northumberland, last year; he had held this appointment for 40 years. He qualified M.B., C.M. at Aberdeen in 1881.

Dr. Dey was a famous and outstanding character in his district and will be long remembered by his colleagues in the Northern Branch.

VINCENT J. GLOVER, M.D., CH.B., D.P.H.

We announce with regret the death at the age of 64 of Dr. V. J. Glover, Medical Officer of Health for the Borough of Crosby since its formation in 1937, and previously M.O.H. for the Waterloo and Seaforth Urban District, which became a part of the new Borough. Dr. Glover qualified at the Victoria University in Manchester in 1901; took the M.D., Liverpool, in 1898; and the D.P.H. in 1921, a year or two after his public health appointments.

He was an active and conscientious medical officer of health, and amongst his recent work will be remembered an intensive campaign against scarlet fever and diphtheria, which he described in PUBLIC HEALTH for April, 1938.

He leaves a widow, two sons and a daughter, to whom we extend our sympathy.

A well-known figure will be lost to public health through the retirement, at the end of June next of Dr. H. Hyslop Thomson, who has been County Medical Officer of Health for Hertfordshire since 1916, and for three years before that was Tuberculosis Officer in the same county.

BOOK REVIEWS

Recent Advances in Medical Science: A Study of their Social and Economic Implications. By Sir EDWARD MELLANBY, K.C.B., F.R.C.P., F.R.S., K.H.P. The Rede Lecture. Cambridge University Press. 1939. Price 2s. 6d.

As one would expect from such an experienced investigator and logical thinker as the present Secretary of the Medical Research Council, this lecture contains many casual observations which would bear expansion.

Sir Edward crystallises the medical and political spirit of the age with his remark that probably at no time in the world's history has the average citizen felt so insecure against death by violence and at the same time so secure against death by disease. There must surely be something wrong with the civilisation which permits such glaring contradictions. From the strictly medical point of view the fight against disease has progressed rapidly and it is perhaps not unnatural that the author should attribute the most rapid and complete advances to the sphere of chemistry. It is in many respects true that all the biological sciences are fundamentally chemistry. The biochemist has given the world very potent agents in the treatment of disease—notably the sulphanilamide group and the chemical agents from certain glands.

The author rightly points out that public health administration necessarily lags behind medical discoveries, and he is perhaps also right in attributing many of the improvements in the social life of to-day to the effects of fashion. He is all in favour of increasing the benefits of preventive medicine, and he can foresee the day when the State will guarantee the provision of a sufficiency of the protective foods to all school children. It is common knowledge that the basis of private and hospital practice is changing rapidly, but Sir Edward points out that the change is really two-fold. On one hand the increasing complexity of the methods of medical diagnosis and treatment demand bigger and better hospitals. Added to this there is the slowly acting factor of improvement in the health of the young and middle-aged, and the increasing tendency to longevity. This factor may make some types of hospitals unnecessary, and will certainly increase the demand of beds for the aged.

It is perhaps timely that the author should point out that in the past State action in the sphere of public health has depended largely on political considerations. He can foresee no very marked changes in the domain of preventive medicine, but he is convinced that in the future State action should be determined solely on the possible advances which the medical and scientific discoveries of the time may warrant.

Black's Medical Dictionary. By J. D. COMRIE, M.A., B.SC., M.D., F.R.C.P. (Ed.). 15th Edition. 1939. London: A. and C. Black, Ltd. pp. 1006, with a special supplement on air raid casualties. Price 18s. net.

This well-known reference book was revised, and had added to it a supplement on air raid casualties, before the recent regretted death of its Editor. It is a useful volume, especially so for laymen who have to show at least a book acquaintance with medical terms and treatment of disease.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1865. (Encloses Memo. 225/Med. Price 2d. net). *Typhoid Fever.* Encloses for the information of Local Authorities a memorandum on Typhoid Fever.

Circular 1896. (Encloses P.R. & O. of 1939, No. 102,577.) Price 2d. net. *Public Health: Notification of Infectious Diseases.* Encloses copy of the Measles and Whooping Cough Regulations, 1939, requiring the notification of all cases of measles and whooping cough in England and Wales (excluding London) during the period of the emergency.

Circular 1806A (encloses P.R. & O. of 1939, No. 102,580.) Price 1d. net. *Public Health: Notification of Infectious Diseases.* Encloses copy of the County of London (Measles and Whooping Cough) Amendment Regulations, 1939, requiring the notification of all cases of measles and whooping cough in the County of London.

Circular 1904 (encloses S.R. & O. of 1939, No. 1296.) Price 2d. net. *Government Evacuation Scheme.* Addressed to Clerks to Reception Local Authorities enclosing copies of the Compensation (Defence) Notice of Claim Rules 1939 (S.R. & O 1296 of 1939) and describing the procedure for making claims for compensation in respect of premises requistioned for the purposes of the Government Evacuation Scheme.

Circular 1905. *First Aid Posts.* Requisition for returns of equipment at First Aid Posts. Issued to all scheme making authorities.

Circular 1906 (encloses Memo. 2/Med.) Price 2d. net. *Influenza.* Encloses copy of a revised edition of the Memorandum on Influenza (Memo. 2/Med.). The Memorandum contains a statement of the principal known facts regarding influenza, a brief review of the history of the disease in this country in recent years, and advice as to measures of personal protection. It also enumerates the administrative measures which may be taken by Local Authorities to prevent the occurrence of the disease and to minimise the spread of infection.

Circular 1907. *Government Examination Scheme.* Addressed to Local Authorities. States that provision of clothing for evacuated children is responsibility of parents and outlines procedure to be followed by parents in receipt of Unemployment Benefit, Unemployment Assistance or Public Assistance.

Circular 1908. *Housing.* Keeping of pigs and poultry on Local Authorities' Housing Estates.

Circular 1911. *Residential Treatment of Tuberculosis —Costing Return*—1988-89. Informs Clerks to Voluntary Associations administering approved Sanatoria that it has been decided to suspend during the period of the War the publication of all Costing Returns, and that if a return for above period had not been furnished, no further action, so far as the Department is concerned, is necessary.

Circular 1918 (encloses Memo. Ev. 6.) *Government Evacuation Scheme.* Addressed to Receiving and Evacuating Local Authorities. States that everything possible should be done to discourage those who have been evacuated returning home. Various suggestions for the consideration of Local Authorities are outlined in the accompanying memorandum.

Circular 1914. *Civilian Deaths Due to War Operations.* Modifies procedure set out in Circular 1779 as to notification of civilian deaths due to air raids.

Circular 1916. *Government Evacuation Scheme.* Addressed to Receiving and Evacuating Local Authorities. States that arrangements for provision of communal meals should be made by the Local Education Authorities with the co-operation of the Local Authorities.

Circular 1917. B. of E. *Circular* 1488. *Government Evacuation Scheme.* Requests Local Authorities and Local Education Authorities to release where possible all village halls, club rooms, etc., which have been requisitioned in order that the social life and communal needs of districts should not be seriously curtailed.

Circular 1918. *Air Raid Precautions Act*, 1937. *Medical Staffs at First Aid Posts.* Issued to all Scheme Making Authorities. Deals with financial arrangements for personnel at First Aid Posts.

Circular 1919. Transmits to Local Authorities copy of a Memorandum of the Ministry of Supply on the collection of waste and dormant material.

Circular 1920. *Civil Nursing Reserve. Leave with pay in cases of Sickness or Injury.* Issued to all Voluntary Hospitals. Deals with regulations with regard to sick leave for members of the Civil Nursing Reserve serving in the Emergency Hospital Organisation.

Circular 1921. *Leave with Pay in Cases of Sickness or Injury for Volunteer Personnel of the Ambulance Services and First Aid Posts and for Members of the Civil Nursing Reserve.* On the same lines as Circular 1920, but issued to all Scheme Making Authorities.

Circular 1924. *Emergency Medical Services.* Issued to all Voluntary Hospitals in the scheme. Encloses revised regulations regarding payments at Voluntary Hospitals.

P.H.M.S. No. 90. Price 2s. net. *Reports on Public Health and Medical Subjects No.* 90. A study of the Nasopharyngeal Bacterial Flora of different groups of persons observed in London and South-east England during the years 1930 to 1937.

Report. Price 3s. 6d. Annual Report of the Chief Medical Officer of the Ministry of Health for the year 1938.

Circular 1905*a*. *First Aid Posts.* Arranges for the issue of a local reserve of equipment to each Metropolitan Borough and for its subsequent replenishmen from Regional Stores to the extent and in the manne indicated in Circular 1905.

Circular 1925 (encloses Form EV.23). *Government Evacuation Scheme.* Requests for particulars (on Form EV. 23) relating to premises occupied for the purposes of the Government Evacuation Scheme.

Circular 1926. *Personal Protective Equipment for Hospitals.* Issued to all scheme-making authorities. Gives particulars regarding the allocation of protective clothing to hospitals.

Circular 1928. *Personal Injuries (Civilians) Scheme*, 1939. Issued to voluntary hospitals. Gives information regarding claims in respect of injuries sustained by civil defence volunteers in the course of the performance of their duties.

Circular 1929. *Annual Leave for Volunteer Personnel of the Ambulance Services and First Aid Posts and for Members of the Civil Nursing Reserve.* Issued to County Councils, County Borough Councils, Metropolitan Borough Councils and other scheme-making authorities. Gives instructions to apply the information in A.R.P. Circular No. 336/1939 on the subject of annual leave with pay for members of the Civil Defence Volunteers, to all the above personnel.

Circular 1930. *Annual Leave for Members of the Civil Nursing Reserve.* Issued to Voluntary Hospitals. Gives instructions to hospitals regarding the annual leave of members of the Civil Nursing Reserve.

Circular 1933. *Health Services. Annual Returns.* Addressed to County and County Borough Councils, other Welfare Authorities and Tuberculosis Joint Boards. Forwards forms of annual returns required in connection with health services. The forms concerned are: M.C.W. 96 (revised 1939); M.C.W. 96*a* (revised); Hosp. 6 (revised); Hosp. 7 (revised); Hospital 8 (revised); T.145 (revised); T.137 (revised 1939); T.52C (revised 1939); V.D.(R) (revised 1939) and V.R.5 (revised).

Circular 1938. *Payment in Respect of Casualities.* Issued to all local authorities and mental authorities with hospitals in the emergency scheme. Gives full details regarding payment for any casualities in hospitals.

Circular 1938a. *Payment in Respect of Casualities.* Issued to all Voluntary Hospitals in the Emergency Scheme. The same details as Circular 1938.

Circular 1940. *Adoption of Children (Regulation) Act*, 1939. Encloses for the information of welfare authorities a copy of a circular issued by the Home Office to County Councils and County Borough Councils.

Memo. 226/*Med.* (price 2d. net). *Puerperal Sepsis.* Explains the nature of puerperal sepsis, how it is spread, the streptococci responsible and the technique of their identification and grouping.

Memo. 227/*A.G. and Form A.G.* 132. *Midwives* Act, 1936. Memo and application form for Instalment of Exchequer Grant under Sect. 4 (2) of the Midwives Act, 1936, in respect of the year 1939-40, issued to all local supervising authorities in England.

The Society of Medical Officers of Health.

NOTICES.

ORDINARY MEETING.

Notice is hereby given that an ORDINARY MEETING of the Society will be held at the Society's offices, Tavistock House South, Tavistock Square, W.C.1, on Friday, March 15th, 1940, at 2 p.m.

AGENDA.

1. Minutes of the last Ordinary Meeting held May 19th, 1939 (printed in PUBLIC HEALTH, June, 1939, p. 284).
2. Election of Fellows and Associates (see list below).
3. Any other business.

By Order,
G. L. C. ELLISTON,
Executive Secretary.

(Members will note that the above meeting is a purely formal one for the election of new members and that no paper or discussion is to follow.)

ANNUAL LUNCHEON.

A Luncheon, which has been arranged to take the place of the Annual Dinner which would normally have been held in November last, is to be held at the Piccadilly Hotel, W.1, on April 5th, 1940, at 12.45 for 1 p.m.

This date has been chosen as the Minister of Health, who is to be the Chief Guest, has intimated that he should be able to attend on that day. The President (Dr. F. T. H. Wood, *O.B.E.*) will be in the Chair, and will propose the toast of the Minister of Health, to which Mr. Elliot will reply. These will be the only speeches.

Ladies are to be included in the company. **Members are asked to inform the Executive Secretary as early as possible of their intention to attend, and to enclose a remittance for tickets at the same time in order to save additional clerical work at the central office.** Tickets will be 7s. 6d. each, inclusive of tips, but not wines and cigars.

It is hoped that as many members as possible will take this opportunity of honouring the President and of meeting their colleagues.

G. L. C. ELLISTON,
Executive Secretary.

CANDIDATES AWAITING ELECTION ON FRIDAY, MARCH 15TH, 1940.

AS FELLOWS.

Branch.	*Name.*	*Address.*	*Appointment.*	*Proposer and Seconder.*
E.M.	**Appleton, Sydney Kennaugh,** M.D. (MANCH.), D.P.H.	4, Sunnyside, Worksop, Notts.	A.C.M.O.H., Nottinghamshire C.C.	T. C. Garrett C. W. W. Jeremiah
Y.	**Atkinson, Victor Hugh,** M.B. (BELF.), D.P.H.	4, Oak Avenue, Bradford	Senior S.M.O., Bradford C.B.	John J. Buchan H. Heathcote White
E.M.	**Barclay, David,** M.B., CH.B. (ABERD.), D.P.H.	29, Devonshire Avenue, Allestree, Derby	A.M.O.H., Derby C.B.	Gordon Lilico Alex. Morrison
H.C.	**Bennett, Lily,** M.R.C.S., L.R.C.P., D.P.H.	Three Gates, Chiltern Road, Chesham Bois, Bucks.	A.S.M.O., Berkshire C.C.	W. W. Jameson E. V. Saunders-Jacobs
S.	**Capes, Alexander,** M.D., B.S. (LOND.), M.R.C.S., L.R.C.P.	The Summit, Bishopstoke, Hants.	M.S., The Mount San. & T.O., Hants. C.C.	H. Leslie Cronk W. J. Hart
H.C.	**Davidson, William Campbell,** M.D. (ABERD.), D.P.H., D.T.M. & H.	59, Station Road, March, Cambs.	A.C.M.O.H., Cambridgeshire C.C.	Thos. C. Lonie M. V. Joscelyne
N.W.	**Davies, Herbert Stanley,** M.B., B.S. (LOND.), D.P.H.	Norwood, Newton-le-Willows, Lancs.	M.O.H., Newton-le-Willows & Golborne U.D.	*Harold E. Watkins* H. Osborne
H.C.	**Dodds, Mabel,** M.B., B.S. (DURH.), D.P.H., B.HY.	Cornerways, High Street, Pinner, Middlesex	A.M.O.H., Harrow U.D.	Caryl Thomas E. V. Saunders-Jacobs
S.	**Drew, Frances Hughes,** M.B., CH.B. (EDIN.)	Isolation Hospital, Southampton	Junior M.O., Isolation Hosp. & San., Southampton	H. C. M. Williams William Stewart
E.M.	**Faith, Charles Norman,** M.B., B.S. (LOND.), D.P.H.	The Priory, Minster Yard, Lincoln	Temp. A.S.M.O., Lindsey (Lincs.), C.C.	W. S. H. Campbell H. G. H. Butcher
E.	**Franks, Harold,** M.B., B.S., B.HY. (DURH.), D.P.H.	14, Fredericks Road, Beccles, Suffolk	A.C.M.O.H., Essex C.C.	Hubert Pedler John W. Hunter
E.	**Graham, Eric William,** M.B., CH.B. (EDIN.), D.P.H.	Birkdale, 154, Henley Road, Ipswich	A.C.M.O.H., East Suffolk C.C.	John W. Hunter E. A. Whitney
H.C.	**Hanneson, Hannes,** B.SC., M.R.C.S., (MANIT.), M.R.C.S., L.R.C.P.	Kent C. C. Sanatorium, Lenham, Maidstone	Asst. M.S., Kent C.C. Sanatorium	C. Ponder A. Elliott
Sc.	**Mearns, Alexander G.,** M.D., B.SC. (GLASG.), D.P.H.	43, Verona Avenue, Glasgow, W.4	Lect. in Pub. Hlth., Glasgow Univ. & Clin. V.D.O., Glasgow	J. S. M. Gray W. G. Clark
E.M.	**Millar, Ernest Leslie Morgan,** M.B., CH.B., M.SC. (SHEFF.), D.P.H.	Court Cafe, Duffield Road, Allestree, nr. Derby	A.M.O.H., Derby C.B.	Gordon Lilico William E. Haigh
W.E.	**Sheehan, Brendan,** M.B., CH.B. (MANCH.), B.SC., D.O.M.S.	10, Greenbank Road, Liskeard, Cornwall	S.M.I. (Ophthalmic), Cornwall C.C.	R. N. Curnow F. J. H. Crawford
Y.	**Urquhart, James,** M.B., CH.B. (EDIN.), D.P.H.	Municipal Offices, Rotherham	A.M.O.H., Rotherham C.B.	William Barr N. M. Macdonald
S.	**Whalley, George Hamilton,** M.B., B.S. (DURH.), D.P.H., B.HY.	Borough Isolation Hospital, Southampton	R.M.O., Borough Isol. Hospital	H. C. M. Williams William Stewart

ASSOCIATE.

Y.	**Wood, Alan G.,** L.D.S. (MANCH.)	35, Osbert Road, Broome Lane, Rotherham	S.D.O., West Riding C.C.	J. Jackson W. H. Etheridge

NOTICES (continued)

MATERNITY AND CHILD WELFARE GROUP

President : Dr. Agnes Young (A.M.O.H., Warwickshire C.C.)

At a meeting of the Maternity and Child Welfare Group Committee held on Friday, February 23rd, 1940, it was decided that monthly meetings of the Group should, if possible, be resumed. Such meetings to be held alternately on a Saturday afternoon, and on a Friday evening during full moon. The following dates were agreed upon: —

March 16th, Saturday afternoon, luncheon-discussion at 1.15 p.m. for 1.30 p.m.
April 19th, Friday evening, at 7.30 p.m. Committee at 6.30 p.m.
May 18th, Saturday afternoon.
June 21st, Friday evening, at 7.30 p.m. Committee at 6.30 p.m.

In view of the number of important maternity and child welfare problems which are constantly arising, members of the Group are urged to note these dates and to make a special effort to attend the meetings.

Meeting on March 16th, 1940.

The first meeting will be in the nature of a reunion and will take the form of a luncheon discussion to be held at the *Lansdowne Club, Fitzmaurice Place, Berkeley Square, London, W.1* (by kind permission of the Secretary) at 1.15 for 1.30 p.m. (price 3s. 6d., excluding drinks). Short papers, followed by a discussion, will be read on "Maternity and Child Welfare Experiences and Problems Arising from Evacuation." The names of the guests of honour and of the speakers will be announced later. It is hoped that members will come prepared to discuss relevant matters of interest.

E. VIRGINIA SAUNDERS-JACOBS,
for the Hon. Secretary.

Town Hall,
Woolwich,
London, S.E.18.

Reports of Branch Meetings

HOME COUNTIES BRANCH.

President: Dr. E. W. Caryl Thomas M.O.H., Harrow) U.D.C.).
Hon. Secretary : Dr. C. E. E. Herington (M.O.H., Dagenham U.D.).

A meeting of the Home Counties Branch was held at Tavistock House South, Tavistock Square, London, W.C.1, on Friday, January 19th, 1940, at 2.30 p.m. There were present the President and twenty-one members.

The minutes of the meeting held on July 21st, 1939, were read, confirmed and signed.

Dr. E. W. Caryl Thomas, the President-elect, was then installed in the chair and suitably replied.

Dr. Maddison proposed, and Dr. Bramley seconded, a vote of thanks to the retiring President, Dr. A. T. W. Powell, and this was passed with acclommation.

Treasurer's Balance Sheet.—Dr. Tapper then presented his balance sheet for the Session 1938-39. Drs. Ball and Maddison were appointed auditors and signed the Treasurer's statement. Dr. Underwood proposed and Dr. Powell seconded the adoption of the Balance Sheet and this was carried unanimously. It was agreed that approximately £90 be invested in Defence Loan.

Nominations for Life Membership.—It was unanimously agreed that the following members should be recommended for Life Membership of the Society: Dr. A. McMaster and Dr. A. Senior.

Persons Contaminated by Gas.—Mr. Elliston explained details of negotiations with the Ministry of Health *re* the proposed policy on the provision for persons contaminated by gas.

Presidential Address.—Dr. Thomas then gave a very interesting paper (published on page 121) dealing with many aspects of the work of the public health department. A vote of thanks to Dr. Thomas was proposed by Dr. Tapper, seconded by Dr. Ball and carried unanimously.

It was decided that as far as possible the Branch should hold monthly meetings throughout the present session.

MIDLAND BRANCH.

President: Dr. C. W. Shapley (M.O.H. Oldbury, U.D)
Hon. Secretary : Dr. R. H. H. Jolly (M.O.H., Wolverhampton C.B.).

The first meeting of the session was held at St. Chad's Hospital, Hagley Road, Birmingham, on Thursday, February 1st, 1940, at 3.15 p.m. The President for 1938-39 (Dr. Hugh Paul) was in the chair and 14 members attended.

The minutes of the meeting on March 2nd, 1939, were taken as read and signed.

The Hon. Secretary reported that the President-elect was indisposed and would be unable to attend the meeting. The retiring President then moved that Dr. Sharpley be formerly installed as President in his absence and this was carried unanimously. The Secretary was instructed to send a letter of condolence to Dr. Sharpley and the best wishes of the Branch for his speedy recovery.

The Branch Council submitted a recommendation that the next meeting should be held on March 14th, when it was hoped that the new President might be well enough to deliver his Presidential address. This was approved.

Reference was made to the retirement of Dr. P. S. Blaker, formerly Medical Officer of Health, Dudley, and the Secretary reported that he had sent a letter to Dr. Blaker thanking him for his active support in the Midland Branch and congratulating him on his valuable public health activities in Dudley.

It was reported that the Birmingham Branch of the B.M.A. had nominated Dr. Mary B. Stone as their representative on the Branch Council *vice* Dr. Marris (deceased).

Dr. Hugh Paul gave a hearty welcome to Dr. C. T. Maitland, the Senior Regional Medical Officer of the Ministry of Health, who was present as a Visitor.

In the absence of the Hon. Treasurer (Dr. Snell), Dr. Gibbons Ward presented the Balance Sheet for 1938-39, together with the Annual Statement of Accounts. These were received and adopted.

The Secretary mentioned that the offices of the Birmingham Medical Institute had been closed down since December, 1939, and that there had been difficulty in obtaining a place for the Branch Meetings until the Smethwick Health Committee had kindly

offered to place a room at their disposal at St. Chad's Hospital, Birmingham.

An informal discussion on Civil Defence in its relation to the Public Health Services was opened by Dr. Massey, who was followed by Drs. Paul, Jolly, Newsholme, Walton and Maitland.

The Secretary raised the question of the need for V.D. propaganda in war-time and the form which it should take. Drs. Newsholme, Massey and Maitland also expressed their views on the subject.

The meeting then adjourned.

NORTH-WESTERN BRANCH.

President: Dr. G. Jessel (Cons. T.O., Lancashire C.C.)
Hon. Secretary : Dr. J.E.Spence (M.O.H., Eccles, M.B.)

An ordinary meeting of the branch was held at the School of Hygiene, Mount Pleasant, Liverpool, on Friday, January 12th, 1940, the President occupying the chair. Twenty members were present.

The President, in his opening remarks, expressed on behalf of the Branch the honour they felt by the presence of the President of the Society, Dr. F. T. H. Wood. He then invited the views of members on certain suggested points for discussion, the first being that the employment of Public Health Department staff on A.R.P. Services was impairing the efficiency of the Public Health service.

Public Health Services in War Conditions.

Dr. W. M. Frazer (Liverpool) opened the discussion by welcoming the Branch to Liverpool and then went on to emphasise that the Society should allow as little impairment as possible of the public health services during the period of the war so that on cessation of hostilities they might be taken over unreduced so far as national and local financial demands allowed. The staffs of the public health departments were spending much of their time on A.R.P. but by this time the later were being organised so as greatly to reduce this demand. It was important that the Medical Officer of Health should devote as much time as possible to his public health duties. The tendency to cut down grants diminished the scope but nevertheless it might be possible to develop the services; in particular the sanitary inspectors' staff needed to keep pace with changing circumstances.

Dr. James Bennett (Warrington R.D.) thought public health work should not be unduly curtailed and considered that in the event of air raids occurring in reception areas actual extensions in the services would be called for. In his opinion (as a rural M.O.H.) the fact that so many evacuees were unbilletable was a reflection on the health services and indicated that health visitors in the evacuation areas were either overworked, incompetent, or failing to gain access sufficiently to the homes. He thought that if the grants of the Ministry of Health were scaled down retrogression would be inevitable and even now a halt had been temporarily called on public health work as ordinarily undertaken. The last four months had been an eye-opener to him and he considered that conditions affecting the child were often unspeakable and indicated the need for greater attention to environment.

Dr. C. O. Stallybrass (Dep. M.O.H., Liverpool) said that to deal with verminous children was to attack a problem rendered difficult by the absence of adequate legal powers—the family as a unit lay at the root of the matter; mothers and pre-school children as well as school children were involved. The question had been widely discussed; it was not, as generally regarded, a disgusting class distinction, but could be remedied if one possessed the necessary authority to take action.

Dr. R. Gamlin (Sen. A.S.M.O., Liverpool) doubted whether doubling or trebling the school health staff would improve uncleanliness and quoted his experience of how after a short holiday, and when cleansing had been carried out immediately prior to it, visitation school by school showed that no change in the position of verminous conditions could be noted. Although pre-school children could be dealt with the mothers were immune. Powers to deal with secondary school children were lacking and the Board of Education inspectors themselves agreed that herein lay a weakness. He wondered whether the problem was insoluble—the worst cases often came from new houses where uncleanliness was least excusable—but if it could be solved he felt the solution did not lie entirely with the public health department.

Dr. Wood informed the members that Dr. Duncan Forbes had suggested an amendment of legal powers to deal with verminous conditions and agreed that stress should be laid on the family and not the child as the unit for action. During a visit to Scandinavia he had been impressed with hygienic conditions there which undoubtedly indicated a higher standard of civilisation than we in this country possessed.

Dr. Morley Mathieson (Birkenhead) was in agreement with the foregoing speakers. The public had been misinformed about the state of evacuees and had been led to believe that the public health authorities had been negligent. This misunderstanding required removing. It was depressing to think of the childlike ignorance of the Board of Education who suggested that a little extra work would produce a deloused nation. The Society should come out with some definite and strongly worded pronouncement for the public. He proposed that the Council of the Society

(1) should press for extra legal powers to deal with verminous conditions, and
(2) should, in view of the allegation that the unsatisfactory condition of evacuees was due to the negligence of public health authorities, work out and issue a statement to the public in order to remove this misconception.

Dr. Frazer seconded the motion, which was carried *nem. con.*

A.R.P. Problems.

The President then invited a discussion on a suggestion submitted that although medical officers in charge of aid posts were to receive remuneration no consideration had been given to the medical officer of health, despite the administrative burden he had borne over the past two years.

Dr. Wood said that A.R.P. work was one of the problems facing all local government officers, although chief constables seem to have been favoured by Home Office instructions to Local Authorities to give salary

increases. However other local government officers upon whom the work had devolved might well be considered as giving their extra time and energies as their own individual contribution to the national cause. The question of payment in these circumstances did not seem to be an appropriate matter to press for.

Views of members were then asked for on the hardship caused by the using up of hospital beds under the Civil Defence Scheme.

Dr. Morley Mathieson stated that at first evacuation of hospitals had been carried out but since then a filling up of the beds had been proceeding but this could not be complete because of alterations in lay-out, etc., which had been undertaken. All acute conditions were being admitted to hospital but some limitation of accommodation existed with regard to chronic cases.

Dr. Stallybrass said that conditions varied greatly from place to place. In Liverpool there were a large number of voluntary and municipal hospitals; the scheme had meant moving into outside areas where accommodation was less good but fairly adequate. There had, of course, been a reduction in the number of beds available but the Government was building up an outside reserve. Regarding beds for tuberculosis cases local authorities had tended to go too far in clearing institutions; many cases were being sent outside the cities but the proportion of beds available had been reduced. One should not forget the recent greatly improved standards of hospital accommodation for tuberculosis which made the present smaller total number of available beds less intolerable. With regard to infectious disease there had luckily been no serious epidemic and no doubt the results of diphtheria inoculation helped the position. Some difficulty might be anticipated with regard to municipal hospital cases (for example, the usual seasonal increase in respiratory cases in March), especially if the cataclysm falls on us in the spring.

Dr. Frazer then raised the question of friction between Report and Control A.R.P. Officers and the rest of the services. On the one hand directions for executive action were given by the departmental control officer but occasionally other control officers were anxious to give orders.

Dr. Brothwood mentioned that in county districts the Control Officer acted on the advice of the Technical Officer.

Dr. Wood thought that where the Controller accepted the advice of the M.O.H. or Executive Officer no trouble would result.

Dr. Glover pointed out that although departmental representatives advised the Controller in smaller areas, in a large city, such as Liverpool, there was a Main Control and several sub-controls; the Control (or Communication) Officers in charge of the latter were often voluntary workers anxious to exercise authority but without real responsibility and would doubtless resign if called to account for some technical blunder.

Dr. Mathieson raised the question as to who should be the Medical Officer of Health's representative in the Control Room. He was employing a sanitary inspector (night and day) in the Centre, a medical officer being available for duty on call.

There was a general agreement about the suitability and necessity for such an arrangement.

An ordinary meeting of the Branch was held in the Council Chamber, Town Hall, Preston, on Friday, February 9th, 1940, the President occupying the chair. Eighteen members were present.

The minutes of the last meeting were confirmed and signed.

The Hon. Secretary reported that Dr. A. A. Mussen, late of Liverpool, and Dr. M. C. R. Grahame, formerly of Burnley, had retired and were eligible for life membership of the Society and it was resolved that they be recommended to the Council for election as fully paid life members.

The President then called upon Dr. W. C. V. Brothwood (Chief A.M.O. Lancs. C.C.) who gave a very interesting address on " Evacuation," dealing with the experience of Lancashire as a reception area. The paper, which consisted of a critical survey of the evacuation in September of last year, is published in *Public Health* this month (page 125).

In proposing a vote of thanks to Dr. Brothwood, Dr. F. A. Sharpe (Preston) said Preston was a detraining authority. He was of the opinion that the children coming from congested urban areas were badly nourished, pale and undersized but that their condition, so far as verminous condition is concerned, was very much what one would expect to find in urban areas—under 1 per cent. were heavily infested with lice. A few cases of infectious disease were recognised and were isolated. He thought the public did not give enough credit to the officials of evacuating and receiving areas for a difficult task which, on the whole, was well carried out. He thought the billeting of adult women was doomed to failure as adults would not adapt themselves to changed surroundings.

Dr. J. D. Kershaw (Accrington) in seconding the vote of thanks thought the next evacuation would be different as it would take place under the stress of bombing. Many who have had experience of evacuees will not like them and less voluntary help will be available. He found that verminous conditions were more prevalent among children from some schools, but on the whole, it was not above the average. Infectious disease among evacuees was not common. Bed wetting however was the cause of much complaint but this condition was not abnormal in frequency.

When additional assistance had been obtained from evacuating areas medical supervision of the children was possible but routine medical inspection was not attempted. Visits were paid to the schools for the examination of special cases and in this work the co-operation of teachers was invaluable. He thought billeting would never be successful and felt that camps and evacuation schools would be more satisfactory.

Dr. J. D. Buchanan (Lancaster) said that many people receiving evacuees were not aware that they should use the clinics and delayed in obtaining medical advice and treatment with the result that cases of scabies had remained untreated and the disease had spread. He had found that if bed wetters were billeted with families who had bed wetters there was much less grumbling. Visits by parents upset the children and many returned home owing to the selfishness of the mothers. Evacuation had opened up a new conception of and interest in the country among town dwellers.

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Editorial

A Question of Space

Our readers may notice that the whole of this issue of PUBLIC HEALTH is printed in the smaller of the two sizes of type which have been used hitherto. We proffer no apology, first because we believe that the present size of type is legible and makes no undue strain on the eyesight, and secondly because the reason for this change is outside our control. It is, of course, due to Hitler's latest incursion, which has—we hope only temporarily—cut off one of the main supplies of raw material for paper-making, so that a further measure of rationing has been introduced. The use of the present size of type goes some way towards solving for us the accentuated problem of getting the quart into the pint pot, and we hope to find adequate " living room " for important contributions in the future as in the past. We do, however, take this opportunity of reiterating our appeal to contributors to cut out all redundant verbiage before they submit their papers. Such co-operation on their part will save much " blue-pencilling "—both verbal and physical—on the part of the Editor.

The Ministry of Food

The Council of the Society has acceded to a request from the Ministry of Food that they should nominate a representative to serve on a Consultative Council which appears to be mainly concerned with a campaign of public education on the best use of food (see p. 185). The view was expressed, however, that the Ministry required expert advice on many other matters than this, and it was generally felt that they were reluctant to seek it. Very frank criticisms were heard about the arrangements made by the Ministry for the slaughtering of animals for human food and their apparent disregard of the existing system of meat inspection, and in this connection it was agreed to endorse a memorandum addressed to the Ministry by the Sanitary Inspectors' Association. No doubt part of the trouble is due to the unavoidable difficulty of grafting a new scheme of control and distribution on to an administrative plant of such respectable age as the sanitary system of this country.

We desire to take this opportunity of welcoming the appointment of Lord Woolton as Minister of Food. We believe that he ranks in capacity and forcefulness with the late Lord Rhondda who held this post with such distinction during the last war. He may, however, have difficulty in overcoming a certain rigidity of outlook in his Department. There is a suspicion that the Ministry does not desire continuous guidance of a scientific character, but rather to be free to ask for

opinions on specific questions from such individuals or bodies as it chooses to consult. It is true that a distinguished biochemist is now carried on the staff of the Ministry but he may be in the invidious position of seeing decisions taken without his advice being sought, or of finding his advice disregarded, with resignation as his only effective means of protest. A properly recognised body of experts alone can resist such cavalier treatment. The situation has been trenchantly discussed by Mr. C. S. Orwin,* who goes the length of saying that "No use is being made of the experts in the science of nutrition and in the science of food production to say how the nation must and can be fed." He states that the place of experts consulted by Lords Rhondda and Lee during the last war is being taken by representatives of vested interests. We believe that Lord Woolton will be well able to assess the extent to which his problems can be solved by the methods of the Civil Service, and to determine when to break through its rigid barriers. He has our hearty good wishes in his difficult task.

M. & C.W.—Post War

If experience can be accepted as a guide, the end of the war will be followed by a period of depression, of unemployment, and the burden of excessive taxation, during which national and local expenditure will be restricted to those items of basic necessity and of proved value.

The maternity and child welfare services of this country, born out of the last war and developed on the original frame-work, have since expanded in directions and to a degree unthought of in the earlier days. To what extent will pruning have to take place, and what can be accepted as the underlying principles on which the service to-day rests and on which it can, in the future, develop? These questions are dealt with by Dr. E. H. R. Smithard, Medical Officer of Health for the Metropolitan Borough of Shoreditch, in an article in the February issue of *Mother and Child,* in a manner deliberately provocative and designed to start fruitful controversy.

Suitable housing for the future clinics, should, he feels, be on the lines of a central clinic contiguous with or very close to both the Health Department and an in-patient hospital, in which would be held the various specialised clinics of welfare work—ophthalmic, dermatological, orthopaedic, ear, nose and throat, and the like—and in a ring round these, suitable peripheral centres dealing with routine infant welfare and toddlers' clinics, with ante-natal work and housewifery. He would ask for the passing of a higher standard before admission to the ranks of the "sheltered profession" of the health visitor, and anticipates that the decrease in national income will be followed by a reduction in the number of those willing and able to give voluntary service. Because of the decline in the number of births which has already taken place, and the probability that the country after the war will not be so pleasant a place to live in, Dr. Smithard believes that, in the absence of specific stimuli, married women will take care to ensure, either by birth control or by abortion, that their parenthood is entirely voluntary. This diminution in the number of babies will make the lives of those who are born all the more precious. To ensure the successful rearing of these he feels the most likely post-war extension will be on the lines of the development of institutions, crêches, day nurseries, nursery day schools and residential nurseries, attendances at which may be made compulsory. Collaterally there will be an extension of mother-craft and father-craft, while eugenic services, including marriage advisory clinics and abortion clinics may be developed. Lastly, Dr. Smithard urges the necessity of a critical review both of central and of local administration, with a view to removing the chaotic division of functions in the welfare services which has been allowed to grow up in this country.

So far from looking with favour on such institutions as nursery schools, crêches and day nurseries, Dr. E. C. Downer, Medical Officer of Health for the Borough of Chorley, uses the suggestion of the possibility of their disappearance as one of the arguments in favour of the provision of family allowances. In an article in the January issue of *Mother and Child* on family allowances in post-war maternity and child welfare policy he emphasises that for the average child the objective should be to ensure the best home and family environment rather than to resort to the creation of a new environment in all too often an institutional atmosphere. Postulating that the two chief factors making for a modern home in which a child may reasonably find its needs are a healthy father in remunerative work and a mother with the health and leisure to afford the necessary close attention the child needs, he submits that, in the post-war world, where, because of the diminishing demands for labour it would be of advantage to remove many women from the labour market, the solution would be the provision of family allowances. This he defines as an allowance from the time when the fact of pregnancy is first established, continuing until the child has left school and has entered into employment. This allowance he would make payable only to those families whose incomes fall below a certain scale and should be conditional on the female parent refraining from work other than that of her home (save in special cases such as that of the unmarried mother or of the invalid husband) and on the child for whom the allowance is made being properly cared for. For the accomplishment of these desiderata pregnancy should be made notifiable by the doctor or midwife and close supervision by health visitors, the school medical staff and sanitary inspectors would be necessary to ensure that the money was, in fact, being devoted to the purpose for which it was provided. Dr. Downer submits that, while some of his claims of the benefits of a family allowance, which are as much due to the secondary effect of the abstention of the mother from work outside the home, may by some be regarded as Utopian, the proposals are within the compass of the country's resources and the principle on which they are based has already been accepted in that childhood is now subsidised in kind and in money, income tax relief is allowed in respect of the wife and family, allowances are paid in respect of certain children

*The Times, April 5th, 1940.

attending secondary schools, while children allowances are granted to members of the Defence Services.

Since the above annotation was written, we have received a paper on the general public health aspects of family allowances, which Dr. Downer read to the April meeting of the North-Western Branch. We hope to publish this paper in our June issue.

Routine Examination of Food Handlers

The practicability of examining, as a matter of routine, those who are concerned with the production, preparation and handling of food is a topic which must constantly be in the minds of epidemiologists and public health administrators. It is allied to the less complicated question of the medical control of men engaged in waterworks, which emerged from the Croydon typhoid epidemic, and it is of course mixed up with the discovery and control of carriers of infection. For many years New York City has endeavoured to detect carriers and keep them under control, but still most of their discoveries result from enquiries begun after the occurrence of actual cases. No doubt such gross dissemination as that caused by the notorious Typhoid Mary may be so avoided, but from the broad preventive point of view the results are probably as negligible as those resulting from the operation in this country of the Public Health (Infectious Diseases) Regulations, 1927.

In a letter to a correspondent, Dr. Ernest L. Stebbins, Assistant Commissioner for Preventable Diseases, New York State, has recently dealt with the general question of the examination of food handlers.* He points out that it must involve a clinical history, physical examination, laboratory tests and sometimes X-ray or other examinations. One such examination will often be insufficient; indeed, even if it is repeated, it may engender a false sense of security and lead to the neglect of general hygienic precautions. A single laboratory test, in particular, means little or nothing. A really satisfactory system of examinations would be so time-consuming and expensive as to be quite impracticable. Moreover, a large proportion of infections conveyed by food arise from acute disease in the handler, either frank or anomalous in character, and periodical examinations cannot eliminate this risk: "a so-called 'health certificate' guarantees freedom from an acute infection only on the day it is issued." Even tubercle may take an infectious form between examinations reasonably spaced. For such reasons, "this Department is firmly convinced that, under the conditions in which it is possible to carry them out on a community basis, routine food handler examinations are unwarranted and are not to be considered a proper use of public funds." This emphatic pronouncement is interesting, coming as it does from a very progressive department, in close touch with American thought and no doubt with the experience of New York City in mind. The same point is stressed by Dr. James Roberts, M.O.H. of Hamilton, Ontario,† in reporting upon a third large outbreak of staphylococcal food poisoning within a year from custard-filled pastries made in a bakery where staphylococcal infection flitted about among the members of the staff over long periods.

*New York State Department of Health. *Health News* (1940), **17**, 3.

†*Can. Pub. Hlth. J.* (1939), **30**, 590.

Industrial Health in War

The quickening *tempo* of our home-front war effort may involve such risks as are believed to be affecting the workers of Nazi Germany through disregard of some of the established rules of industrial hygiene. Therefore the issue by the Industrial Health Research Board of a booklet* which sets out the requisites for industrial health in a short and lucid form, is very timely. The sub-title of the report describes it as "a summary of research findings capable of immediate application in furtherance of the national effort." Most of the findings described are those which were made and could have been applied in peace-time, and it is perhaps ironical that the outbreak of war may speed their general adoption; it will certainly not be the fault of the Board if the Government departments and industrial undertakings responsible for the output of munitions and other war materials do not see that the workers are given the conditions conducive to the greatest health and efficiency in their jobs. One new problem to which the report refers is that of "black-out" ventilation, a subject to which the public health service may have to give increasing attention both in the home and the hospital, as well as the factory. It is interesting to note that the British Standards Institution is to issue specifications for various ventilator light traps. The main headings of the report are work and fatigue, lighting and vision, heating and ventilation, accidents, and sickness absence and labour wastage. The conclusion states that the use of tests for general and specialised skills has not been dealt with, but points out that at the present time, when there is considerable displacement of labour and many people have to learn new skills quickly, the importance of test methods is greater and not less than it is normally. At the end is a list of the published reports of the Board on specific subjects, to which seekers after the original evidence may refer.

"The Birth of a Baby"

Many of our members have now seen the film with the above title, which was produced in the United States by the American Committee on Maternal Welfare, and is being shown in this country to separate male and female audiences under the sponsorship of the National Baby Welfare Council. Those who saw the film as it arrived from America may have felt that the story showed so many divergencies from our practice that its effect might be misleading to British audiences, but the addition of a prologue and epilogue, which explains such things as the working of the salaried midwives' service and of ante-natal clinics in this country, has disarmed the criticism which might have

*Industrial Health in War. Med. Res. Com. (Industrial Health Research Board). Emergency Report No. 1. 1940. H.M. Stationery Office. p. 36. Price 6d. net.

been made on that score. The film itself is excellent from the points of view of biological accuracy and of human interest, and the actual delivery of the child—which is the climax to which the story leads—is almost too good to be true. We understand that in Hammersmith, where the first public showings were given, an information bureau was installed in the cinema entrance and was kept busy giving advice as to the local antenatal services. A similar opportunity might well be taken by welfare authorities in whose areas the film is shown in future.

SUPPLEMENTING OF SERVICE PAY OF PUBLIC HEALTH MEDICAL OFFICERS

Under the Local Government Staffs (War Service) Act, 1939, which came into operation at the beginning of the war, local authorities are empowered to make up the balance of civil pay of their employees undertaking war service as defined in the Act, and superannuation rights of such employees are preserved.

In the course of the debate in the House of Commons on the proposals contained in this measure the Minister of Health expressed the hope that local authorities would interpret its provisions in a fair and reasonable spirit. Mr. Elliot stated, "I can say that we shall interpret it in a fair and reasonable spirit, and I think that precept will be better than injunction. This is very much a sort of gentlemen's Bill and a gentlemen's agreement, and I hope very much that it will be treated in that fair and reasonable spirit."

The British Medical Association has had under consideration the extent to which local authorities have given effect to the Minister's recommendations. After ascertaining the Society's views on this question, the Association has addressed the following communication to local authorities which have not accepted in full the Minister's recommendations in regard to supplementing war service pay of whole-time medical officers serving with His Majesty's Forces:—

The British Medical Association has had under consideration the extent to which local authorities have given effect to the Ministry's recommendations on supplementing the war service pay of medical officers in the whole-time employ of local authorities. It is glad to note that the great majority of authorities have accepted those recommendations without qualification. It is understood that your authority has not accepted in full the Ministry's recommendations in regard to supplementing war service pay. I should be grateful if your authority would reconsider its decision on this subject in order to bring its policy into line with the great majority.

War inevitably increases the demands upon the medical profession, and there is being experienced a bigger and earlier demand for medical men in the Fighting Forces than for any other group of local government employees of corresponding age. It is important that nothing should be done to make more difficult the position of those public health medical officers who offer themselves for, or are recruited to, the Fighting Services.

Arrangements have been made for the full protection of the financial position of the majority of private practitioners entering the Forces, and the Association believes that local authorities will wish that their officers should be no less adequately provided for.

Medical practitioners are recruited to His Majesty's Forces in commissioned ranks. Generally speaking, junior public health officers are recruited to the rank of lieutenant with gross pay of approximately £500 a year, and senior public health officers to the acting rank of major, with gross pay of approximately £800 a year. Thus, it will be seen that the liabilities of local authorities in putting into force the Minister's recommendations are, in the case of public health medical officers, who form a small proportion of the total local authority staffs, unlikely to be large.

The medical profession, through the Central Medical War Committee, and the Local Medical War Committees that cover the country, is endeavouring to supply the growing needs of the Services, maintaining at the same time a sufficient medical service for the population. Anything which makes more difficult or discourages the recruitment of medical practitioners hinders the work of the emergency organisation, and the Association would be grateful if your Council would reconsider its decision not to accept the Minister's advice in full.

A communication has also been sent to local authorities which have not yet reached a decision on this question urging them in dealing with this matter to take into account the considerations set out above.

OBITUARY

JAMES JOHN DAY, O.B.E., M.R.C.S., L.R.C.P., D.P.H.—We regret to announce the death of Dr. J. J. Day, Medical Officer of Health for the East Kent No. 2 united district, which lay in the region of Dover and Sandwich. Dr. Day qualified in 1896 and took his D.P.H. in 1902. After early experience as Assistant Medical Officer with the M.A.B. and service in the Great War in Africa, Dr. Day took up his appointment in Kent. His last few years of service were much interrupted by ill-health, following a motor accident, and last year he gave up membership of the Society, which he had held since 1922, in anticipation of retirement.

JOHN TATE, M.R.C.S., L.R.C.P., D.P.H.—We announce with great regret the death on April 21st, following a period of serious ill-health, of Dr. John Tate, since 1923 county medical officer for Middlesex. The whole of Dr. Tate's public health career was associated with that county, where his service had lain since taking his D.P.H. in 1908, after a short term as Assistant Medical Officer to the Birmingham City Sanatorium. His years in Middlesex as County Medical Officer saw a tremendous growth in the population of the county, with a concomitant expansion in public health services. He was a very able administrator and his development of the county hospital service will be particularly remembered.

Dr. Tate's personality gained him the liking and respect of colleagues, especially those in county service. We extend our deep sympathy to his widow in her loss. He had been a Fellow of the Society ever since his entry into public health.

Speeches by the President of the Society and by the Minister of Health at the Annual Luncheon, April 5th, 1940

THE PRESIDENT (F. T. H. Wood, O.B.E., M.D., B.Sc., D.P.H.)

No speaker on an occasion like this is expected to keep strictly to his text, so I may be forgiven if I take this first public opportunity since my election to the chair of expressing to my colleagues my appreciation of the honour they did me last autumn. Kipling said that recognition by one's equals and betters of one's own craft is a reward of which a man may be unreservedly proud, and to pride I may add gratitude. In my own case the gratitude is the more marked because whatever service I may have rendered this Society has been far outweighed by the benefits I have received from it.

One further digression I must allow myself to make. We have no special speaker to offer a welcome to our guests and I therefore would like to take this opportunity of expressing to the general body of them our keen pleasure at their presence. I resist the impulse to single out individuals, but as we in this Society are doctors we specially welcome the presence of the heads of the Royal Colleges and of the ancient Society of Apothecaries. We have among our other guests the heads of the Ministry of Health, distinguished representatives of our employers, the great associations of local authorities, our dental colleagues, and a number of Members of Parliament.

I felt that it would be an interesting exercise to attempt to reconstruct the speech which the first President of this Society, Sir John Simon, a distinguished medical officer, who made as big a mark on the health of the nation as his namesake of to-day has made on its wealth—to reconstruct the speech which he might have delivered in the presence of your forerunner, Sir, the President of the General Board of Health, 84 years ago. The speech would have been in the nature of a diplomatic, eloquently phrased record in which he would have said that the functions of the Board were ill-defined and were resented on the rare occasions when they were exercised, and he would have lamented that it was not such an able-bodied service as he and his colleagues were desiring to render. He might even have ventured to repeat an observation which he had made when Medical Officer of Health for the City of London some two years earlier to the effect that the difficulties which had baffled successive Home Secretaries might be simplified by the less divided attention which a Minister of Health would devote to their study.

We now have a Minister of Health with extensive and well-defined functions, the exercise of which is always welcomed by local authorities. In the local chambers of legislation we are given the opportunity, within limits, of shaping and, who knows, improving the statutes and regulations on public health which still come out in steady spate.

The present, of course, is a tragedy in that much of the energy and ability of the Minister of Health has to be diverted from social medicine to tasks where he shares with his fellow servants of the Crown in the responsibility for the prosecution of this great war. Let us look forward hopefully to the time when peace will enable him to give a larger share of attention to the problems still remaining in public health—such problems as the placing within the reach of all of the facilities for adequate nutrition, the reshaping of domiciliary practice, and the establishment of a greater hospital system.

Lastly, we have special pleasure in remembering that the Minister is himself one of us. In his career of service to the State, in the Treasury, the Ministry of Agriculture, the Scottish Office, as well as in his present sphere, he has shown clearly that a medical training does not in some mysterious way disqualify for high administrative offices, but is indeed the best of all training.

There is much that I could say and others could say much better in recounting the gifts and abilities of our distinguished guest, but I am confident that you as well as I wish to hear him and not me.

THE MINISTER OF HEALTH (The Rt. Hon. Walter Elliot, P.C., M.C., M.B., F.R.S. M.P.)

I think this function is noteworthy as being a step towards the restoration of our everyday activities—a step which is all the more necessary in war-time because of the press of business, including the neccessity of reading the regulations and sometimes the statutes, which I am glad to hear are always received with delight both by local authorities and their servants. This cascade, indeed this cataract, of injunction and admonition leaves us very little time for anything else. I suffer from it also, but for that reason I am all the more glad to find an opportunity of coming down and joining again in an assembly of the brethren, because it was a great pleasure to me to find your President recalling that the fact that I, too, once upon a time sported the white jacket of a house man and occasionally took my share as a *locum tenens* in a panel practice, where I discovered the innumerable things you are not taught anywhere in the schools.

I was more particularly glad when the President mentioned that all of us, being doctors ourselves, are honoured to find here to-day the masters of the craft such as the Presidents of the Colleges. I, having a double capacity, as heir to the Presidents of the Local Government Board and Chairman of the National Health Insurance Joint Committee, do feel a great responsibility which all of us feel more and more in time of war—the responsibility of the linking up of the administrative and the practising sides of medicine.

The Local Government authorities with whom I collaborate—1,500 local authorities with all their medical and administrative staffs—are also, we all know, greatly indebted to the work and services of the medical practitioners of whom I, as Chairman of the National Health Insurance Joint Committee, have some 17,000 on my books in England and Wales. These 17,000, I regret to say, derive to a considerable extent from the north of the border as well as the south, but I am happy to find that in this great Society the President, who speaks for many of his colleagues, is English born and bred, and I believe he is the fifth in an unbroken line of Englishmen who have occupied this chair. For that I, as an "Honorary Englishman" myself, am extremely grateful. As an honorary Englishman I do my best to conceal my origin and to imitate the qualities of that distinguished race. Those qualities include the power of working with others and a kindliness and tolerance which sometimes take a great deal of achieving on the part of those who come from the more "savage" quarters of this island. At the moment that kindly tolerance and power of working together is more necessary than ever before. The work of medicine is enormously more closely interwoven than it was at this time last year as between the administrative and the practising sides of the profession.

The President spoke of the tragedy that so much of our effort has to be diverted to-day from tasks to peace to tasks of war. But we should not be downhearted. After all, there was in the lifetime of most of us in this room another great war which we began and continued and carried through to a victorious conclusion, and although sometimes we query the advantages which followed from the winning of that war, yet there is no doubt that in the sphere of the health of the nation tremendous advantages can be dated from that time. The vital statistics of 1918 compared with the present day show great advances indeed, and in those advances the local government service has shared. The tuberculosis rate has been brought down during the period from 1,200 to 600 per million of the population. That is a very great achievement. The general death rate has fallen. The infantile mortality rate has fallen from 89 per 1,000 births to 53 to-day. What has been done once can be done again, and we can make ready at the conclusion of war to go forward again with advances not less important than those before us achieved after the last war. Even to-day advances are being made, although great tasks, which I would be the last to underestimate, are being laid upon the shoulders of the public services and upon the shoulders of medical officers of health as much as most and more than many can bear.

Two great movements have taken place, namely, evacuation and the emergency medical service, both of which have been gigantic and immediate tasks for many who sit round this table. I thank you for what you have done, and we in Whitehall are by no means unmindful of the burdens which are being shouldered up and down the country by those of you who for a brief space to-day have come away from the battle to meet each other, talk over the fights, and, it may be, exhibit a few scars.

The tasks of to-day are in addition to, and not in substitution for, the tasks of yesterday. That huge movement of evacuation and the fact that we were able to carry it through without injury to the public health of this country was built to an enormous extent on the achievements for which medical officers of health have been responsible in years past. The fact that actually infectious diseases have not increased during this experience, that in many cases they have diminished as compared with this time last year is a tremendous triumph. Take typhoid, the disease of crowds, the disease of camps, the disease of unfamiliar water supplies, the disease of changed food sources; not only has it not increased but it has notably diminished. The notifications of typhoid for the last three months of last year were 246, and for the corresponding period of this year 166. That is a figure of which the public health service may well be proud, and it brings to the acid test of reality the work on water supply and public health of all kinds which has been the care of the medical officer of health for so many years past. Sometimes, especially after a personal attack of influenza, or German measles (which I understand is now to be called "Empire measles," because we cannot allow Hitler to take credit for even a temporary interruption in the work of the nation) we feel that there must be a heavy incidence in those infections. But in fact the influenza figures are down. The maximum figure for one week was 24 deaths, which was only half the number recorded in the peak week of 1937 and only one-third of what it was in the peak week of 1933, and neither of those were considered years of universal desolation and sorrow in that respect.

On the whole, we shall find that this last winter has been by no means one of exceptional incidence in sickness, but of relatively good health. Even as to cerebrospinal meningitis, it is true that we have had a number of cases, but the mortality there is less than a quarter of the mortality which we have had to recognise in previous epidemics. That, of course, is very largely due to the discoveries of modern science and chemistry, but none the less to the fact that those discoveries have been picked out and adapted and applied by medical science and administration. The work of the medical officers of health has well supported the laboratory trial which has given us these magical drugs.

During the evacuation 12,000 women were moved and cared for in pregnancy, in every case in improvised homes, with the attention of medical officers, and there was no rise whatever in morbidity curves, which were as good as in any previous year when no such movement was taking place. That is an achievement the magnitude of which only the brethren of the craft can appreciate.

The President spoke of the sort of speech that the Sir John Simon of those days might have delivered in the presence of a Minister of Health. I was glad to see that he gave a proper balance and precedence to those two powerful figures—Sir John Simon of

those days spoke humbly and walked gently in the presence of the Minister of Health. The present Sir John Simon is perhaps rather different, he may not always consult me as much as I think he should, he raises my taxes without consultation with me, and many times refuses requests which are to me most reasonable, and I will call his attention to what in the opinion of the President of this Society his namesake of the last century might have said on such an occasion.

But I was struck with the fact that if the Sir John Simon of the former day had spoken of the conditions obtaining only one hundred years ago we should have found that he was deploring that the expectation of life in 1837 in Manchester was only 20 years and in Liverpool only 17. Very different from the expectation of life to-day, which is 59 years for a boy and 63 years for a girl. That has been accomplished in the span of a century, in spite of great European wars—an alteration in the expectation of life from 17 years a hundred years ago to 59 years for a boy to-day. That is a testimony to the care and attention which is given to human life, and it shows that it is not mere molly-coddling and waste, but it does mean great advantage and improvement in health and therefore in wealth of the community of to-day.

To these enormous tasks have been added many in connection with the emergency medical service, and here the responsibilities of medical officers of health are tremendous and immediate. They have supervision of the 3,000 first aid posts with a personnel of 120,000 people, mostly unpaid, and if anybody thinks unpaid workers are easier to work with than paid ones they are making a great mistake. The ambulance service has got 82,000 personnel and 19,000 vehicles, and in the hospital organisation there are to-day 133,000 hospital beds immediately ready for either civilian or military casualities. That shows in a slight way the amount of toil that has gone into the making of that scheme in so short a time. Of the number of hospitals upgraded and the problems of personnel and staff I do not need to talk either in the presence of medical officers of health or of Members of Parliament, who know the difficulties which the whole task has involved. The fact that it has been possible to-day for us all to get an afternoon off to discuss in an atmosphere far removed from the sights and sounds and scents of a hospital ward is an indication of what has been accomplished.

That programme is not at an end. We have a programme of hospital building actually under way of no fewer than 40,000 hospital beds, nearly all of them in the grounds and under the supervision of the local authorities and their responsible medical staffs, and a further big programme, when that first programme is completed, will immediately be got under weigh. These are evidences of the war effort in the sphere with which we are immediately concerned, which is secondary to, but not in any way less important than, that of the fighting services.

It is true that we regret the great diversion of energy they represent. It goes against the grain to find our money, energy, and time devoted to the task not of construction but of destruction. But if it has to be done we shall do it. We are determined to maintain our position in the world, to maintain our ideals, and to maintain, more important than either, our conception of international life. We are determined to live, and if necessary to die, as free men and free women. We have no intention of giving way to any threats of bluster or braggadocio. We have faced great perils before and you know how we have met them. Here on my left hand they took the President of your Society from his sphere of work at Bootle in Lancashire and made him actually a medical officer at the port of Sinbad the Sailor, at Basra in the Near East, and then when his work was over he returned to the more prosaic but scarcely less exacting tasks of the part of the great western port over which he presides. And we shall find in our own resources men who are ready to do those tasks again in any part of the world wherever it is necessary that they should be done. We have sent great forces overseas and we have great forces coming after. We have sent our ships to the ends of the earth and our aeroplanes through the skies, and we do these things, not because we want to conquer, but because we want to live in peace and be let alone, and those who interfere with this country will find too late the enormous resources which have been mobilised against them.

We in the Government have always with us the inspiration of a remarkably healthy figure, a septuagenarian, Mr. Chamberlain, who seems to gather strength as days go on and affords a terrible example of the sort of human beings that were constructed long before many of the health services of to-day had come into existence. If we now produce a generation which at his age of 70 is proportionately more powerful than Mr. Chamberlain we shall indeed have created a race of supermen of whom all the rest of the world may well beware.

We are colleagues and comrades in a great task—the task of keeping the nation fit both in its peace and its war services. To that task the medical officers of health have bent themselves without remission and with the utmost energy, and their work already begins to bear fruit. It is in virtue of the work they have done that I am particularly proud to accept the invitation to meet them to-day, and I thank you for the way in which you have drunk my health.

Registration Under the National Service (Armed Forces) Act, 1939.—The Ministry of Labour and National Service desire to make it clear that the male medical practitioner and the male medical student are in exactly the same position as all male members of the community in so far as registration under the National Service (Armed Forces) Act, 1939, is concerned. The fact that a man is reserved by the Schedule of Reserved Occupations does not affect his liability under the Act or relieve him of his obligation to register with his age group in the normal way. All male British subjects within Great Britain (including medical practitioners and students) not specifically exempted under the Act, who were born between January 1st, 1913 and April 27th, 1920, both dates inclusive, should have registered by April 27th, 1940. Those who have not registered should do so without delay at a Local Office of the Ministry of Labour and National Service without waiting for the next registration day.

Maternity and Child Welfare Experience and Problems arising from Evacuation*

EVACUATION FROM A CITY

By V. Mary Crosse, M.D., D.P.H.,
Assistant Medical Officer (M. & C.W.), Birmingham C.B.

In Birmingham the scheme for evacuation of mothers and children was drawn up in accordance with instructions from the Ministry of Health early in 1939. The zone from which evacuation was to occur was chosen by the Ministry, *i.e.*, the centre of the town (including most of the 40,000 back-to-back houses and the families with the least ideas of hygiene). Registration for evacuation was planned to be carried out by health visitors. By May only 10,000 mothers had registered the names of themselves or their children. Then the Chief Evacuation Officer enlisted the services of the school attendance officers, who carried out house-to-house visits which brought up the registrations to 34,000, of whom 781 were expectant mothers, 860 were children accompanying the expectant mothers, 12,736 were non-pregnant mothers, and 20,747 children accompanying the latter.

The maternity units in receiving areas were provided in co-operation with the authorities of those areas. Four were arranged for, of which one was a convalescent home, one a public assistance institution, one a large house, and the fourth a district nursing home in connection with a small existing maternity unit.

On September 2nd, actual evacuation began. The figures of those registered have been mentioned above, but the numbers who actually left on the trains consisted of 406 expectant mothers, 4,135 other mothers, and 7,958 children—total of 12,499. There were 60 trains, provided each with a health visitor and a voluntary helper. There were special trains for antenatal cases, each containing a maternity outfit and a midwife. These women collected at the Child Welfare Centres and were taken to the stations by 'bus. The staff which accompanied the evacuees numbered 28 health visitors, 17 midwives and 4 doctors; all were back again in the City after 12 weeks.

The return of evacuees to the City began from the very first day. Three months later only 2 per cent. of mothers and young children remained in receiving area. The reasons for the return appear to be: —

(1) Non-occurrence of the expected air raids;
(2) The difficulty of financing and managing two homes;
(3) The appeals of husbands left with no home comforts;
(4) The inconvenience to evacuated mothers of sharing house and cooking facilities;
(5) The large number of mothers registered who really had no intention of being evacuated;
(6) The fact that billeting arrangements were not always very satisfactory.

The main complaints of the reception areas were that mothers or children were dirty or verminous, whereas the complaints of the evacuees were more or less as outlined above.

For a future scheme the following points have been suggested for consideration: —

(1) *An Alteration of the Zone.*—Housing estates around landmarks such as the Austin Motor Works, I.C.I. Works, and other big undertakings, are not included at present and are particularly vulnerable. They have a high birth rate.

(2) *Registration.*—Women should come forward themselves and book their names. They should not be persuaded to do so.

(3) *Better Co-operation with the Billeting Officers.*—Lists should be sent out in advance from the evacuation areas in which the mothers should be classified into groups according to their cleanliness, good management, health, and number of children. A code system could be used. The billeting officer should co-operate with the health visitors in the reception areas in finding suitable homes.

(4) *Residential Nurseries.*—For the under-five children, without their mothers, residential homes should be provided and staffed by the evacuation area.

(5) *Camps.*—And lastly, there should be camps with communal kitchens for the expectant mothers and the mothers with small children, also for large families. The ideal arrangement would seem to be a group of hutments round a large house which could provide kitchen, dining room and recreation rooms.

PROBLEMS IN A RECEPTION AREA

By Catherine Morris Jones, M.B., D.P.H.,
Assistant Medical Officer (M. & C.W.) Gloucestershire C.C.

The types of cases to be dealt with resolved into three classes, *viz.*: (1) expectant mothers; (2) children under five with their mothers; and (3) children under five in groups apart from their mothers.

(1) Expectant Mothers.

In March, 1939, a meeting was held in Birmingham, at which the medical officers of health of various reception areas discussed what provision could be made in their district for evacuated expectant mothers. The county medical officer of health for Gloucestershire agreed that we could deal with approximately 1,000 mothers provided that they all came to the same district where special arrangements *re* billeting and hospital accommodation would be made, as we did not want scattered cases in the rural areas. This was agreed, and it was decided that Cheltenham district would be most suitable. The Billeting Officers were informed, and with the consent of the Ministry of Health a large house was taken and equipped for 86 beds—and some staff appointed. During the following months the number was reduced first to 800 and then to 300.

On the day of evacuation actually 140 mothers arrived and were distributed among the billets, but two days later only 80 could be traced. A medical officer and four midwives were sent from Birmingham; the medical officer and two midwives were sent to the improvised maternity home and two midwives were kept in Cheltenham to do the ante-natal work and attend any cases of confinement which might occur in billets.

A special ante-natal clinic was arranged, attended by the evacuated medical officer.

During the next few weeks several of the mothers returned to Birmingham and eventually only 50 were actually confined in our area. As the mothers returned to Birmingham the staff was also recalled and new staff had to be appointed.

The arrangements for ante-natal work and for the confinements were adequate, but difficulty was experienced in keeping trace of the mothers as they did not notify us of their return home, and as no ante-natal records were sent from Birmingham* we had no specific knowledge of the cases. In most instances the billets were satisfactory and it must be remembered that, as the mothers returned to billets after confinement with their baby, it was not easy to find people willing to accept them.

As far as expectant mothers from London were concerned, we had no previous information—they kept cropping up in all districts and had to be dealt with as well as possible in local maternity units as in many cases it was not possible to admit them to the improvised maternity home on account of distance.

(2) Children under Five with their Parents.

The children who came with expectant mothers were accommodated in a special nursery in Cheltenham while the mothers were in hospital. Other children with their mothers remained in billets—in some cases, special sessions at welfare centres had to be arranged where there were large numbers, but in most instances they were able to attend the routine sessions. A great demand was made on dried milk products and as the children returned home in a very short time the county was left with a large stock on its hands.

Several health visitors were sent from Birmingham and followed up the children, but as the mothers returned so the staff were recalled.

The chief reasons for the return of the mothers were:—

(1) The quietness and dullness of rural life.
(2) The statements of the husbands as to their lack of cooked meals and the condition of their home.
(3) The expense of keeping two homes.
(4) Most infrequently—the unsuitability of the billets particularly with regard to cooking arrangements.

(3) Children under Five in Groups.

Several day nurseries and nursery schools and one residential nursery were received in this county. They were usually billeted by arrangement in a private house and took some time to discover. Arrangements are now being made for the county council to accept certain financial and administrative liabilities for these groups at the request of the Ministry of Health, but as other speakers are dealing with the subject of nurseries, I will say no more about it.

In any further scheme of evacuation it would seem possible to deal adequately with expectant mothers and children under five apart from their mothers, but it will always be unsatisfactory to have mothers in billets with young children.

EVACUATION OF A DAY NURSERY

By Ann Mower White, M.R.C.S., L.R.C.P., D.P.H.,
Assistant Medical Officer of Health, Southwark Met. B.

The chief problems that arose during the evacuation of the Southwark municipal day nursery were administrative.

During July, 1939, the owners of a private house at Edenbridge offered it for a residential nursery. This was accepted by the Godstone R.D.C. as the billeting authority, and the place was sanctioned by the L.C.C.

On September 1st there arrived at the Southwark day nursery two Green Line 'buses, one for children and staff and the other, cleared of seats, for equipment, cots, bedding, etc.

The 25 children, ranging from one year to three-and-a-half years in age, with a matron, two nursery trained nurses, and two probationers, went to Edenbridge. The London County Council had passed the house as suitable for 25 children, but this seems to have been done without visualising 25 children and 5 adults, for we found immediately that the accommodation was not adequate. There was only one lavatory for the use of these children and adult staff, and only one bathroom. There was no isolation accommodation and there was not enough room for the adequate spacing of cots. We compromised in this last matter by using the day nursery for sleeping as well.

The standard set by the Ministry of Health Circular 1882 was far above that which we could accomplish at Edenbridge. We felt, reluctantly, that the number of children would have to be reduced to 15. Actually, through parents removing their children they were reduced to 16, and in this way the nursery stayed at Edenbridge for four months. During those four months various problems arose. There was the problem of isolation accommodation, which was achieved by putting the host and hostess to more inconvenience. Even then the room was not big enough, for we had a mild epidemic of diarrhoea and vomiting in seven of the younger children. They were isolated in the smaller room, and by hard work on the part of the matron and the nurses they soon recovered, except for one child who was removed to hospital.

Another thing that worried me was the question of the milk supply. The host had a model dairy farm, with pedigree Guernsey cows. The milk was all unboiled—a thing that I did not think wise in the case of the younger children. There was no means of sterilising it in bulk for all the children, but by means of saucepans and spirit lamps I had the one-year-olds' and the 18-monthers' milk boiled.

*Papers read to the Maternity and Child Welfare Group, London, March 16th, 1940.

*These were apparently lost *en route*.

Now to deal with the nursing staff. The day nurseries train young girls who have had no sort of hospital training, and one noticed large gaps in their training when it came to looking after children day and night. I think one of the best experiences those trainees can gain is through evacuating with a day nursery which then becomes a residential nursery. The welfare of young children for 24 hours out of 24 is a very different thing from the usual nursery hours of 8 a.m. to 6 p.m.

I had difficulties with the mothers. As I have said, nine children were soon taken back to London. I think this was chiefly due to the mother finding that the child did not recognise her when she visited. A child of 15 months does forget his mother when separated from her, but I will leave it to the psychologist to decide whether the separation of young children from their homes is bad.

Physically, I think it did the children good. The daily routine, fresh air, good food and adequate quiet sleep must be beneficial to them. I was struck by the happiness of all the children. There was very little crying and they seemed to take the change from London to country with complete unconcern. Their appetites were enormous, with no fuss about not eating this and that, which one so often gets in their own homes.

Before four months were up, the host and hostess found it impossible to carry on, so we applied direct to the Ministry of Health for a removal. An empty house was found at Shalford, near Guildford, to which children, staff and equipment were then moved.

Another problem which must be mentioned, although it is financial, is who is responsible for the cost of this nursery now that it has passed into the hands of the Surrey County Council? As the case now stands, the Surrey County Council is in charge of Southwark children, using to a large extent Southwark equipment, and the Council wants to know if it will have to pay part of the expenditure when it has no control of the management of the place. The Ministry's suggestion is that the respective M. & C.W. Committees meet to discuss management and that Southwark pays what it used to for the maintenance of the nursery while it was in Southwark.

For my part, the transfer of our nursery to Shalford is a blessing. The difficulty of its evacuation to Edenbridge was chiefly due to their occupying an inhabited house. There were conflicts between nursery staff and occupants which made its efficient management very difficult, especially as the hostess acted as caterer.

RECEPTION OF EVACUATED DAY NURSERIES

By J. E. HAINE, M.B., CH.B., D.P.H.,
Medical Officer of Health, Guildford R.D., Hambledon R.D. and Haslemere U.D.

In September last, six or seven residential nurseries became established in my district as a result of the evacuation of day nurseries and of young children from London. Some of these were day nurseries transferred *en bloc* with their staffs to accommodation previously arranged, and three were nurseries which we were obliged to initiate and organise. Children below school age can seldom be satisfactorily billeted in private houses, since householders are unwilling to accept the responsibility, and where there are considerable numbers the only possible solution is the establishment of a residential nursery.

All the difficulties associated with the transfer of *day* nurseries from a city to *residential* nurseries isolated in the country, were not, and indeed could not, have been foreseen. The accommodation was strange and more or less improvised, staffs were unaccustomed to complete night-and-day care of the children, and were in entirely new surroundings, and methods of supervision and control applicable to the London premises had to be radically altered.

It is under these three heads that I propose to group my necessarily brief remarks, *viz.*, accommodation, staff, and management.

Accommodation

The discovery of ideal accommodation in country districts would be well-nigh impossible, since the choice is limited to large private houses. It has not proved entirely satisfactory to share a house, and there is no doubt that it is far preferable to select a house of suitable size and utilise the whole building. Our largest nursery has just over 50 children, and this is quite as many as can be conveniently managed in one establishment. It takes a big house for this number since there are usually but few bedrooms large enough to take more than six or eight cots, whilst the staff is necessarily numerous and requires as much consideration as the children.

Overcrowding was universal in the early days—in no place did bedrooms allow the rather meagre minimum standard of 40 sq. ft. per cot. In many rooms this standard was much too small, especially in rooms of odd shape or with awkwardly placed windows. In one or two cases bedrooms were used as playrooms or for meals during the day—a most undesirable arrangement. Fortunately bathrooms and lavatories were, as a rule, ample, and, as one would expect, there was plenty of open-air playing ground space. In one case, however, the youngest children could not negotiate the long corridors and stairs to reach it, and, as a result, children under two spent far too much of the day-time in the rooms used as bedrooms. It may be significant that this is the only group of children who did not show remarkable improvement in general health in the course of the first few weeks or months.

The relative position of staff rooms, children's rooms, kitchens and laundries is at times undesirable. I have in mind one establishment where a nurse had to spend the night in a chair placed in the corridor outside the children's room, since all the staff bedrooms were too far distant. In another one, adults sleep in every bedroom with the children—an arrangement of which I strongly disapprove.

The importance of the laundry cannot be overemphasised, and all initial arrangements were inadequate. Wet-weather drying was a great trial, but greenhouses and conservatories make excellent drying grounds even if the heating is apt to be expensive, and flowers and plants have to be displaced. Where there

are several nurseries within a short distance I rather think that it would pay to establish one central laundry to do all washing. The number of articles per child washed every day runs to more than six for the younger children, without taking account of bedding.

Sick bay accommodation was not at first provided, but within a few weeks it became of paramount importance. Chicken pox, mumps, and whooping cough cases were removed to our improvised evacuee hospitals, but colds, sore throats, impetigo, and minor ailments had to remain. The return of children from the ordinary isolation hospital after scarlet fever or diphtheria presented difficulties, too, since it was unwise to allow immediate mixing with the other children. Provision of separate special billets for a fortnight was best, but seldom possible, and so these children have to be isolated in the sick bay as a rule.

Staff

Provision of adequate staff has given more anxiety, I think, than anything else. There is still an acute shortage of suitable junior nurses. The number required varies from one for four children to one for every six or seven children, according to the convenience of the accommodation. In some we have been able to make use of mothers whose children are boarded, but this source of help is ever diminishing. There is, I am convinced, only one way of solving the difficulty, and that is to run all nurseries in close collaboration and to make use of the facilities as a training school for children's nurses. This will prove an actual economy as well, and our only trouble with it is to guarantee completion of training for those in training when the war ends and all nurseries close down. I dare to suggest that the benefits to the children will by that time be so well established that some permanent nurseries may be retained in rural areas to which city dwellers may send their children for health's sake.

I want to see kindergarten teaching introduced into every nursery. The discipline is good for the children, and eases matters for the staff, whilst it provides useful and interesting occupation for the children.

Medical officers ought to have been appointed from the first—they are essential. Health records have not been kept as they should have been, though efforts have been made to remedy this. Diphtheria immunisation is being attended to. Diets still require adjustment in order to take fullest advantage of country fare which is best suited to young children, and of which there is abundance in Surrey.

Special credit is due to the matrons in charge of the day nurseries who found themselves so suddenly transported into new surroundings and new circumstances. They had no one to fall back on for help and advice, and amid a multitude of new problems clamouring for solution, they wisely made simple hygiene their first care even at the expense of other more obvious matters. It is to their credit that in practically every institution the health of the children improved beyond expectation—general development, physique, and most noticeable of all, resistance to minor ailments and infections. They did well. When it is possible to produce accurate records they will be a testimonial to the work of these matrons.

The nurseries have had their share of epidemic diseases, especially scarlet fever and chicken pox, the former being brought from London with two institutions; and the latter, part of the general epidemic which ravaged our district last autumn. Infectious diarrhœa affected practically all children in another nursery, and was followed by infective jaundice amongst the nurses. There have been the odd cases of diphtheria, whooping cough, mumps and seasonal ailments, but on the whole, considering the general conditions, it has been a healthy winter.

Management

I have already suggested the wisdom of uniform management and co-ordination of nurseries over a large area. It seemed, in the first few months, as though it was nobody's business to improve conditions and deal with the countless daily problems. Supervision by the local authority appears to be essential—it must be someone actually on the spot—yet it would be no less than a tragedy if the interest and support of the London committees were completely lost. Greater help from them would have been very much appreciated. In one or two instances there is already a great measure of co-operation and accord between the authorities in London and in the reception area, but there is still much to be done.

Children are still arriving from London, and a few are still being taken back by impatient parents. Some are growing too old for our nurseries and ought to be billeted as school children. Official mechanism for this procedure appears to be lacking, but would not be entirely successful in any case. Mothers who have learned to entrust their children to a residential institution are too often unwilling to put the same confidence in private billets. They prefer to take children home. The disruption from friends and associates, as well as the sudden break from properly controlled routine, coming at the age of five is something that ought to be avoided. A suitable hostel could serve a number of nurseries and would overcome all these objections. Far too many children, and especially younger children, have returned to London, and anything that encourages them to stay in safe areas is justified.

I cannot conclude without expressing my thanks and appreciation for the honour of being invited to give this short paper this afternoon, and ask your pardon if I have omitted mention of features which might have been of greater individual appeal.

DISCUSSION.

The President (Dr. Agnes Young, A.M.O., Warwickshire C.C.) expressed thanks to the opening speakers for their papers and declared the subject open for discussion. Arising from Dr. Haine's paper, she asked what prospects could be held out to girls to train as nursery school nurses? It was difficult to see what future and what hope of promotion could be offered to these trainees. A similar problem existed in connection with the Civil Nursing Reserve personnel.

Dr. Violet Russell (A.M.O.H., Kensington Met. B.) spoke of the psychological difficulties which had been encountered in connection with evacuation. This had been evidenced by the epidemic of bed-wetting, which

had been experienced amongst children who were not all bed-wetters when at home. She wondered whether enuresis was a way of expressing resentment, and she mentioned cases of violence amongst evacuated children which might be ascribed to the same psychological cause. She feared that there was a prospect of an outbreak of juvenile delinquency, but suggested that communal living arrangements might answer this problem.

Dr. E. H. R. Smithard (M.O.H., Shoreditch Met. B.) said that he was an advocate in any case of separating children from their parents at the age of five months. He raised the question of what could be done for the children under five years of age who had now returned to London; a public demand was now being raised for the establishment of new day nurseries in his borough in place of those which had been evacuated. This was largely a question of finance as the Borough Council had to bear the same expense in the case of the evacuated nurseries as had been incurred when they were still in their own London premises.

Dr. Catherine Morris Jones, answering some questions which had been raised about the responsibility for evacuated day nurseries, held that they were still the responsibility of the evacuated authority or of their parent Society. Visiting by the managing body was encouraged. The excess of expenditure over the pre-war expenditure would be made up by the county council.

Dr. Haine, replying to a question about the nurse-trainees, said that the only promise made to these girls was that they would have two years' training, during which time they would receive 7s. 6d. per week for the first year, and 10s. per week the second year.

The President, in winding up the discussion, expressed special gratification at the attendance at the Group's luncheon-discussion of many members up from the provinces.

MINIATURE RADIOGRAPHY*

By A. Lovell Cranch, F.R.P.S.,
Radiographer and X-Ray Technician to the Welsh National Memorial Association.

In considering the possibilities of mass radiography in the Welsh National Memorial Association it was essential to make use, as far as possible, of existing apparatus in the various institutions. This is mostly of the single or 4-valve type. The methods of many workers were examined, especially those of Dr. Robinson Thomas. His suggestions in the September issue of Public Health are most helpful and form the groundwork for constructing simple and inexpensive apparatus for use with existing plants.

With regard to the 1 in. square size, as used by Dr. Dormer, the useful area of which is about the size of a postage stamp, it was decided that this was really too small to be of value without considerable magnification. This applies in a somewhat lesser degree to any camera using 35 mm. perforated cinema film, such as the well-known Leica and Contax cameras.

*A demonstration given to the Welsh Branch, Society of Medical Officers of Health, April 19th, 1940.

The camera chosen for my experimental work was a 2¼ in. square reflex, fitted with a 4 in. *f*1·9 Meyer Primoplan lens at a pre-war cost of £47 10s. This camera is attached to a home-constructed ply-wood cone, and electrically synchronised with the X-ray plant. A standard super-speed panchromatic 120 roll film is used, similar to that used with a Rolleiflex or Rolleicord camera. The cost of three rolls (36 pictures) for 4s. 6d. compares very favourably with that used in the Leica or Contax (36 pictures for 3s. 6d.), having regard to the fact that the former has an effective superficial area about four times as great.

Processing

The processing of these 2¼ in. films is standard, rapid and easy. Any girl trained in developing and printing work could carry this out successfully. With regard to development, a much better quality negative is obtained by using one of the modern contrast developers, *viz.*, Kodak D19B or Ilford Blue Label, developing for a period of 6½ mins. at a temperature of 65 deg. F. It is imperative that both time and temperature are strictly adhered to. Prolonged development or increased temperature will result in diotic fog. With this technique the full speed value of the film is obtained. Then, in the usual way, the film is rinsed in water and fixed in an acid fixing bath. Alternatively, where reasonably large quantities of films are used, special arrangements can be made for having them processed at the special price of 6d. per roll.

One hears much these days of the grain bogey. Here, also, the larger size film scores over the smaller in the following respects:—

(1) Provided the same emulsion is used on both sizes of film and both are processed similarly it follows that if the smaller size film is magnified to the size of the larger, then the grain will be four times more obvious in the former.

(2) The use of superfine grain developers with their slowing down of emulsion speed is dispensed with.

(3) In the case of the smaller size film 36 exposures have to be completed before development can be carried out; in the larger size only 12.

Apparatus

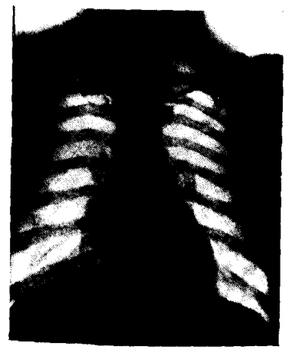
Lens.—Dr. Dormer advocates the use of a lens of aperture 0·85. The only advantage gained by this highly expensive, specially constructed lens is *speed*. In all other optical qualities it is surpassed by an equally well made 1·9 lens of similar focal length.

Screen.—Up to the present, standard Levy West Screens, with lead-glass protection, giving a yellow-green fluorescence, have been utilised. Orthochromatic films are quite sensitive to this yellow-green, although panchromatic film is more so, because of its extra yellow sensitivity. The ideal combination would be a screen and a film having the same peak wavelength sensitivity.

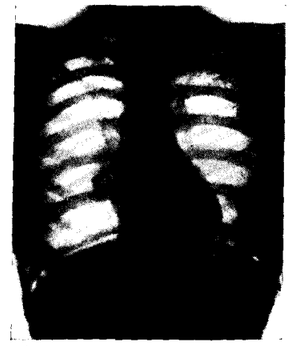
Research might be carried out with advantage in this direction.

ACTUAL SIZE MINIATURE RADIOGRAPHS

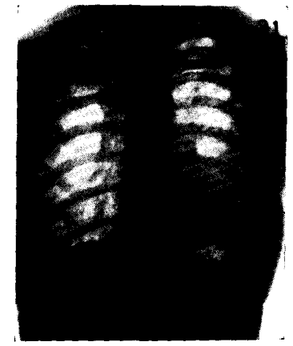
Taken by Mr. A. L. Cranch



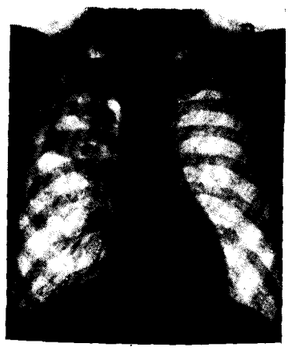
Normal Chest.



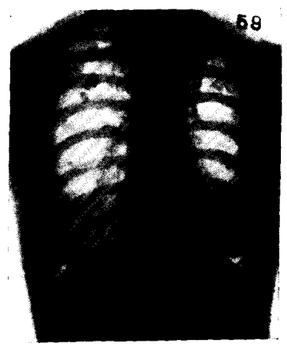
Bilateral Apical Lesion.



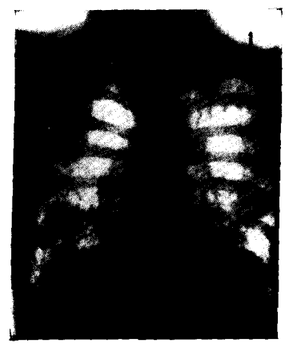
Right Apical Cavity.



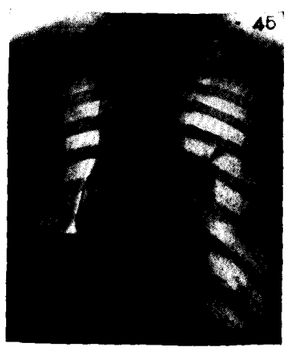
Small Pneumothorax Showing Adhesions and Large Cavity.



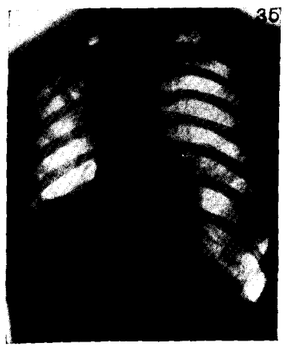
Healed Tuberculosis.



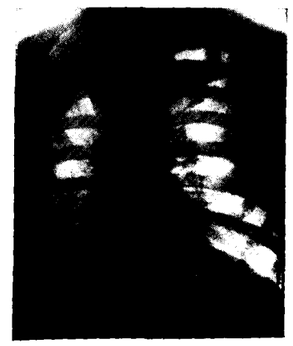
Silicosis ? + Tuberculosis



Right Sided Pneumothorax with Fluid Level.



Right Sided Phrenic Evulsion.



Partial Right Sided Thoracoplasty.

X-Ray Tubes.—A standard water-cooled 6 or 10 k.w. tube is quite suitable and, by the use of the specially designed stand of the W.N.M.A., the tube is rendered shock-proof.

Technique

The technique adopted for miniature radiography is as follows: —

	3 *Constant Factors.*	1 *Variable Factor.*
(*a*)	M.A.s 100.	K.V.s.
(*b*)	Tube Screen Distance 40 in.	50—70.
(*c*)	Time: 0·5 sec.	Average adult 60.

It will be noted that the all important and only factor which is variable is the *kilovoltage, i.e.,* the penetrating property of the rays. This variation is proportional to the opacity of the patient. Many workers use high K.V.s with the object of shortening exposures. My experience shows that much cleaner and more brilliant pictures of the chest are obtained with low K.V.s. Shortening of the time factor does not compensate for the added scattered radiation and loss of contrast which follows the use of high K.V.s, thereby blotting out the finer details so essential to early diagnosis.

Speed of Radiographing Cases

As to the number of cases taken in a given time it would be quite possible, even with the present improvised attachment, to radiograph at the rate of 100 per hour, provided cases were prepared and instructed beforehand. It is the marshalling of the patients which might possibly cause delay, rather than the actual taking of the radiographs.

Serial Numbering

Serial numbering device is very simple. Lead numbers on thin pieces of cardboard are just hooked on the tube side of the screen in one of the top corners.

Conclusion

My suggestion for carrying out good miniature radiography on a large scale at a minimum cost and in a minimum space of time would be: —

A simple combined stand and camera unit, especially designed to facilitate entry and exit of patient, with rapid centring, kept solely for miniature radiography and attached by a change-over switch to the existing X-ray productive unit.

Cost per 1,000 radiographs—

	15 in. by 12 in.	2¼ in. sq.	
Films ...	140 0 0	6 5 0	(retail price)
Developing ...	16 0 0	2 0 0	
	£156 0 0	£8 0 0	

Therefore the 2¼ in. square is roughly one-twentieth of the cost of 15 in. by 12 in. To the Memorial Association this would have represented a saving last year of about £5,000.

Finally, as the object of mass radiography is early diagnosis, the demonstration has, I hope, enabled you to decide whether the films shown are of such quality as to achieve this end.

Correspondence

ANOMALOUS RESULTS IN THE BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

To the Editor of PUBLIC HEALTH.

SIR,—The facts brought forward by Drs. Hughes and Wordley in your December issue, 1939, must have been very disquieting to many interested in public health, and I was very glad to see the letter on the subject by Dr. Suckling in your April issue.

I am inclined to agree that some of the bacteriological examinations which are made can only be described as inadequate and that if the procedure described in Report No. 71 of the Ministry of Health were followed by everyone no such discrepancies could arise.

It used to be a common practice to put on a small number of tubes of the water, say one each of 10, 5, 1 and 1/10th c.c., and frequently to be content with reporting the presumptive tests as "*B. coli* present." This is certainly inadequate and coupled with the small quantity of sample very often taken, has always appeared to me to be like trying to determine the number of fish in the sea by counting the number in a cubic yard of seawater taken off the end of a pier.

Since the appearance of the Ministry of Health Report No. 71 I have always followed the technique there laid down and put up fifteen tubes, five each of 10, 1 and 1/10th c.c. All the tubes giving a positive reaction should be further examined by the complete methods described in Report No. 71. This, however, is very time-consuming and laborious, and I have recently found that it is sufficient to re-innoculate all the tubes showing a positive reaction into MacConkey broth at 44 deg. C. as well as into Kosers' citrate solution at 37 deg. C. These two results enable one to distinguish between *B. coli* and the intermediate-*aerogenes-cloacae* group. In cases of doubt the full procedure should be followed.

I do not think that Dr. Suckling is right in saying that it follows that when sodium thiosulphate has been added that the bottles must have been opened after collection of the samples. Report No. 71 directs that the thiosulphate should be added before sterilisation. At the same time I do not like the addition of thiosulphate to the sample, especially since it is possible for decomposition products of the thiosulphate to be formed on sterilisation at 170 deg. C. I do not think that a continued action of the chlorine during transit would make the difference between a good and a bad water, but I have instituted experiments to test this point. Further, if the sample is taken direct from a reservoir, the process should be credited with the continued action in the service pipes. I still prefer to sterilise a Winchester quart bottle with 5 per cent. phenol so that the sample will serve for both chemical and bacteriological analysis. The sample is sufficiently large to ensure a fair bacteriological sample. This entails great care in rinsing out the bottle but insufficient rinsing is easily detected by the presence of traces of phenol.

I have lived through practically the whole history

of bacteriological water analysis. Originally it was very unsatisfactory but I have found that careful application of the procedure laid down in Report No. 71 of the Ministry of Health is entirely reliable.

Yours faithfully,

CLARENCE A. SEYLER, D.SC., F.I.C.

The Technical Institute,
Swansea.
April 13th, 1940.

PROBLEMS OF EVACUATION AND NURSING SERVICES

In a Chadwick Lecture delivered on March 12th on "The Role of Women in the Public Health Service To-day," Dr. T. N. V. Potts, County Medical Officer for the West Riding of Yorkshire, said that he had chosen his subject in view of the fact that his county area for maternity and child welfare work embraced the largest population of women and children in this country living under diverse local conditions—agricultural, coal-mining and engineering, textile manufacture, etc. He gave special attention to the aspects of women health officers' work which had been accentuated by the war. He saw no reason to depart from his opinion of before the war in regard to the rival claims of M. & C.W. and A.R.P., that in war-time health visitors should remain with their "flocks." If anything, war conditions had indicated that the general establishment of health visitors throughout the country might well be increased.

"In the first place," he said, "no one will dispute that the effects of war upon the moral, physical, and mental fibre of women and children is likely to be serious and, therefore, that a greater degree of skilled nursing attention and supervision will be required. In the second place it has been brought to light in no uncertain fashion, not only in the West Riding but in most other parts of the country, what unsatisfactory environmental conditions still exist in the larger urbanised aggregations of population, despite recent re-housing schemes, maternity and child welfare and school medical services, and the substantial strides that have been made lately in improving the nutrition of mothers and children by providing them with various forms of assistance, for example, milk, food, dental treatment, through various channels. . . There is still, even in peace-time, much leeway to be made up and in war-time more intensive action is necessary, otherwise the leeway will be greatly increased rather than diminished."

He went on to quote an interesting series of views expressed by the medical officers working in reception areas as to the state of health of evacuated children. The gist of these was that a high proportion of the children had arrived thoroughly clean, that there had been some cases of serious infestation, that there had been an almost universal improvement in health and nutrition as a result of the country life, regular hours, and so on, and that infectious disease had been low in incidence. Another point of view had been that of members of the Women's Voluntary Services and of the District Nursing Associations, who had been in close contact with billeting officers and householders; they considered that the improvement in nutrition and cleanliness which had been so noticeable would not have been possible but for the constant and untiring efforts of the health visitors, school nurses and district nurses in the reception areas. Without adequate control, such conditions as dirty heads, scabies and impetigo would have been rife. All these points in connection with evacuation brought home the ever-increasing responsibilities which were likely to be thrown on the shoulders of health visitors if mass evacuation took place.

Turning to another phase of his subject, Dr. Potts said that the acute shortage of nurses which had existed for some years had been greatly accentuated by the outbreak of war. He thought that the problem was to secure an equitable distribution of female labour during the war, and it might be a logical solution to introduce some form of conscription to those national services which could be undertaken by the women of the country. He hoped, however, that this would not be necessary but that improved organisation would overcome the present difficulties. There was room for much more flexibility in the nursing profession so that areas which were better off for nurses could transfer some of their personnel to the areas which were under strength; this principle should apply both nationally and also locally amongst contiguous authorities.

He mentioned the recommendation that at least two or three trained nurses should be appointed to each First-Aid Post. This was, no doubt, an ideal arrangement, but it was certainly not possible to carry out such a policy in the West Riding except by denuding other important casualty and hospital services which were equally in need of trained nurses. His county council had appointed its peace-time staff of public health nurses on a part-time basis to First-Aid Posts; these women were carrying on their normal peace-time duties in clinics and in home visitation, and had generously accepted the additional burden of taking charge of First-Aid Posts and giving the necessary instructions and training in their spare time. He appealed to the sense of responsibility of individual women to offer themselves to the Civil Nursing Reserve. In cases where women were deterred from enrolling for whole-time service by the fact that they would be sacrificing income and security for the future, he urged that employers should give an undertaking that the peace-time posts of such women would be kept open.

Apart from recruitment, a serious problem with the Civil Nursing Reserve had been the unwillingness of members to accept duty in areas outside those where they usually lived. This resulted in uneven allocation of staff as between the hospitals in the large towns and in the more remote places.

Dr. Potts concluded by referring briefly to the work of midwives and the difficulties which may fall to their lot. He also said that the duties of the tuberculosis nurses would certainly not diminish if tuberculous patients were compelled to remain at home during the next year or two in order to make way in the sanatoria for Service casualties and sick. There would obviously be a tendency, on account of the infectious nature of the disease, the absence of segregation of infectious cases, and the rationing of food, for the incidence and death-rate of tuberculosis to increase.

The Society of Medical Officers of Health

THE ANNUAL LUNCHEON

The Annual Luncheon of the Society, arranged as a substitute for the Annual Dinner which was cancelled owing to the war, was held on Friday, April 5th, 1940, at the Piccadilly Hotel, at 12.45 for 1 p.m., when the President (Dr. F. T. H. Wood) and Mrs. Wood, who were accompanied by their daughters, Dr. Joan S. Wood and Miss M. S. Wood, received nearly 140 members and guests.

The following is a list of those present: —

Officers and Guests of the Society.—The Rt. Hon. Walter Elliot, P.C., M.C., M.B., F.R.S., M.P. (Minister of Health); Sir Girling Ball, F.R.C.S. (President, Royal Society of Medicine); Sir Comyns Berkeley, F.R.C.P. (Chairman, Central Midwives Board); Sir George Chrystal, K.C.B. (Secretary, Ministry of Health); Sir Francis Fremantle, M.P. (Past-President); Sir Percy Hurd, M.P. (President, Rural District Councils Association); Sir Robert Hutchison, F.R.C.P. (President, Royal College of Physicians); Sir Arthur MacNalty, F.R.C.P. (Chief M.O., Ministry of Health and Board of Education); Sir Adam Maitland, M.P. (Vice-President, Association of Municipal Corporations); Sir Wm. Savage, M.D. (Past-President); Dr. G. C. Anderson (Secretary, British Medical Association); Dr. Cyril Banks (Chairman, General Purposes Committee) and Mrs. Banks; Mr. L. Vernon Cargill, F.R.C.S. (Master, Worshipful Society of Apothecaries); Dr. R. Veitch Clark (Past-President); Mr. A. Emil Davies (Chairman, L.C.C.); Capt. G. S. Elliston, M.P. (Consultant Secretary) and Dr. A. B. Howitt, C.V.O., M.P. (Hon. Secretary, Parliamentary Medical Committee); Mr. Eric Errington, M.P. (Bootle); Dr. James Fenton, C.B.E. (Vice-President); Mr. P. T. Harrison, M.INST.C.E. (Chairman of Council, Royal Sanitary Institute); Alderman C. W. Key (Chairman, Metropolitan Boroughs Standing Joint Committee); Mr. E. C. King (Chairman, Urban District Councils Association); Mr. John Lee (Secretary, Central Council for Health Education); Mr. Hugh Lett, C.B.E., F.R.C.S. (President, Royal College of Surgeons); Sir George Newman, G.B.E., K.C.B., F.R.C.P. (formerly Chief M.O., Ministry of Health); Prof. R. M. F. Picken (Chairman, Journal Committee); Dr. Charles Porter (Past-President); Dr. Ernest Ward (Vice-President); Mr. W. R. Wood, L.D.S. (President, British Dental Association); the Executive Secretary.

Members and their Guests.—Dr. J. S. Anderson (Hon. Secretary, Fever Hospital Medical Service Group); Dr. Marjorie Back; Dr. and Mrs. H. Stanley Banks; Dr. H. L. Barker; Dr. W. G. Booth; Dr. Vynne Borland (Hon. Secretary, Metropolitan Branch); Mrs. G. F. Buchan and Mr. and Mrs. Gerald McDonald; Dr. Helen Buck; Dr. Thos. Carnwath; Dr. H. W. Catto (Hon. Secretary, Welsh Branch); Dr. J. A. Charles (Hon. Secretary, Northern Branch); Dr. Stella Churchill; Dr. J. W. Crawford; Dr. W. Allen Daley; Sir Weldon Dalrymple-Champneys, Bt., F.R.C.P., and Mr. H. A. De Montmorency; Dr. C. W. Dixon; Dr. and Mrs. W. K. Dunscombe; Dr. J. Fahey and Guest; Dr. and Mrs. H. A. Fawcett; Mrs. J. Fenton and Dr. S. Stansfield; Dr. and Mrs. James Ferguson; Dr. R. P. Garrow; Dr. Margaret Glass; Dr. Katherine M. Hirst (Hon. Secretary, M. & C.W. Group) and Drs. Andrew and Dorothy Kellner; Dr. and Mrs. G. Hamilton Hogben; Dr. J. W. Hunter (Hon. Secretary, Eastern Branch); Dr. George Jessel (President, North-Western Branch); Dr. R. H. H. Jolly (Hon. Secretary, Midland Branch) and Mrs. Jolly; Dr. G. Q. Lennane; Col. W. A. Lethem; Dr. Arthur Massey; Dr. H. P. Newsholme; Dr. Thos. Orr; Dr. and Mrs. F. R. O'Shiel; Dr. D. D. Payne; Dr. and Mrs. H. Pedler; Mr. J. F. Pilbeam, L.D.S.; Miss Alison Porter and Mr. Bertram Baden, M.C.; Dr. and Mrs. T. N. V. Potts; Dr. T. P. Puddicombe; Dr. David L. Pugh; Dr. Maitland Radford; Dr. Violet Russell; Dr. B. Barling and Dr. Kathleen Hart; Mr. W. Senior, L.D.S. (Dental Secretary, British Dental Association); Mr. R. G. H. Warner, L.D.S. (Chairman of Council, B.D.A.) and Mr. T. Helmer, L.D.S; Dr. Edith Shannon; Dr. Carol Sims; Dr. E. H. R. Smithard; Dr. J. E. Spence (Hon. Sec., North-Western Branch); Dr. and Mrs. J. W. Starkey; Dr. J. A. Stirling (Hon. Secretary, East Midland Branch); Dr. W. B. Stott; Dr. J. A. Struthers; Mr. A. Gordon Taylor, L.D.S. (Hon. Secretary, Dental Officers' Group) and Miss R. B. Latter; Dr. and Mrs. R. W. Tannahill; Dr. E. W. Caryl Thomas (President, Home Counties Branch) and Mrs. Thomas; Dr. A. G. G. Thompson (President, Metropolitan Branch) and Mrs. Thompson; Dr. C. S. Thomson and Miss Agnes Thomson; Mr. George Thomson, L.D.S.; Dr. H. G. Trayer; Dr. E. A. Underwood and Mr. J. Aitchison, L.D.S., and Mr. John Weir; Dr. J. Sim Wallace; Dr. and Mrs. W. H. S. Wallace; Dr. H. Gibbons Ward; Dr. H. C. Maurice Williams (Hon. Secretary, Southern Branch).

This being a war-time occasion, it had been decided to "ration" the speeches, and the only toast proposed, apart from the Loyal Toast, was that of the Minister of Health. The President's speech in proposing the health of the Minister and Dr. Elliot's reply are printed in full on pages 169 to 171.

It is gratifying that so many members of the Society were able to attend on this occasion which was, by common consent, a most successful and enjoyable one.

COUNCIL MEETING.

A meeting of the Council was held at the Piccadilly Hotel, London, W.1 (preceding the Annual Luncheon) on Friday, April 5th, 1940, at 10 a.m.

The President (Dr. F. T. H. Wood) was in the Chair and there were also present Drs. Cyril Banks, Vynne Borland, H. W. Catto, Captain G. S. Elliston, M.P., Dr. James Fenton, Sir Francis Fremantle, M.P., Drs. J. W. Hunter, A. W. Johns, R. H. H. Jolly, Thos. Orr, R. M. F. Picken, T. N. V. Potts, T. P. Puddicombe, Sir Wm. Savage, Dr. J. A. Stirling, Mr. A. Gordon Taylor, Drs. E. W. Caryl Thomas, Ernest Ward, H. Gibbons Ward and H. C. Maurice Williams.

Apologies for absence were received from Drs. J. S. Anderson, G. F. Buchan, J. J. Buchan, James Ferguson, C. E. Herington, Sir Wilson Jameson, Drs. J. J. Jervis, Catherine Morris Jones, Gordon Lilico, A. S. M. Macgregor, James Mair, E. H. T. Nash, Wm. Paterson, A. T. W. Powell, F. A. Sharpe, P. H. Stirk, R. Sutherland, A. G. G. Thompson, H. G. Trayer, W. Allan Young.

THE IMMEDIATE PAST-PRESIDENT.—The President stated that illness was the reason for Dr. Nash's non-attendance, and the Council unanimously decided to send an expression of sympathy and good wishes.

MINUTES.—The minutes of the meeting held at Birmingham on October 20th (printed in PUBLIC

HEALTH, November, 1939, pp. 44-48) were confirmed and signed by the President. There were no matters arising therefrom apart from those dealt with in the reports of the General Purposes and Journal Committees below.

REPORT OF THE GENERAL PURPOSES COMMITTEE.—Dr. Cyril Banks presented the following report from the General Purposes Committee :—

1. At the meeting of the Council held at Birmingham on October 20th last, it was decided to give executive authority to the General Purposes Committee to carry on the business of the Society until another Council meeting was convened. Your Committee now feel that the time has arrived for the presentation of a report to the Council on the action which has been taken on behalf of the Society and to ask for confirmation of such action. We therefore beg to report as follows :—

2. MEETINGS OF THE COMMITTEE HAVE BEEN HELD :—*At Birmingham, October 20th.*—A short informal meeting was held after the Council meeting, for the election of a chairman for the session. It was decided to ask Dr. Cyril Banks to undertake the chairmanship, which he subsequently accepted.

In London, November 17th.—Present—Dr. Cyril Banks (Chairman), the President (Dr. F. T. H. Wood), Drs. J. S. Anderson, Vynne Borland, James Ferguson, R. H. H. Jolly, Catherine Morris Jones, Gordon Lilico, E. H. T. Nash, R. M. F. Picken, T. N. V. Potts, J. A. Stirling and Ernest Ward.

In London, January 26th.—Present—Dr. Cyril Banks (Chairman), Drs. Vynne Borland, G. F. Buchan, James Ferguson, R. M. F. Picken, J. A. Stirling, Ernest Ward and H. Gibbons Ward.

In London, March 15th.—Present—Dr. Cyril Banks (Chairman), Drs. J. S. Anderson, G. F. Buchan, James Fenton, James Ferguson, Catherine Morris Jones, G. Lilico, E. H. T. Nash, R. M. F. Picken, J. A. Stirling, E. Ward, H. Gibbons Ward and F. T. H. Wood.

3. SUMMARIES OF PROCEEDINGS.—For the information of members we authorised the publication in PUBLIC HEALTH (December, p. 68, and February, p. 113) of summaries of our proceedings.

4. CIVIL DEFENCE RESPONSIBILITIES OF MEDICAL OFFICERS OF HEALTH.—Arising from the decision of the Council (see PUBLIC HEALTH, November, p. 48) we approved a statement which was subsequently submitted to the Ministry of Health and the Ministry of Home Security. Briefly, this memorandum urged the Central Departments to give the Society an opportunity for the advance discussion of new proposals on casualty services matters and for bringing forward its own suggestions through some regular consultative machinery. On December 15th a deputation representing the Society was received by Mr. Neville, Dr. Hebb and other representatives of the two Ministries. A report of the discussion appeared in PUBLIC HEALTH, January, p. 89.

At our January meeting we appointed the Chairman (Dr. Banks), the President (Dr. Wood), Drs. James Ferguson, Gordon Lilico, R. M. F. Picken and T. N. V. Potts to act as our consultative committee ; later Dr. Vynne Borland was added as London representative.

In accordance with the agreement reached with the Government departments, we were asked for our observations on new proposals for the treatment of persons contaminated by gas by the institution of public cleansing stations in addition to the existing provision at First Aid Posts. The members of our consultative committee were unanimous in criticising these proposals both in general and in detail. At an interview on January 16th, the Ministry agreed that any circular to local authorities on these proposals would make it clear that they were purely optional.

At our January meeting several further points in connection with civil defence services were discussed and it was decided to make representations to the Central Departments on the following matters :—

The answers given by Mr. Neville and other representatives of the Ministry of Health at a subsequent interview on March 15th are also summarised against each heading.

(i) *Trained Nurses at First Aid Posts.*—(This question had been briefly raised at the interview on December 15th.) As a result of a further sounding of opinion among its members, the Society considers that, with a view to maintaining efficiency and discipline in first aid posts, a trained nurse should be present in each post during the whole daily period of 24 hours and that shifts and reliefs should be arranged accordingly. . . . In view of the existing shortage of trained nurses, which may become more pronounced, the Ministry cannot see their way to authorising the employment of more than one trained nurse on the whole-time staff of a First Aid Post.

(ii) *Pay of Leaders.*—The desirability of a higher rate of pay for A.R.P. personnel holding positions of extra responsibility. . . . The question of extra responsibility was one for determination by the Ministry of Home Security. It was thought unlikely that any concession would be made in this direction but Mr. Neville undertook to convey the views of the Society to the right quarter.

(iii) *Contractual Obligation for Volunteers.*—The desirability of instituting a full contractural obligation for volunteer personnel with a view to securing the efficiency of casualty services. . . . This question is under active consideration by the central Departments ; meanwhile no information is available as to the form which such obligation might take.

(iv) *Expended Equipment.*—Request for clarification of a recent circular, E.M.S. I.104 (addressed to County Medical Officers) regarding transfer of expended equipment. . . . Mr. Neville explained that there had been a clerical error and that the circular should have been addressed to County and to County Borough M.O.s H.

[At the Council Meeting, the Chairman was asked whether the consultative committee had been approached by the Ministry on the recent evacuation circulars. It was believed that certain new instructions regarding the evacuation of expectant mothers were about to be issued. The Chairman replied that the consultative committee had not been asked for its observations on these matters.

The Executive Secretary was therefore instructed to write to the Ministry drawing attention to the understanding reached at the conference in December that the Society would have an opportunity of expressing views on matters concerned with evacuation as well as purely civil defence matters, and to request that the Society should have an opportunity of discussing the future arrangements in regard to expectant mothers.]

5. CIRCULAR 1840—REDUCED PRICE MILK SCHEME.—On a reference from the Council we sent the following letter to the Ministry of Health on November 27th :—

"The Society of Medical Officers of Health has been considering representations made by its members in regard to the above circular, which requested welfare authorities to submit proposals for the local operation of the scheme to supply milk at reduced prices to expectant and nursing mothers and children under five years of age.

This Society has always given support to the idea of increasing the consumption of milk amongst the population and has at the same time drawn attention to the need for ensuring a safe milk supply. We feel impelled, however, to urge at the present time that the inception of the scheme set out in Circular 1840 should be indefinitely postponed. We do so on the grounds both of the administrative difficulties involved and of the nature of the scheme itself.

First, public health departments are now carrying very heavy burden of responsibility in regard to Civil Defence services which has been added to their normal and essential work. The addition of a scheme which would involve much administrative and clerical work and also assessment of means of applicants for milk free of charge or at a price below 2d. per pint would seriously affect the execution of existing duties. The departments would in fact have to become distributing agents for the Milk Marketing Board.

Secondly, Medical Officers of Health are concerned with the possible effect of the scheme on maternity and child welfare work. The existing schemes of welfare authorities for the supply of milk have the valuable feature of bringing about regular attendance at welfare centres. This feature might disappear. Further, many of our members are not satisfied that wet milk has the advantages of dried milk in a scheme of this kind, where they wish to be assured of the safety and standard quality of the foodstuff supplied. They feel that the effect of the new scheme might well be to lead to the unrestricted use of wet and possibly unsafe milk. We are aware that Circular 1840 places with the Medical Officer of Health the right of approval of the source and quality of the milk, but pressure may be brought to bear on the officers concerned to approve other than pasteurised supplies where the latter are insufficient or not available.

On the above grounds therefore the Society of Medical Officers of Health urge the postponement of the scheme."

At the end of February the Deputy Secretary of the Ministry (Sir John Maude) invited representatives of the Society to discuss the matter. The President, Dr. G. F. Buchan and the Executive Secretary attended at the Ministry on February 2nd and reaffirmed the views expressed in the Society's letter. As a result of the discussion which followed, the following letter dated March 6th was received from the Ministry :—

"I am directed by the Minister of Health to refer to your letter of the 27th November in which you convey the suggestion of the Society that the operation of the cheap milk scheme described in the above circular should be postponed, and to the Conference recently held between representatives of the Society and officers of this Department.

The Minister fully realises that the scheme cannot be brought into operation without imposing additional work on the Public Health Staffs of local authorities. In his view, however, the improvement in the general level of nutrition and of the health of mothers and young children which may be expected to result where advantage is taken of the scheme, justified a request that welfare authorities should make every effort to submit proposals for his approval.

With regard to the observations in the fourth paragraph of your letter on the effect of the scheme on maternity and child welfare work, the Minister cannot share the view that welfare authorities should rely on the distribution of free or cheap milk to encourage regular attendance at welfare centres. Indeed, it appears to him to be one of the advantages of the scheme that much of the time of the staffs of the centres which is now occupied by the distribution of milk will be set free for the educational work which is the primary function of the centres.

With regard to the safety and quality of milk supplied under the scheme, the Minister is of opinion that the necessary safeguard is provided by the requirements (to which reference is made in the fourth paragraph of your letter) contained in clause 4 of the scheme that the approval of the Medical Officer of Health must be obtained.

The Minister cannot therefore agree that on the grounds mentioned in your letter he would be justified in consenting to the postponement of the scheme."

In the same connection the Deputy M.O.H., Ilford, had written to draw attention to recent serious increases in the cost of dried milk to welfare authorities.

The Committee also had before them a letter from Dr. J. A. Charles, of Newcastle, reporting that his authority had obtained a concession from the Ministry that applicants for milk under the Circular 1840 scheme should be in attendance at child welfare or ante-natal centres. The City Council had made a further condition that the block grant should be adjusted so as to alleviate the burden borne by the local authority in applying the scheme. The Ministry had not yet acquiesced in this latter condition.

The Committee discussed the Ministry's letter of March 6th, and it was decided to express to the Council the view that the Society must still disapprove of the features of this scheme which would affect the work of welfare authorities and would involve a heavy administrative burden on public health departments. They decided to urge that the Ministry's policy should permit local authorities to maintain or extend the supply of milk through their maternity and child welfare schemes, it being understood that the distribution of milk under the Circular 1840 scheme might operate through such other channels as were thought practicable.

[The Council approved the action taken by the General Purposes Committee on this matter. They also took into consideration a letter from the Town Clerk of Hull, setting out objections to the Scheme, and a letter from the Secretary of the Association of Municipal Corporations asking the Society's observations on the Town Clerk's letter. It was decided to inform the Association of the action previously taken by the Society in regard to Circular 1840, to reaffirm the views expressed in our letter to the Ministry of November 27th last ; to stress the Society's concern at the recent increase in the cost of dried milk brought about by the action of the Milk Marketing Board in raising the price of milk supplied to dried milk manufacturers ; and express general support of the views put forward by the Hull City Council.]

6. PUBLIC HEALTH MEDICAL OFFICERS AND WAR SERVICE.—We have expressed opinions to the British Medical Association on two important questions relating to the above (see PUBLIC HEALTH, February, p. 113).

(i) *Civilian and Services Pay.*—The attitude of local authorities towards the question of making up the difference between civilian and services rates of pay in the cases of members of their staffs who joined the Forces was considered in the light of information published in the N.A.L.G.O. organ *The Local Government Officer*. It was felt that the extent to which local authorities made only qualified payments or no payments at all to their medical officers who joined up would be an important factor in deciding whether the public health service would provide its fair quota of men for the Navy, Army and R.A.F. medical services. We therefore decided to request the Association to circularise all local authorities which had decided to make no payments or only qualified payments, and those which had reached no decision. This circular was sent by the Association just after Easter.

(ii) *Public Health Appointments falling vacant during the War.*—The B.M.A. informed us that in a recent instance where a borough M.O.H. was due to retire they

had asked the local authority to consider either extending the service of the present M.O.H. or of making an appointment of his successor for the duration of the war only, on the ground that many men who would normally be candidates for such an appointment were now serving with the Forces, or awaiting their calling up. The Association pointed out (1) that the field of recruitment was therefore limited and (2) that the men who were unable by reason of absence with the Forces, to compete for the post would be penalised as compared with their colleagues retained for civil duty.

The Association asked the Society to consider whether the Ministry of Health should be asked to advise local authorities not to make permanent appointments to M.O.H. posts and other senior appointments during the war.

We felt that, despite the difficulties involved, *e.g.*, as to superannuation rights, the Society would agree to the principle of this suggestion, which should indeed apply to all public health vacancies, and that the B.M.A. should approach the Ministry on the matter.

After the mention of this decision in PUBLIC HEALTH for February, several members wrote expressing anxiety at the possible results of this policy if it comes generally into force. For example, an M.O.H. of about 40 years of age wrote to point out that he was responsible for the A.R.P. casualty services in a vulnerable area and that it was unlikely that he would be released for military service even if he so desired. He suggested that the majority of his colleagues of the same age were in a similar position and that it seemed unfair that they should be debarred from seeking promotion in the usual way; he felt that it would be best to leave the whole matter to the discretion of the authorities who might be requiring medical officers of health in war-time.

An assistant medical officer, age 43, who had seen service in the last war, also expressed anxiety lest he should be robbed of the chance of promotion until he had passed the age of 45. Another member has drawn attention to the already serious depletion of public health staffs in some areas, and especially those where the reception of evacuees has put an extra strain on the services, and has argued that the demands of the Forces should not take away more public health medical officers than are urgently required.

The Committee gave further consideration to the matter at their March meeting and felt that they could not depart from the principle expressed in their previous communication to the B.M.A. It was felt that the obligation upon the Society to watch over the interests of its members serving with the Forces demanded this step, and that the proposed discussion with the Ministry would be of value.

In anticipation that the Society would be asked to nominate a representative for the deputation to the Ministry, the Committee asked the President to act on our behalf.

[A member of the Council expressed the view that the policy was impracticable and unfair to the medical officers of health who would be seeking promotion, and were unlikely, because of the present importance of their posts, to be released for military service.

It was, however, pointed out that it would be impossible to rely on individual local authorities to make the fair and right decision in individual cases and that some guidance was desirable from the Ministry. The Committee had therefore felt that a discussion of this difficult matter between the B.M.A., the Society and the Ministry of Health would be desirable.

The Council adopted the General Purposes Committee's recommendation by a large majority.]

7.—DENTAL CARE OF EVACUEES.—The Dental Officers' Group drew attention in a letter dated February 2nd to paragraph 11 of the Board of Education Circular 1485—which is as follows :—

"*Consents for Treatment.*—It will often be impossible to obtain consents for treatment from the parents of evacuated children and it is, therefore, suggested that the following procedure might be adopted. If it appears from information supplied by the teacher or other person, or from evidence obtained from an examination of the child's mouth that the parent has consistently refused in the past to allow the child to receive dental treatment, emergency treatment only should be given. If there is evidence that the child has received dental treatment in the past, it may be assumed that the parent would agree to treatment, and action might be taken as if the parent's consent had been obtained."

In the opinion of the Group this paragraph does not relieve the dental officer of responsibility and an action at law might still be brought against the individual dentist for carrying out treatment without parental consent. It is understood to be the practice of many dental officers to insist on such consent before treating the teeth of evacuated children. The Group therefore requested the Society to approach the Board with a view to clarifying the position in the light of the above paragraph.

The Executive Secretary addressed an inquiry to Dr. Alison Glover whose reply, dated March 5th, is as follows :—

"The paragraph in question only suggests a procedure which, if adopted by local education authorities and their officers, will satisfy the Board. When making this suggestion we felt that it was one of which public opinion generally would approve.

An analogy will perhaps make the Board's position clear, Paragraph 11 of the "Conditions of a satisfactory dental scheme" indicates that the Board will not object if, in cases of special urgency, a dentist acts both as operator and anaesthetist. This cannot be taken to imply that, in the event of an untoward result occurring through this policy being adopted, the dentist is completely protected from risks of an action at law; it merely means that the Board regard the policy as a reasonable one.

I doubt if anything would be gained by making a formal approach to the Board. It will be appreciated that the Board cannot possibly clarify the legal position or suggest what action would be taken by the Courts, and therefore, if an authority feels that its position and that of its officers are not sufficiently safeguarded by the Circular 1485 procedure, it is open to it to insist on parental consents being obtained."

The Committee regarded the position as unsatisfactory and decided to RECOMMEND the Council to express to the Board their view that circulars should not issue directions to education authorities which might lead to legal action being taken against individual officers of the authority. Moreover, that the Society should advise its dental members not to treat evacuated children without the previous consent of the parents having been obtained, or unless the local education authority agreed to indemnify dental officers against possible legal action being taken against these for assault.

8.—DIPHTHERIA IMMUNISATION.

(1) *Central Council for Health Education.*—The Committee reviewed the leaflet on Diphtheria Immunisation issued by the Central Council for Health Education, with a view to suggesting amendments before a new edition was printed. The Executive Secretary was instructed to convey certain amendments to the Central Council.

(ii) *Compulsion.*—The Committee considered a letter dated November 21st from the Urban District Councils'

Association. The letter stated that one of the Association's members had urged the introduction of legislation to make diphtheria immunisation compulsory for children between the age of one and 14 years. They requested the Society's observations on the advantages and disadvantages of immunisation and the need for compulsory protection.

The Committee decided to reply that in the view of the Society there was no question of the advantages of diphtheria immunisation and to refer the Association to the revised memorandum just re-issued by the Ministry of Health.

In regard to the question of compulsion, the Committee decided to repeat the advice given by the Society to the Association of Municipal Corporations in regard to compulsory vaccination, *i.e.*, that in the present state of public opinion a voluntary system was likely to have more favourable results.

[The Executive Secretary drew attention to the exact terms of the Society's previous advice to the Association of Municipal Corporations. It was felt, therefore, that this might be repeated to the Urban District Councils Association, with the general observation that a compulsory system of diphtheria immunisation was unlikely to receive public support in the present state of opinion.]

9. DOSAGE AND CONTENT OF COD-LIVER OIL.—This matter having been raised by Dr. Cecile Asher, it was reported that the Ministry of Health had taken steps to see that no dilution of cod-liver oil intended for human consumption would occur.

The Maternity and Child Welfare Group had considered the question of the dosage of cod-liver oil required for prophylaxis. They recommended that enquiry should be made as to the vitamin potency of cod-liver oil and the number of international units which should be considered necessary for a prophylactic dose. In their opinion the maximum quantity of oil which a child should be expected to take was 3 drachms per day.

The Committee decided to address an enquiry to the Medical Research Council saying that the literature regarding the optimum dosage of vitamin D showed wide variations and asking for guidance as to the daily requirements for a child, having regard to the vitamin potency of a standard cod-liver oil.

10. PEDICULOSIS.—The Committee considered a letter from Dr. Duncan Forbes drawing attention to the problem of reinfection by other members of their families of children who had been disinfested by school nurses and suggesting that in the present state of public opinion the Society should urge that local authorities be given new powers to deal with this nuisance. Dr. Forbes suggested that the necessary powers might be included in a properly drafted clause to the following effect :—

"If on reasonable grounds it is suspected that one or more members of a family harbour vermin then it shall be the duty of the Medical Officer of Health to arrange for the examination of all members of the family and unless, in the following four weeks, they have taken effective steps to disinfest themselves, to have all infested members of the family disinfested at the same time."

A further letter from Dr. Duncan Forbes suggested a compulsory notification of infested persons. There was also a resolution from the North-Western Branch supporting Dr. Forbes' proposal for extra-legal powers and urging that the Society, in view of the allegation that the unsatisfactory condition of evacuees was due to the negligence of public health authorities, should issue a statement to the public in order to remove this misconception.

The Committee decided that it was wiser for the public health service to concentrate on educational methods rather than to seek compulsory powers for dealing with this problem, and that a public statement at this stage would be out of date and impolitic.

[The Council discussed this matter and, after several members had expressed their views, decided that it should be reconsidered by the General Purposes Committee. The points were made that the present time was favourable for getting the public to accept a compulsory measure; that magistrates had not always given the support necessary in the matter of imposing penalties on parents and that the Magistrates Association might be approached; and that the terms of Dr. Forbes' suggestion might be widened to include scabies.]

11. RUBELLA.—The Committee considered a letter dated February 27th, from Dr. A. D. Symons (M.O.H., Shrewsbury) with reference to his letters published in the *Lancet* and *Medical Officer* of February 24th. He stated that he had had pressure brought to bear on him to admit cases of measles and German measles occurring in the Services to his isolation hospital; he had been informed that his hospital was part of the Emergency Hospital Scheme and should admit such cases on request. After exchanges with the Hospital Officer of the Ministry and the Army authorities he had reached a compromise with the area A.D.M.S. that he would admit such cases only when complicated. He suggested that the Ministry should issue instructions that German measles or chicken-pox should not be admitted to hospitals and that the memorandum of the Ministry and the Board of Education should not advise any attempts to control or prevent these two trivial infections in childhood.

The Committee felt that to some extent Dr. Symons' difficulty had been a local one, but that the Society should support a protest against the general hospitalisation of cases of rubella amongst troops in barracks, camps or billets.

12. BUTTER.

(*i*) Correspondence between the Town Clerk of Eccles and Divisional Officer of the Ministry of Food had been forwarded by Dr. J. E. Spence in regard to the Ministry's circular suggesting that butter found unfit for table use should not be destroyed by a health department, but used for other purposes including confectionery-making. It was understood that the matter was being discussed between the Ministry of Food and the Ministry of Health; the Committee, therefore, decided to take no action.

(ii) The Chairman raised the question of the present difficulty involved in purchasing samples of butter from retailers unless some special arrangements were made for the issue of ration coupons to the inspectors.

Professor Picken suggested that the alternative method mentioned in Section 68 of the Food and Drugs Act, 1938, might overcome the difficulty.

The Committee decided that an inquiry should be sent to the Ministry of Health as to whether this would be regarded as suitable to meet the present position.

13. VENEREAL DISEASES IN WAR-TIME.—The Committee considered a question raised by Sir Charles Fremantle at the Annual General Meeting of the steps to be taken for the treatment of venereal disease amongst the civilian population in war-time. Dr. Borland reported the recent educational methods taken by the British Social Hygiene Council, and he said that the Council would by March have the latest figures of incidence of the disease collected from treatment centres.

The Committee decided to defer full consideration of this question until more evidence was available, and in the meantime to express the view that the venereal diseases schemes of local authorities, including public

education, should be developed rather than restricted at the present time.

[At the Council meeting, Sir Francis Fremantle expressed the hope that this matter would be pursued. He said that the main difficulty in the extension of venereal diseases schemes must be put down to the fact that the Ministry of Health's memorandum gives no promise of financial aid. He pointed out that the remote districts where troops might now be stationed lay outside the effective operation of venereal diseases schemes. Other members supported this view and the General Purposes Committee undertook to keep the matter under continuous review.

They were also instructed to consider a letter received from the British Social Hygiene Council, which raised certain questions about the treatment of gonorrhea in women and young girls.]

14. PERSONAL INJURIES (CIVILIANS) SCHEME.—The Committee considered a letter dated February 7th from Dr. K. E. Tapper (M.O.H., Bromley), and a letter dated March 11th from the Secretary of the Institution of Municipal and County Engineers.

The latter stated that a senior regional officer of the Home Office had expressed the view that local authority officials who were carrying out duties in connection with Civil Defence were not regarded as coming within the definition of "Civil Defence Volunteers" but as "gainfully occupied persons." The institution proposed to make representations that a suitable scheme should be drawn up for local government officers embodying an adequate scale of compensation, and invited the Society to discuss this matter with them and with the Society of Town Clerks.

It was agreed that the Chairman and Dr. James Fenton (or Dr. G. F. Buchan) should represent the Society at the proposed conference, and that it should be suggested that an invitation should also be sent to the Association of Clerks of County Councils.

15. REPRESENTATION OF THE SOCIETY.

Tuberculosis Services in War-time. Dr. James Ferguson reported on a conference between the Ministry of Health and representatives of the National Association for the Prevention of Tuberculosis, Joint Tuberculosis Council, Tuberculosis Association, the London County Council and the Society, held on October 27th (reported in PUBLIC HEALTH, November, p. 25).

Dr. Ferguson stated that as the Society's representative, he had expressed the view of medical officers of health that it was desirable that sanatorium accommodation be reserved for normal purposes, even in time of war.

The Committee RESOLVED:

"To appoint Drs. James Ferguson and Ernest Ward as the Society's representatives on the Standing Advisory Committee which had been set up at the request of the Minister of Health in order to consult with him on problems relating to the Tuberculosis Services."

The Tuberculosis Group later submitted a resolution expressing the view that the medical officers administering the tuberculosis service of local authorities were not adequately represented on the above Committee. It was felt, however, that since the Group's resolution, the Advisory Committee had been strengthened by the addition of Dr. Dan Powell (Welsh National Memorial Association) so that it now included Drs. Ferguson and Ward, representing the Society, Dr. W. A. Daley (L.C.C.) and Dr. Powell.

Central Association for Mental Welfare for 1939-40.—Dr. T. P. Puddicombe.

[Dr. T. P. Puddicombe mentioned for the information of the Council that in pursuance of the recommendation made by the recent departmental committee, the Central Association was now amalgamating with the Child Guidance Council and the National Council for Mental Hygiene. The new organisation was now under consideration.]

Royal Sanitary Institute and Sanitary Inspectors' Examination Joint Board for three years from January 1st, 1940.—Drs. T. W. Naylor Barlow and F. T. H. Wood.

British Social Hygiene Council for 1939-40.—Dr. Vynne Borland.

Civil Nursing Reserve Advisory Council.—A letter dated February 1st, from Miss Z. L. Puxley, of the Ministry of Health, conveyed an invitation from the Minister to nominate a representative on the above Advisory Council which was taking the place of the former Central Emergency Committee for the Nursing Profession.

The Committee decided to put forward the name of Dr. James Ferguson, who had previously served as the Society's representative on the Central Emergency Committee.

16. DOMESTIC MATTERS OF THE SOCIETY.

(i) *Annual Luncheon.*—The President accepted a suggestion that a Luncheon be held in place of the Annual Dinner, the date to be governed by the choice of the Minister of Health. The Minister accepted the invitation if the luncheon could be fixed for April 5th, and arrangements have been made accordingly.

(ii) *Roll of Members.*—The Committee considered on reference from the Council whether the Roll of Members for 1939-40 should be printed in full, or alternatively whether a supplement setting out the alterations to the Roll for 1938-39 should be issued.

The Executive Secretary reported that the net cost of printing last year's Roll was £93; it was difficult to estimate the figure for the 1939-40 edition in view of the recent rise in paper prices, but the net cost might be between £95 and £120.

The Committee RESOLVED that the Roll for 1939-40 be not printed, but that the question be reconsidered in regard to the next session.

(iii) *Recruitment.*—The Executive Secretary reported that 39 Fellows and three Associates had been elected to membership since October last. In the same period last year 83 new members were elected.

(iv) *Proposed Air-Raid Precautions Group.*—The Executive Secretary reported that he had recently had discussions with the committee of a group of London Region Assistant M.O.s employed whole-time on A.R.P. duties by local authorities. The group had been meeting regularly under the Chairmanship of Col. G. Wallace (Medical Officer in the London Region Civil Defence Headquarters). The group had been enquiring as to the possibility of their being incorporated as a group of the Society.

The Executive Secretary had reported these discussions to the Chairman (Dr. Banks) who has authorised him to proceed with them on the understanding that any group which was formed as part of the Society's organisation should not be confined to the London region but be open to members outside the London region who were particularly interested in A.R.P. questions.

The Committee decided to support an application for the formation of such a group provided that those of the present independent group who were not yet members of the Society would first apply for membership in the ordinary way. They would also agree that the officers and committee of the existing independent group should be continued as officers of any group formed in the Society for the current year.

(v) *Life Memberships.*—The Dental Officers' Group sent an enquiry as to whether Messrs. Frederick Breese and George Thomson would be regarded as eligible for life membership of the Society. Each of these gentlemen had had a combined length of membership of the School Dentists' Society and the Society of M.O.H. of 32 years, the School Dentists' Society having merged with the Society of Medical Officers of Health in 1921.

The Committee decided that the Group would be in order in recommending life memberships for these two gentlemen.

(vi) *Staff Salaries.*—The Hon. Treasurer reported that the present financial position of the Society was satisfactory. He wished to recommend immediate increases in the salaries of the clerical staff of 10s. per week each, no increments having been given since October, 1938. The recommendation was adopted as from the week ending March 23rd.

The Council adopted the report with amendments mentioned under items 4, 5, 6 (ii), 8 (ii), 10, 13 and 16 above.

REPORT OF THE JOURNAL COMMITTEE.—Prof. R. M. F. Picken (Chairman) presented the following report of the Journal Committee:—

1. MEETINGS.—Since the last meeting of the Council we have held two meetings attended by:—

November 7th.—Professor R. M. F. Picken (Chairman) and Dr. Ernest Ward.

March 15th.—Professor R. M. F. Picken (Chairman), Drs. G. F. Buchan and Ernest Ward.

2. CHAIRMAN.—Professor R. M. F. Picken has been re-elected to the Chair for the session, 1939-40.

3. EDITORIAL.—The Editor reported a temporary shortage of material during the opening months of the war owing to the non-resumption of Branch and Group meetings. However, certain papers read to Branches before the war and some original contributions, together with summaries of Government documents, helped to relieve the situation. By December, Branches and Groups were beginning to meet again, and during the past quarter the main articles in PUBLIC HEALTH have been recent Presidential addresses and other papers read to meetings.

There is now no immediate fear of a further shortage of special contributions, as several papers read to Branches and Groups and some original contributions are awaiting publication. The volume of editorial annotations has been fully kept up, thanks to the efforts of the Chairman and other contributors.

In general, the number of editorial pages in PUBLIC HEALTH has been cut by about one-third since October last, as compared with preceding sessions, the reasons being partly the above-mentioned shortage of material, and partly the increased war-time cost of printing.

4. PRINTING AND ADVERTISING. [Comparative printing costs and advertising revenues for the last three March quarters were set out.]

Members will have noted that since the outbreak of war, the average number of editorial pages in each month's PUBLIC HEALTH has been about 22, as compared with about 32 pages before the war. This reduction was necessitated partly by a shortage of material, but mainly because of the increased cost of paper and the uncertainty as to this factor and as to advertising revenue. The printers' new contract prices, which would have come into operation in October, were already about 7·5% above the prices tendered in 1936. The rising war-time cost of paper has resulted since December in a further increase of about 10 per cent. on the new contract prices. It will be seen, however, that the diminution in the number of pages and the steady advertising revenue have resulted in a better working balance for the six months, October to March, than in previous years.

The Council adopted the report and congratulated the Committee and the Editor and Manager on the results of the last six months' work.

CENTRAL MIDWIVES BOARD.—Dr. J. J. Buchan was re-elected as the Society's representative for the year 1940-41.

CONSULTATIVE COUNCIL TO THE MINISTER OF FOOD.—The Council had before them an invitation to appoint a representative on the Consultative Council under the Chairmanship of the Parliamentary Secretary, Mr. Lennox-Boyd, M.P., with reference to the movement to give guidance to the public on the use of food.

The Council decided to nominate Sir William Savage.

It was *Resolved*, when forwarding this nomination, to state to the Ministry of Food the Society's view that the Consultative Committee should have power to advise the Minister on the scientific and public health aspects of the food supply question.

BRITISH MEDICAL ASSOCIATION.—The Council were reminded that the nominations of public health service representatives for the Council and the Representative Body of the B.M.A. had to be sent in by April 20th.

It was *Resolved* to support the nominations of the President (Dr. F. T. H. Wood) and Prof. R. M. F. Picken as the two P.H.S. members of the B.M.A. Council, and those of Drs. Cyril Banks, G. F. Buchan, James Fenton and R. J. Maule Horne as the P.H.S. representatives.

It was understood that this year's Annual Representative Meeting would probably be held in London.

NOMINATIONS FOR LIFE MEMBERSHIP OF THE SOCIETY.—The Council decided to nominate the following for election at the next Ordinary Meeting on the recommendations of their respective Branches in accordance with Article 12:—

METROPOLITAN BRANCH.

Dr. M. B. Arnold (formerly M.O., Ministry of Health). Joined the Society, 1906.

Dr. G. Quin Lennane (formerly M.O.H., Battersea Met. B.). Joined the Society, 1907.

NORTH WESTERN BRANCH.

Dr. A. A. Mussen (formerly M.O.H., Liverpool C.B. and Port). Joined the Society, 1899.

Dr. H. E. Watkins (formerly M.O.H., Newton-in-Makerfield U.D.). Joined the Society, 1908.

SCOTTISH BRANCH.

Dr. G. Arbuckle Brown (formerly Sen. Deputy M.O.H., City of Glasgow). Joined the Society, 1899.

Dr. John Guy (formerly M.O.H., City of Edinburgh). Joined the Society, 1914.

Dr. J. Livingstone Loudon (formerly M.O.H., Hamilton B.C.). Joined the Society, 1909.

Dr. G. Pratt Yule (formerly C.M.O.H., Fife and Kinross, and M.O.H., Buckhaven B.C.). Joined the Society, 1912.

YORKSHIRE BRANCH.

Dr. James Mair (formerly M.O.H., Harrogate M.B.). Joined the Society, 1910.

WELSH BRANCH.

Dr. P. W. Kent (formerly M.O.H., Barry U.D. and Port). Joined the Society, 1913.

DENTAL OFFICERS' GROUP.

Mr. Frederick Breese, L.D.S., R.C.S. (Eng.) (formerly D.O., L.C.C. Clinic, Blackfriars, etc.). Joined School Dentists' Society (later merged with the Soc. M.O.H.) in 1908.

Mr. George Thomson, L.D.S., R.C.S. (Eng.) (formerly Hon. Dent. Surg., St. Pancras School for Mothers, etc.). Joined School Dentists' Society, 1908.

HEALTH EDUCATION.—Dr. Ernest Ward, who said that " propaganda is now an accepted agent of civilisation," raised the question of whether the Society could not direct suggestions to the Central Council for Health Education on suitable subjects for health propaganda work. As an example, he suggested that the subject of venereal disease prevention should be considered by the Central Council. It was decided not to accept this proposal.

CIVIL DEFENCE QUESTIONS.—The Council considered resolutions passed by the Southern Branch :—

Civil Defence Responsibilities of Medical Officers of Health.—That, in view of the overwhelming civil defence duties now imposed upon the Medical Officers of Health, the Ministry of Health be asked to advise Local Authorities to appoint Assistant Medical Officers to assist with the work.

Proposed Policy on the Provision for Persons Contaminated by Gas. That the Society be requested to submit to all the Branches copies of the Ministry of Health's draft circulars for their observations; or, alternatively, to publish the drafts in the monthly journal of the Society, and invite the observations of the members of the Society thereon.

In regard to resolution (1) it was decided to notify the Branch that the government departments concerned encourage the appointment of medical assistants to medical officers of health for civil defence work devolving upon health departments.

With regard to resolution (2) the Council decided to reply that it was not practicable to follow the suggestion of the Branch. First, the document had been submitted by the Ministry in confidence and with a request for immediate observations. Secondly, the publication of such a draft document in the journal after the Soeiety had made its observations on it would not serve any useful purpose.

VITAMIN CONTENT OF MARGARINE.—The British Medical Association's Committee on War-time Problems of Nutrition forwarded copies of correspondence with the Ministry of Food on the vitamin content of margarine. It appeared that the Minister of Food proposed to control the manufacturers' undertaking to incorporate vitamins A and D in margarine in the same quantity as found in butter by a voluntary agreement reached by the usual legal method of food control. The Association requested the Society's view as to whether a legal requirement should be introduced that margarine should conform to a certain standard of vitamin content.

The Council felt that asking for the compulsory addition of something to a foodstuff was a new departure from the previous basis of food legislation. They decided to reply to the Association that the fortifying of margarine with vitamins was in their view to be regarded as an interesting experiment, but had not yet reached the stage of scientific knowledge where it could be made compulsory by law.

CONTROL OF SLAUGHTERHOUSES.—The Council had before them a memorandum submitted by the Sanitary Inspectors' Association to the Ministry of Health and the Ministry of Food, drawing attention to the question of the present facilities for meat inspection and other features of the Government scheme of controlled slaughterhouses including the questions of unsatisfactory transport and handling of meat.

The Council decided to support the memorandum of the Sanitary Inspectors' Association and to send some further comments on the present position to the Ministry of Health.

JOINT WAR EMERGENCY COMMITTEE (OPTICAL PROFESSION).—The Council received a letter from the above Committee making suggestions for the utilisation of services of opticians in the A.R.P. casualty services.

The Council felt that in view of certain considerations the British Medical Association should be consulted on this letter before any decision was reached.

DATE OF THE NEXT COUNCIL MEETING.—The Executive Secretary reported that in the Articles of Association where it is stated that the dates of the Council meetings should be in the months of November, February, May and September, the qualifying words were used, " unless the Council should otherwise determine," and that the Council had at its last meeting in October decided to vary the dates of meetings for the war period. The Council's power to vary the dates of its meetings is held to cover a meeting at which the President for the ensuing session would be elected. It was, therefore, decided to hold the next meeting of the Council on Friday, June 14th.

With regard to the nominations for the Presidency for the session, 1940-41, the Articles lay down that May 1st. The Council decided to inform the Branches these should be received from the Branches not later than that they had no power to alter this requirement and to request that nominations be sent in before May 1st as in previous years.

COST OF LIVING BONUS.—The Executive Secretary reported that in one county borough which had accepted the recommendation of the Regional Whitley Council, it had been decided to pay a cost of living bonus to the officers and servants of the local authority with whom there was no separate agreement through their professional organisations or trade unions. It had been learned that the medical officer of health's salary was subject to a national agreement arranged through his organisation, so he had received no bonus such as had been given to other chief officials. The Council decided to draw the attention of the B.M.A. to this position.

NUFFIELD PROVINCIAL HOSPITALS TRUST.—The Executive Secretary reported that he was shortly meeting the Secretary of the above Trust who desired the co-operation of medical officers of health in forwarding a scheme for the regionalisation of provincial hospitals. He was instructed to have a full preliminary discussion of this matter and to invite representatives of the Trust to hold a further detailed discussion if they so desired with the General Purposes Committee.

The meeting then adjourned at 12.25 p.m.

NORTH-WESTERN BRANCH.

President : Dr. George Jessel (Cons. T.O., Lancashire).
Hon. Secretary : Dr. J. E. Spence (M.O.H., Eccles M.B.).

An ordinary meeting of the Branch was held on Friday, April 12th, 1940, in the Council Chamber, Town Hall, Chorley, the President occupying the chair. Fourteen members and guests were present and apologies were received from ten members.

The members were welcomed by His Worship the Mayor of Chorley, whom the President thanked for his welcome and his kindness in placing the Council Chamber at the disposal of the Branch for the meeting.

The minutes of the last meeting were signed. A letter from the Executive Secretary relating to the nomination of a candidate for the office of President of the Society was submitted. No nomination was made but the Branch representatives were requested to support the nomination of the candidate whom they considered most suitable.

A letter from Dr. Duncan Forbes relating to the compulsory notification of pediculosis was submitted. As the matter had been referred back by the Council of the Society to the General Purposes Committee for further consideration no action was taken.

The Secretary reported that Dr. E. W. Rees Jones, M.O.H. of Blackpool, would retire in July. Dr. Rees Jones has been a member of the Society since 1906. It was resolved that the Council be recommended to elect Dr. Rees Jones a fully paid life member.

Dr. E. C. Downer (M.O.H., Chorley) then opened a discussion on " Family Allowances " with an interesting paper which it is hoped will be published in PUBLIC HEALTH. The opening paper was followed by a discussion, opened by the President, in which Drs. Cookson, Lyle, Spence, Galloway, Brothwood, Bennett, Leigh, Wood, Burnett and Peters took part. Opinion was divided on the desirability of family allowances, the majority favouring definite allowances based on the number of children, while the minority were in favour of an extension of existing forms of assistance instead of further monetary allowances.

After the meeting the members were entertained to tea by His Worship the Mayor of Chorley.

WELSH BRANCH.

President: Dr. J. Greenwood Wilson (M.O.H., Cardiff C.B.).
Hon. Secretary: Dr. H. W. Catto (M.O.H., Newport C.B.).

The Welsh Branch held their first meeting since the outbreak of the war on Tuesday, March 5th, 1940, at the Cardiff City Isolation Hospital. The minutes of the last meeting were read, confirmed, and signed. As the season was now far advanced, it was decided that the present officers should continue in office until the next annual meeting, to be held some time during the summer. Reference was made to the loss recently sustained by Dr. Colston Williams in the death of his wife, and a vote of condolence was passed, all the members standing. It was resolved that the name of Dr. P. W. Kent be recommended to headquarters for election as a fully-paid Life Fellow, for which he was qualified in virtue of a 25 years' membership.

Cerebro-Spinal Fever

The meeting then listened to a very interesting address by Dr. Emrys Harris, Medical Superintendent of the Cardiff Isolation Hospital, on cerebro-spinal fever. After referring to the importance of certain etiological factors such as the spread mainly by carriers, droplet infection, overcrowding, fatigue, the importance of bed spacing in barracks, etc., Dr. Harris passed on to a description of the clinical types of the disease: abortive, ordinary, fulminating, septicaemic and chronic types. He drew attention to the suddenness of the onset and to the fact that at first the disease was a meningococcaemia, the organism being recovered from the blood at this stage. He then went fully into the list of symptoms, stressing the importance of Kering's and Brudzinski's signs, the leucocytosis, the irritability, headache, vomiting, general rigidity of spine, etc. He then stated that the treatment of the disease had been revolutionised since the advent of the sulphonamide group of drugs. The treatment he had adopted consisted in the administration of four tablets of M. and B. 693 by mouth on admission, which dosage was repeated in four hours' time and then two tablets four-hourly for 72 hours. After this, provided the sugar content of the cerebro-spinal fluid was approaching normality, the dosage was further reduced to one tablet six-hourly for 24 hours, and then one tablet *t.d.s.* for three or four days. Children under 12 years received half the adult dosage, irrespective of the age of the child, as even infants appear to tolerate the drug quite well. If the patient was comatose, the tablets were crushed and given in nasal feeds. If vomiting occurred after ingestion of the M. and B. 693 or the patient was delirious and nasal feeding difficult, the sodium salt of M. and B. 693 was given by intramuscular injections. In severe cases, the sodium salt of M. and B. 693 was given intravenously in about ½ to 1 litre of normal saline by the Vacoliter drip method. It was generally unnecessary to cut down on a vein for this purpose. No serum was given intrathecally, but 30 to 60 c.c. meningococcal antitoxin was given intravenously in the normal saline in severe cases. Fluids were pushed in all cases as, according to him, dehydration could contribute materially towards the fatal issue and two of his cases who ultimately recovered after being in coma for five to seven days, respectively, were given fluids by nasal feeds at four-hourly intervals. Owing to the fact that extensive haemorrhages could frequently be found in the adrenals in fatal cases, he made a point of administering cortical extract in fulminating cases intramuscularly. Salines were given rectally in severe toxic cases, and in a few instances intravenously, as according to MacCance in the Goul-

stonian lecture of 1936, sodium chloride is advocated in cases of adrenal damage. One child, whose pulse was imperceptible on admission, made a complete recovery when treated on these lines.

Complications were rare in his series. Four cases developed arthritis, two iritis, three bilateral nerve deafness, or orchitis. Complete recoveries from these complications were made upon renewal of large doses of M. and B. 693 with the exception of the cases of nerve deafness which were, as usual, permanent. Petechiae were present in about one-third of the cases, facial herpes in about one-third and a combination of herpes and petechiae in about one sixth. One case with extensive ecchymoses up to the size of a penny made a complete recovery.

In conclusion, he would like to give a word of warning regarding the giving of small doses of M. and B. 693 as a prophylactic in suspected cases. Small doses appear to be without effect on the meningococci, and, what is more, the organisms are rendered sulphonamide-fast, or sulphonamide resistant, and large doses administered later are of little avail.

Dr. Allison, of the Ministry of Health Emergency Laboratory Service, had kindly arranged for the typing of the organisms, which, when cultured, were found to belong to Group I.

An interesting discussion followed in which several of the members took part. Dr. W. B. Clark, Medical Officer in Charge of the Allt-yr-yn Isolation Hospital, Newport, gave an account of 62 cases he had treated to date at his hospital. The number of deaths in that series was seven. A noteworthy fact was that in the fatal cases, admission to hospital had been delayed until the sixth or seventh day of illness and a pneumonic complication was existing. Facial herpes had been the commonest skin eruption, while the appearance of the haemorrhagic eruption did not indicate an unfavourable prognosis. The haemorrhagic eruption took the form of discrete petechiae or purpuric spots, which might be visible on the trunk, limbs, face, occasionally on the soft palate and conjunctiva; in one instance actual bruising on the limbs occurred and in another haematuria. The complications were rare—three cases of bilateral nerve deafness, in one of which a transient recovery is recorded; one of right facial paralysis associated with a right ptosis, one iritis, and two cases of internal strabismus, and these recovered.

Treatment consisted of combined chemo- and serum therapy. M. and B. 693 orally was the drug used, and an average of 30 grammes over a period of four to five days administered. One gramme of the drug was given two-hourly for the first 24 to 36 hours, reducing the dosage to one gramme three-hourly, then four-hourly. Infants and children tolerated the drug well, and the total adult dosage was slightly reduced. This was conducted with leucocyte and differential leucocyte counts in about half the cases and agranulocytosis was not recorded. Serum was given intrathecally and intramuscularly on each occasion of lumbar puncture, which was only repeated for relief of symptoms. The intrathecal dose was based on one-fourth of the volume of cerebro-spinal fluid withdrawn, and a polyvalent serum was used in all instances.

The organism was cultivated from the fluid in the laboratory in all cases, with the exception of seven, where it was noted that serum therapy had been administered—possibly only a few hours previously. Because of this observation, he had continued the serum therapy.

The members were subsequently taken round the cerebro-spinal fever wards of the Cardiff Isolation Hospital and cases in the various stages of the illness demonstrated to them by Dr. Emrys Harris.

MATERNITY AND CHILD WELFARE GROUP.

President: Dr. Agnes M. H. Young (A.C.M.O.H., Warwickshire).
Hon. Secretary: Dr. Katherine M. Hirst (A.M.O.H., Islington M.B.).
Hon. Asst. Secretary: Dr. Frances E. Smith (A.M.O.H., Woolwich M.B.).

A meeting of the Group was held at Tavistock House South, Tavistock Square, London, W.C.1, on April 19th, 1940, at 7.30 p.m. In the unavoidable absence of the President, Dr. Saunders-Jacobs (Vice-President) took the chair. Fifteen members and visitors were present.

Professor R. H. A. Plimmer, D.SC., Professor of Chemistry, University of London, read a most interesting paper entitled "Vitamins in War-Time." It is hoped to publish this paper in a later number of the journal. The following took part in the subsequent discussion and questions: Drs. Mizen, Nicoll, Pirrie, Prescott, Saunders-Jacobs, Smith and Wilkins.

A very hearty vote of thanks was proposed by Dr. Pirrie.

NOTICES

DENTAL OFFICERS' GROUP

A General Meeting of the Dental Officers' Group will be held at the rooms of the Society, Tavistock House South, Tavistock Square, W.C.1, on Saturday afternoon, May 4th, at 3 p.m.

A film of "The Masticatory Apparatus in Function," produced and directed by Dr. M. Klatsky of New York, will be presented by Dr. J. Sim Wallace.

The latest films of the Dental Board will also be exhibited.

A. GORDON TAYLOR, *Hon. Secretary*.
28, Battlefield Road,
St. Albans,
Herts.

TUBERCULOSIS GROUP COMMITTEE

A meeting of the above Committee will be held at Tavistock House South, Tavistock Square, W.C.1, on Friday May 17th, at 10.30 a.m.

R. L. MIDGLEY, *Hon. Secretary*.
Hawkmoor Sanatorium,
Bovey Tracey,
Devon.

FEVER HOSPITAL MEDICAL SERVICE

A meeting of the *Council* of the above Group will be held at Tavistock House South, Tavistock Square, W.C.1, on Friday, May 31st, at 3 p.m.

J. S. ANDERSON, *Hon. Secretary*.
9th Sector Headquarters,
"Sherwood,"
Horton Lane,
Epsom, Surrey.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some of the recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointments.

BLACKPOOL C.B.: M.O.H., Dr. G. W. Murray (A.M.O.H. & T.O., Blackpool).
CHESHIRE C.C.: Dep. M.O.H., Dr. Arnold Brown (M.O.H., Congleton M.B. & R.D., Sandbach U.D. & Macclesfield R.D.).
CROSBY M.B.: M.O.H., Dr. A. J. W. Cunningham (Dep. M.O.H., Crosby).
DURHAM C.C.: Deputy S.M.O., Dr. R. W. Locke (A.S.M.O., Durham).
EALING M.B.: A.M.O.H. and R.M.O., Perivale Maternity Hospital, Dr. Anne C. Robertson.
MEXBOROUGH U.D.: M.O.H., Dr. T. Lindsay.
ROSS & CROMARTY C.C.: A.C.M.O.H. & A.S.M.O., Dr. R. J. Lumsden (A.M.O.H., Dunfermline).
WEST HARTLEPOOL C.B.: A.M.O.H., Dr. W. J. Peden (R.M.O., Swansea Bor. Isol. Hosp.).
WINCHESTER, CITY OF: M.O.H., Dr. R. A. Good (M.O.H., Jarrow-on-Tyne M.B.).
WOLVERHAMPTON C.B.: S.D.O.s, Mr. J. H. Glen, L.D.S., Mr. W. G. Clarkson, L.D.S. Salary £450, rising to £520 per annum.
WREXHAM M.B.: A.M.O.H. & A.S.M.O., Dr. Sheila G. Hines.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1903 (encloses Memo. 170/Med.). Price 1d. net. *Diphtheria Prophylaxis*. Encloses for the information of Local Authorities a revised edition of Memo. 170/Med. on the Production of Artificial Immunity against Diphtheria, and points out the enactments under which Local Authorities may provide with the Minister's approval, the gratuitous provision of the necessary facilities.

Circular 1915A. *Government Evacuation Scheme*. States that procedure for recovery of excess payments of billeting allowances outlined in Circular 1915 does not apply to those cases where a person appears to have acted fraudulently. Such cases shall be reported to the Minister.

Circular 1927. *Blind Persons*. Directs the attention of Local Authorities to the provisions of the National Service (Armed Forces) Act, 1939, under which registered blind persons are excepted and to the arrangements made by the Central National Registration Office for the recording in the National Register of such excepted persons. Local Authorities are asked to provide for the completion of a Form (N.R. 68) in respect of each male blind person in the age group covered by the Act. The Circular also refers to Certification Form B.D. 8 and notifies Local Authorities that the arrangements under which copies of this Form are sent to the Department are in abeyance.

Circular 1932 (enclose Form A.G. 1002/2). *Civil Defence Acts*, 1937 *and* 1939. A circular covering Form A.G. 1002/2 issued to Local Authorities explaining the method of claiming a further payment on account of expenditure incurred on structural works and local purchases of equipment in connection with the Emergency Hospital Scheme.

Circular 1934. *Treatment of Tuberculosis*. Addressed to Authorities of Sanatoria and other Residential Institutions approved for the treatment of tuberculosis, draws attention to alterations in returns required on Forms T. 145 (revised), T. 52c (revised), and T. 145b (revised) which are now all required to be submitted quarterly and asks for Form T. 145b to be completed as on December 31st, 1939.

Circular 1935. *Ambulance Attendants*. Issued to County Councils, County Borough Councils, and other Scheme Making Authorities. Makes suggestions for possible reduction of number of whole-time paid personnel.

Circular 1936. *Government Evacuation Scheme*. Outlines scheme for establishing nursery centres for children under school age in reception areas.

Circular 1937. *Annual Reports of Port Medical Officers of Health for* 1939. Circular as to the contents and arrangement.

Circulars 1939, 1939A, 1939B. *Emergency Hospital Scheme*. Addressed to Voluntary Hospitals and certain Local Authorities. Asks for particulars to be furnished on a form of return which was enclosed relating to the provision of in-patient accommodation and the number of patients being treated at December 31st, 1938, and December 31st, 1939.

Circular 1944. *Storage of Dangerous Drugs at First-Aid Posts*. Issued to County Councils, County Borough Councils, Metropolitan Borough Councils and other Schem Making Authorities. Gives details of procedure to be taken at First-Aid Posts on receipt of dangerous drugs.

Circular 1945. Issued to County Councils and County Borough Councils. Gives details regarding payments to British Red Cross and Order of St. John in respect of training of personnel.

Circular 1947. *Government Evacuation Scheme: Civil Defence Act*, 1939. Addressed to Local Authorities in evacuation and reception areas. Encloses form of application for payment on account of Grant in respect of expenditure in the Financial Year, 1939-40.

Circular 1948. *Medical Students*. Issued to Local Authorities and Mental Hospital Authorities with hospitals in the Emergency Scheme and to Voluntary Hospitals in the Scheme. Gives details regarding billeting of medical students.

Circular 1949. *Occupation of Premises for Casualty and Evacuation Schemes.* Issued to all Local Authorities. Gives details regarding requisition and occupation of premises for emergency schemes and specimens of returns to be furnished in connection with the same.

Circular 1950. *First-Aid Posts.* Issued to all scheme making authorities and Metropolitan Boroughs. Reminder to authorities regarding the advisability of resuming normal work in schools where possible.

Circular 1952. *Domiciliary Attendance for Air Raid Casualties.* Issued to Local Authorities and Mental Hospital Authorities with hospitals in the Emergency Scheme and to Voluntary Hospitals in the Scheme. Covering Circular issued with E.M.S. Gen. 303, which gives details regarding treatment by Medical Practitioners of Air Raid Casualties after discharge from hospital.

Circular 1953. *Tuberculosis.* Addressed to Tuberculosis Authorities in England regarding responsibility, as between different Local Authorities, for the provision of treatment for tuberculosis for persons who have recently removed from the area of one Authority to that of another.

Circular 1955. *Government Evacuation Scheme.* Deals with Insurance of motor vehicles used for purposes in connection with the Government Evacuation Scheme.

Circular 1956. *Venereal Disease.* Addressed to County and County Borough Councils (England) and the Common Council of the City of London drawing their attention to the need for maintaining in time of war, the arrangements for the treatment of venereal disease in their areas and making suggestions for the maintenance and, where necessary, the extension of their present arrangements.

Circular 1958. *Civil Nursing Reserve.* Issued to County Councils and County Borough Councils. Makes suggestions regarding the organisation of the Civil Nursing Reserve and training of its members.

Circular 1960. *Government Evacuation Scheme.* Instructs Local Authorities to return to the Regional Store all unissued blankets. States that surplus camp beds and blankets which have been recovered from householders should be returned by Local Authorities for the time being.

Circular 1962. *Emergency Hospital Scheme.* Issued to all Mental Hospital Authorities with hospitals in the scheme. Gives details regarding certain points peculiar to Mental Hospitals and Institutions in the scheme.

Statement. Price 1s. 8d. net. Local Government Financial Statistics, Part III, England and Wales.

Circular 1942 (encloses Memos. 229/Med. and 230/Med.) Price 2d. each, net. *Measures for Dealing with Lousiness and Itch.* Addressed to County Councils and Local Authorities encloses copies of memoranda on (*a*) The Louse (Memo. 230/Med.); (b) Scabies (Memo. 229/Med.). The memoranda summarise the facts regarding pediculosis and scabies and contain advice for preventing these conditions and for the treatment and disinfestation of members of households.

Circular 1957. *Government Evacuation Scheme.* Informs Local Authorities that revised billeting forms are to be substituted for those already in use and requests that obsolete forms be returned to the Ministry.

Circular 1961. Issued to County Councils (except London), Town Councils, Metropolitan Borough Councils, Urban and Rural District Councils. Indicates the contents and arrangements of Annual Reports of Medical Officers of Health for the year 1939.

Circular 1964. *Emergency Hospital Scheme.* Encloses Form A.G. 1005 (1) for making application for advances in respect of expenditure arising in connection with premises occupied for First Aid Posts, Ambulance Depôts, Mortuaries and purposes connected with the Emergency Hospital Scheme.

Circular 1965. Price 1d. net (encloses Memo. E.V.8.). Price 4d. net. *Government Evacuation Scheme.* States that a further measure of evacuation to take place only in the event of serious air raids has been decided upon; discusses various aspects of the new plan and sets out the procedure to be carried out by local authorities. Among other things, states that increased billeting allowances will be payable in respect of children who have attained the age of 14, and that billeting allowances may, in certain circumstances, be paid in respect of children evacuated under private arrangements.

Circular 1969. Addressed to County and County Borough Council and Tuberculosis Joint Boards reminding them of the valuable special services which the Burrow Hill Sanatorium Colony, Frimley, Surrey, is in a position to render in the provision of treatment and technical education for tuberculous youths.

Circular 1970. *Meals for Ambulance Personnel.* Issued to County Councils, County Borough Councils, Mental Authorities and Voluntary Hospitals in the Emergency Scheme. Gives details regarding provision of meals for ambulance personnel and nurses who arrive at a hospital with a convoy at a meal time.

Circular 1972. *Nurses Uniforms.* Issued to County Councils, County Borough Councils, Joint Boards and Committees affected by the London Sector Scheme. Gives details regarding replacement of uniform for nurses transferred from one hospital to another.

Circular 1973. *Nomenclature of Emergency Hospitals.* Issued to Local Authorities, and Mental Authorities with hospitals in the scheme. Makes suggestions for the re-naming of hospitals included in the Emergency Scheme.

Circular 1974. Addressed to Councils of Counties and County Boroughs; indicates generally the measures to be taken (*a*) under the Emergency Hospital Scheme; and (*b*) by Public Assistance Authorities for dealing with survivors of disasters at sea who may be landed in this country.

Memorandum (encloses List 243). Memorandum encloses List (243) of H.M. Inspectors of Factories.

Joint Memorandum of Ministry of Health and Ministry of Foods. Control of Slaughtering. Issued by Ministry of Food to Food Executive Officers and by Ministry of Health to Local Authorities. Explains the arrangements under the Livestock Restriction on Slaughtering, Order, 1940, for the slaughter of livestock for human consumption, the inspection of the meat at slaughter houses and depots and the disposal of unsound meat.

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Editorial

Changes at the Ministry of Health

First, we have to bid farewell to Dr. Walter Elliot, who deserves sympathy in that so much of his energy as Minister of Health has had to be devoted to emergency functions instead of to public health progress. We welcome his successor Mr. Malcolm MacDonald, whose previous record gives promise that his tenure of his new office will be both human and energetic.

The announcement has been made of the impending retirements of Dr. Thomas Carnwath, D.S.O., and Dr. Isabella Cameron (respectively Deputy Chief Medical Officer and Senior Medical Officer at the Ministry of Health). Dr. Carnwath has for so long been a guide and friend to members of the public health service that it is difficult to envisage the Ministry without him. His charm and human qualities have made even the most official contact with him a pleasant one and he has missed no opportunities of keeping in close touch with his colleagues in the service of local authorities outside his professional hours. We wish him happiness and good health in his retirement and hope that he will still often be seen among us at meetings of the Society. Dr. Cameron has been the special oracle on maternity and child welfare matters and has proved as accessible as her deputy chief.

The successor to Dr. Carnwath is Sir Weldon Dalrymple-Champneys, Bart., and we offer him congratulations and a welcome to his new position. Sir Weldon gained his first public health experience under Dr. Buchan, of Willesden, and he has earned much respect for his monographs on undulant fever, bovine tuberculosis and the supervision of the pasteurisation process. The other vacancy is to be filled by Dr. Dorothy Taylor, who is known to many members of the Society first as assistant medical officer in Edinburgh and then Sunderland, and during recent years at the Ministry. A third promotion is that of Dr. E. L. Sturdee, who becomes principal Regional Medical Officer in succession to Sir Weldon. He, too, is well-known to the public health service through his epidemiological studies. The changes will be on August 1st as to the deputy chief medical officer, and on June 5th as to the senior medical officer.

Diphtheria Immunization—A Practical Plan

A Committee on Evaluation of Administrative Practices established by the American Public Health Association has promoted a series of studies on diphtheria under the co-ordinating influence of a strong sub-committee. Some of the results of these investigations are published as short papers in a Supplement

to the March, 1940, issue of the *American Journal of Public Health*. We may have occasion to refer to these highly interesting articles at some other time, but for the present we wish to draw attention to the practical recommendations as to immunization which the Committee has found it desirable to put forward, even before the scientific work of its sub-committee has been brought to a conclusion. The recommendations are as follows :—

1. The preferred practice should be for children under school age[1] and preferably for those at the ninth month of life, (*a*) two doses of diphtheria toxoid, alum precipitated with a four week or one month interval between doses, or (*b*) three doses of diphtheria toxoid at four weeks or one month intervals.[2]

2. In communities where it is impracticable to give two doses of diphtheria toxoid, alum precipitated, or three doses of diphtheria toxoid (*1a* or *b*), to all the children between nine months and ten years of age, it will probably be found that the giving of one dose of diphtheria toxoid, alum precipitated, to a large number of children of this age group is more effective in preventing diphtheria in the community than the use of the two or three doses (*1a* or *b*) for half as many children.

3. To those children receiving one injection of diphtheria toxoid, alum precipitated, a single reinforcing dose of not more than one-half the usual dose of an equivalent diphtheria toxoid, alum precipitated, preparation should be given to each child inoculated in infancy, just prior to the child's entering school at five or six years of age, or three to five years after the initial inoculation if this has been carried out at some time later than the first year of life.[3]

4. As a routine procedure the performance of the Schick test three to six months after completion of the inoculations in infancy is not considered to be essential, although it may be desirable in private practice and whenever the personnel and condition of access to patients at public clinics makes this additional contact practicable.

5. (*a*) Children of ten years of age or over who are known to be susceptible as the result of the Schick test should receive three doses of diphtheria toxoid at four week or one month intervals, or equivalent doses of toxin-antitoxin similarly spaced.

(*b*) For susceptible adults who may be exposed by occupation to contact with the clinical or carrier stage of diphtheria, the use of diphtheria toxoid, alum precipitated, is not recommended. In the case of adults with occupational hazards (*e.g.*, physicians, nurses, attendants in hospitals for communicable diseases) those reacting to a sensitivity test should not be inoculated[4], others should receive three doses of diphtheria toxoid or toxin-antitoxin as advised for children over ten years of age (*5a*). The routine period of Schick test should be twelve months after completion of inoculation, unless there is a special reason for giving the Schick test earlier. The immunity produced is probably at its highest three or four months after the completion of the inoculations.

6. The practice of administering diphtheria toxoid in two doses at three week intervals should be discontinued.

It will be noted that toxoid antitoxin floccules (T.A.F.), so largely used in this country, are not recognised by the Committee as a reagent for the immunisation of older children and adults. This is probably due to lack of availability of the preparation and not to any disbelief in its value. The absence of any indication as to the volume of dosage may be deliberate, but it will be regarded as unsatisfactory on this side of the Atlantic where there is considerable variation of practice in this respect. The Committee's conclusions are probably based on the work of Volk and Bunney* who have used 1 ml. doses uniformly throughout their investigations. The second of the recommendations touches upon a very cogent question for us. Is it easier to get a high proportion of children immunised if only one dose of prophylactic is given? If it is, are we well advised to strive after theoretical perfection, when practical success in the elimination of diphtheria might be otherwise achieved? The answer, as Dr. D. T. Fraser, of Toronto, Chairman of the Sub-Committee on Diphtheria, indicates in the Introduction to these studies, probably must await prolonged and carefully-controlled epidemiological studies. The above recommendations may help to promote them.

Heights and Weights of School Children

In connection with the supervision of the nutritional state of elementary school children, the London County Council in 1935 decided that the standard figures for height and weight, hitherto based on records of the years, 1905-12, should now be brought into accord with more recent figures in view of the generally recognised improvement achieved in recent years. Arrangements were, therefore, made to measure the height and weight of all children at six-monthly intervals, and the analysis of the records of about 100,000 children made in 1938 has now been published as a special report† under the name of Sir Frederick Menzies, lately School Medical Officer.

As there were two measurements of height and two of weight for each child, the investigation involved the analysis of 400,000 items. The most obvious conclusion

[1] If there has been failure to undertake active immunisation of a child prior to school age, either of the initial immunising procedures advised here for younger children can safely be employed for children up to the end of the ninth year of life.

[2] The comparison of the response induced by two doses of diphtheria toxoid, alum precipitated, and three doses of diphtheria toxoid indicates a somewhat higher response produced by the use of the former, although the results in both have been extremely satisfactory. Only preparations of antigenic potency officially acceptable should be used.

[3] Whatever the method of initial artificial active immunisation used in infancy or early childhood, one reinforcing dose of half the size used in the initial dose, or series of doses, of an acceptable antigenic agent, whether diphtheria toxoid, or diphtheria toxoid, alum precipitated, should be given to the child at school age (fifth to sixth year) or three to five years after the initial dose, if this was given later than the first year of life.

[4] Some members of the Sub-committee on Diphtheria have successfully protected adults reacting to the sensitivity test by using doses of toxoid or of toxin-antitoxin smaller than those used for non-reactors.

* Volk, V. K. and Bunney, W. E. *Am. J. Pub. Hlth.*, 1939, **28**, 197.

† Report on the average heights and weights of elementary school children in the County of London in 1938. London County Council, 1940. Obtainable from P. S. King and Son. 22 pp. Price 9d. (10d. post free).

drawn from the comparative tables is the remarkable increase in the average height and weight of London school children since the 1905-12 period, equivalent, at all ages, to a difference of one year's growth. Over some 30 years, taking the total age range, there has been an average increase of 5·6 cm. (2·2 inches) in the height and 3·4 kg. (7·5 lb.) in the weight of boys, and of 5·4 cm. (2·1 inches) and 3·7 kg. (8·1 lb.) for girls. Another general conclusion is that the improvement in physique of the London school child has been greater than that of children in other parts of the country: such a superiority existed in 1910, but to a less marked degree than in 1938. Another interesting comparison is made between the children in better circumstanced and poorer London boroughs. The better circumstanced group came out slightly higher, but the difference, in boys or girls, does not amount to more than 2·1 cm. in height or 0·7 kg. in weight at any age.

As a whole, the report is an encouraging confirmation of the extent to which physique of school children has improved since the period before the last war.

Evacuation—Epidemiological Aspects

To put into effect the Government's Evacuation Scheme, the country was divided into 81 evacuation, 1,100 reception and a number of neutral areas. The number of evacuable persons of the priority classes living in the evacuation areas was estimated at some 3,644,000, one-half of whom would be school children, and of these it was expected that some 80 per cent. would avail themselves of the official machinery. On September 1st, most of the school children with their teachers and helpers were moved, and on the following day the mothers and accompanied children. The actual numbers moved were less than those for whom provision was made, being 166,200 mothers or other adults who accompanied 260,300 young children, 12,291 expectant mothers and 734,888 school children unaccompanied by their mothers. The remainder, making up the total of 1,270,000, were teachers and helpers. The drift back soon set in, so that of the mothers and accompanied children, nearly three-quarters had returned from some areas within six weeks, though the return of the school children was less rapid.

The movement of this large population, occurring at that time of the year, caused apprehension as to the effect on the incidence of those infectious diseases which ordinarily exhibit an autumnal prevalence. Of these, scarlet fever and diphtheria had already shown a high incidence in 1938; poliomyelitis threatened to be as prevalent as in the previous year, one of high incidence, while both enteric fever and dysentery had shown increases in the summer months. In spite, however, of these circumstances, which might have foreboded an incidence of heavy, if not of epidemic proportions, the number of notifications of infectious diseases in the first four months of the war was, in fact, relatively low, the incidence of scarlet fever, diphtheria and poliomyelitis being all much less than during the corresponding period in 1938, while there was no real increase in dysentery and enteric fever.

The epidemiological aspects of the 1939 evacuation were dealt with by Dr. Alison Glover in his Presidential address to the Section of Epidemiology and State Medicine of the Royal Society of Medicine at their meeting on April 5th. He attributed the relative freedom from infectious disease to "the preparation by the Evacuation Department of the Ministry of Health and the public health services, ably seconded by the domiciliary medical services; to the devotion of teachers and nurses; to the generous care so often shown by the foster parents and to nature's gift of a glorious autumn," and claimed that it was evidence, too, of the basic soundness of the environmental hygiene of this country. Steps which contributed to a partial failure of evacuation to attain its objects Dr. Glover suggests might have had their epidemiological benefits, such as the failure of half the expected number to go, the rapid drift back, and the double-shift schooling which ensured for native and evacuated children double their usual time in the open air and allowed the natives to acquire by small intermittent dosages some immunity to fresh strains of infection.

Such circumstances, if operative, would be only local in application and would not account for the diminished incidence of infection which neutral areas in which there were no vast changes in population also enjoyed, nor explain the relative absence of the measles outbreak which should have appeared. The increased prevalence of cerebro-spinal fever could be accepted as an expected occurrence at the outbreak of war, but a study of the notifications in the past few years shows the increased number of cases as an exacerbation on a curve extending over a period. Was evacuation only coincident with and not necessarily associated with the relative freedom from infections which we enjoyed?

The Progress of Cremation

Recently published figures show that the practice of cremation continues to grow at a steady rate. During the year 1939, the number of cremations carried out in Great Britain was 19,813, compared with 16,312 in the preceding year. Since the opening in 1885 of the pioneer crematorium at Woking, more than 150,000 cremations have been carried out in this country, of which number no less than 103,000 have taken place during the last ten years, when the progress both in terms of cremations and of new crematoria has been most marked. This progress may be said to coincide with the development of municipal activity, prompted in large measure by the economic difficulties attending the provision of new burial grounds in urban areas. As Lord Horder has put it, burial has become a luxury we can no longer afford.

From the days of Simon and Chadwick, public health authorities have interested themselves in the subject of the hygienic disposal of the dead, and the progress of cremation has owed a great deal to the advocacy and support of medical officers of health. There is reason to believe that municipal action in relation to cremation is lagging behind public opinion, and the medical officer of health can still perform a useful public service by making reference in his annual report to the hygienic advantages of cremation in those towns where cremation facilities exist, while similar references in the case of less-favoured towns might start a movement towards the eventual establishment of crematoria.

all-round rise in wages the unmarried workers have agreed to see their married neighbours benefit while they get nothing. It resolves itself into a matter of far-seeing and enlightened patriotism. Our children are our national wealth; they are the future workers, the labour power of Britain, theirs will be the heavy task of reconstruction.

I commend to you this policy as worthy of your study if not as yet of your advocacy. It appears to me to promote in the best sense the public health and to do it by means that are agreeable and right. It will enhance the dignity and responsibility of family life, by ensuring the means and the leisure to bring up children aright, it will increase the pleasure and the interest which men and women can feel in their own homes and in their offspring, when children can no longer be regarded by them as a contributory cause of their poverty. It will tend to restore family discipline in a healthy sense, and that cannot fail to bring us more cordial co-operation from parents as regards our work.

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CORRESPONDENCE

ANOMALOUS RESULTS IN THE BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

To the Editor of PUBLIC HEALTH.

SIR,—As I am concerned with the bacteriological examination of large numbers of water supplies at this Institute I have followed with interest the correspondence on the above subject in your journal and in *Water and Water Engineering*. The difficulties experienced by Drs. Hughes and Wordley appeared to me to have been discussed by Dr. Suckling as adequately and as clearly as the limited evidence permitted. Dr. Seyler, writing in your May issue, has, I fear, misinterpreted Dr. Suckling's letter on the question of adding sodium thiosulphate. Dr. Suckling's point was that, from the wording of the original article, it appeared as though Dr. Wordley's practice was to add the thiosulphate after collection of the sample and that, if this were so, "such interference is unwarranted."

It is clearly laid down in Report No. 71, entitled "The Bacteriological Examination of Water Supplies" that thiosulphate, when used, should be placed in the sampling bottles before sterilisation.

Dr. Seyler himself recognises the desirability of strict adherence to the prescribed procedure, but nevertheless employs other sterilisation methods.

We all no doubt feel that our own methods are better than others, but Report No. 71 provides the answer, and this correspondence need not have arisen were it always followed.

Yours faithfully, E. GOODWIN RAWLINSON.

Royal Institute of Public Health,
Queen Square, London, W.C.1. May 16th, 1940.

BOOK REVIEWS

Brompton Hospital Reports: Volume VIII, 1939. Published by the Research Department of the Hospital. pp. 248. Price 5s. net.

It is a pleasure to welcome once again the Brompton Hospital Report. Of 21 articles in the present volume only eight are devoted exclusively to tuberculosis matters. The article on "Tuberculosis in Relation to Life Insurance" by Hope Gosse is of interest to all public health medical officers who deal with matters of superannuation, for it is in regard to tuberculosis that some of the most difficult decisions have to be made. It also provides a useful guide which may be of service to tuberculosis officers in assessing the grading of recruits referred to them by medical boards. The remaining tuberculosis articles are of general clinical interest.

The thirteen articles dealing mainly with non-tuberculous thoracic conditions remind us that it is not good enough in these enlightened days to allow ourselves to fall into the bad habit of limiting our differential diagnosis of thoracic conditions presented for opinion by general practitioners into "tuberculous" and "non-tuberculous." This is a pit-fall into which the busy tuberculosis officer can easily drop, as this is administratively speaking all he is required to do, and any effort to arrive at a more exact diagnosis of the non-tuberculous case depends to a large extent on his individual clinical enthusiasm. Such non-malignant diseases as bronchiectasis and bronchial adenoma are now as much within the scope of successful surgical treatment as pulmonary tuberculosis, and it is not entirely "wishful thinking" to believe that bronchial carcinoma may be diagnosed in its early stages often enough to warrant its removal by the newly devised method of dissection pneumonectomy described by Tudor Edwards.

Finally, but not less important, the articles by Scadding on "The Chronic Pneumonias" and "Disseminated Focal Pneumonia," throw much light on some of the puzzling cases which are constantly cropping up both in the dispensary and the sanatorium; a clearer recognition of cases of this type would do much to tidy up the "T.B. minus" lumber room.

Clinical Practice in Infectious Diseases. By E. H. R. HARRIES, M.D. (LOND.), M.R.C.P., D.P.H., and M. MITMAN, M.D. (LOND.), M.R.C.P., D.P.H., D.M.R.E., with a Foreword by W. ALLEN DALEY, M.D. (LOND.), F.R.C.P., D.P.H. Edinburgh: E. and S. Livingstone, 1940. pp. 468. 17s. 6d.

This is quite a London County Council family affair, the book being dedicated to Sir F. Menzies, whilst a foreword is contributed by the present M.O.H. The senior author, Dr. E. H. R. Harries, a former president of the Fever Group of the Society, requires no introduction to public health circles, and his co-author is already well known in the fever world. The book commences with a series of preliminary chapters on such general considerations as notification, infection and immunity, diagnosis, epidemiology and control, general management and diet. Individual diseases are grouped primarily into inhalation and ingestion infections. Haemolytic streptococcal fevers and epidemic diseases of the nervous system form

separate sub-groups, each preceded by a description of the features common to the group, the ingestion diseases being similarly introduced. The plan is therefore logical. It is also comprehensive in that, in addition to the common diseases including infectious enteritis of children, accounts are given of less usual conditions such as glandular and undulant fevers, psittacosis, and the infective jaundices. Certain diseases likely to assume increased importance under war conditions, *e.g.*, epidemic typhus, trench fever, relapsing fever, and tetanus are also given due prominence. In their treatment of individual subjects extensive use is made of cross headings, numbered paragraphs, and tabulation, and whilst this has a tendency to interrupt the train of thought, there is no doubt that many students, especially those preparing for examinations, like facts presented in this way. The views expressed on all aspects of current theory and practice in infectious medicine will be generally acceptable, indeed one could have wished that the authors had given greater scope to their own personal viewpoint in a number of matters on which this would have been welcomed. For example, in a large fever hospital the opportunities for arriving at conclusions regarding the dosage of sulphanilamide in a variety of conditions should obviate the necessity for depending on a quotation from the work of others. We repeat, however, that everywhere the teaching is sound and the young medical officer could not do better than model his practice on the instruction to be derived from the pages of this work. It will met a long felt want and in these perilous times the authors are to be congratulated on bringing their labours to such a successful conclusion.

The Chemical Composition of Foods. By R. A. MCCANCE, M.D., PH.D., F.R.C.P., and E. M. WIDDOWSON, B.SC., PH.D., Dept. of Medicine, University of Cambridge. And a Section on the Chemical Composition of Cooked Dishes containing several ingredients, with their recipes, by C. M. VERDON-ROE, B.A. Med. Res. Coun. Spec. Report Series, No. 235. 1940. H.M. Stationery Office. Pp. 150. Price 4s. net.

All those interested in the problem of nutrition will welcome the recent publication by McCance and Widdowson on "The Chemical Composition of Foods." This volume sets out the results of work at King's College Hospital, London, over a period of 14 years. The tables giving the composition of foods have been prepared in a most convenient form, showing quantities per 100 grammes and per ounce. A valuable part of this work is that dealing with the chemical composition of cooked dishes, for all dietary investigations by the individual method depend upon a knowledge of these.

The importance of research work on the composition of foods both in the raw state and cooked cannot be exaggerated, for in addition to the solution of the vexed problem of human nutrition, the success of the dietetic treatment of disease is now largely dependent upon the secrets which have thus been revealed. The work entailed is, of course, enormous since any single foodstuff may contain as many as 20 different constituents, and the analysis of each substance presents difficulties—the solution of which may require weeks or months of labour. The Medical Research Council are to be congratulated for appreciating the importance of this branch of work and for having supported Dr. McCance and his colleagues.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1966 (encloses Form R.V. 3.) *Local Government Acts*, 1929 *and* 1937. Applicable to City of London and Metropolitan Borough Councils as Circular 1967 below.

Circular 1967 (encloses Form R.V. 3.) *Local Government Acts*, 1929 *and* 1937. Addressed to County Borough, Town, Urban District and Rural District Councils requesting particulars (on Form R.V. III) of the rateable values according to the Valuation Lists in force on the 1st April, 1936, for the areas as constituted on 1st April, 1937, for the purpose of determining weighted populations for the Third Fixed Grant Period.

Circular 1968, 1968*a*, 1968*b*. *Government Evacuation Scheme*. Notifies receiving Local Authorities of the number of children allocated to them under the new evacuation scheme.

Circular 1968*c*. *Government Evacuation Scheme*. Notifies evacuating Local Authorities of the number of children in respect of whom plans should be prepared under the new evacuation scheme.

Circular 1975. *Emergency Hospital Scheme*. Gives details regarding maintenance, preservation and replacement of sandbag defences to Hospitals.

Circular 1976. *Government Evacuation Scheme*. Notifies receiving Local Authorities that the return of children to their homes in evacuable areas for the Easter holidays is strongly deprecated and that the responsibility for any return must rest with the parents.

Circular 1977. *Government Evacuation Scheme*. Informs Local Authorities of new arrangements for payment of allowances to evacuated school teachers.

Circular 1978. *Government Evacuation Scheme*. Notifies evacuating Local Authorities that the provisions of Circular 1501 of the Board of Education as to the payment of allowances and travelling expenses to teachers should apply to certain other non-teaching staff who have been transferred to reception areas.

Circular 1979 *and B. of E. Circular* 1504. *Government Evacuation Scheme*. Deals with the arrangements for medical examination of children registered for evacuation under the new scheme.

Circular 1981. *Emergency Hospital Scheme*. Nursing Equipment for Inter-hospital Ambulances. Informs Authorities concerned of details of articles to be provided in inter-hospital ambulances.

Circular 1982. *Air Raid Precautions Act*, 1937. Informs Local Authorities of details of items to be included in stock-taking of equipment.

Circular 1985 (encloses Forms E.M.S. 125 and 126). *A.R.P. Casualty Services*. Issued to County Councils, County Borough Councils and other scheme-making authorities, encloses Forms E.M.S. 125 and 126—returns of personnel at First Aid Posts and in Ambulance services.

Circular 1987. *Government Evacuation Scheme*. Addressed to receiving Local Authorities. Encloses a

direction, yet a large element of free choice remains. In the end the individual has much responsibility and is exhorted by the Ministry of Food to take some trouble in selection and to make voluntary sacrifices so as to ensure the maximum of national health and efficiency for the minimum of shipping space utilized in food importation. The Food Ministry has issued advice in pamphlets and in the newspapers recommending that foods from each of four groups should be eaten daily. It is a simpler form of our original square meal diagram.

In time of peace few people will be bothered to follow the simplest directions as to how to choose a balanced diet and resent any suggested change or improvement on their usual custom. They refuse to admit that their frequent ailments, colds, and influenza are in any way the result of their unwholesome diet. In war-time the public may be more amenable to suggestion and once having experienced better health and a new sense of well-being they may not revert to their previous careless diet when control is relaxed.

At the present time after 7½ months of war we are fortunate in having no food shortage and a wonderful variety from which to choose. But these have been relatively quiet months of preparation for the total warfare that is now beginning. If it is a long war it may not be possible to feed the civilian population on the present lavish scale. The fighting forces have prior claim and when armies and their supplies are on the move valuable stocks of food may be destroyed or have to be abandoned. On active service a man requires much more than he did as a sedentary civilian. The food consumption of a nation completely mobilised is enormously greater than in peace-time. Ploughing and allotments will be only a small help to our supply.

We may start this war better equipped in technical knowledge of food values and rationing, but in some more material aspects the position on the food front is less favourable than in 1914. The population has increased by over 4 million, and less shipping was available for importing foodstuffs. In spite of huge subsidies British agriculture in 1939 was in a sorry state, short of labour and dependent for its existence on imported feeding stuffs for animals and imported fertilisers as soil nutrients. This winter many farmers have had to reduce their stocks of pigs and poultry for want of imported feeding stuffs. The convenient and handy foreign food market, Denmark, has just been lost to us, and other European markets may be closed in the future. The necessity of bringing food from longer distances, as from Australasia, South Africa and America is an added strain on our limited shipping resources. It will be some years before our home-grown food supplies can become more than a drop in a bucket. Meanwhile the public can assist materially by reducing their intake of non-essentials such as sugar, tea, coffee, chocolate which have to be imported. Another economy is to eat no more than is actually needed, aiming at keeping the body weight at the weight for height average for the age of 20 to 25 years, even though the years number 30, 40, 50 or more.

Livestock are, as you know, wasteful mechanisms for converting large quantities of plant material into smaller amounts of flesh, milk, and eggs for human consumption. As the war proceeds it is probable that we shall have to become increasingly vegetarian in our habits. Provided that suitable mixtures of seeds and leaves, and of roots and fruits are eaten we shall do very well, especially if the supplement of vitaminised margarine can be continued.

Milk and other Supplementary Foods

You are probably thinking about milk. Since fresh milk is generally esteemed as a superlatively valuable food its supply to mothers and children is likely to be safeguarded. For the rest of the people milk may be limited causing inconvenience but no grievous hurt. Milk is not an indispensable food. Milk is a natural food only when supplied by the mother to her suckling and there is no reason why human mothers on vegetarian diets should not suckle thriving infants.

The good effect of supplementary feeding with milk to school children and mothers is due mainly to the excellent quality of the protein and the happy proportion of calcium to phosphorus, just right for the calcification of bones and teeth. In other respects cows' milk is for human beings an incomplete and expensive food. Mass produced milk from cows selectively bred for phenomenal yields and artificially fed has very little vitamin value. Milk lacks iron salts and does not correct nutritional anaemias from which so many working-class mothers and children suffer. On a properly composed vegetarian diet there should be no anaemia. Another disadvantage of milk is that much of it is not pasteurised and is a vehicle for tuberculosis and other infections. If the need should arise it will not be impossible to devise a satisfactory milk-less vegetarian diet for newly weaned infants.

Various methods have been tried to remedy malnutrition in working-class mothers and children by supplementary feeding. Sometimes the supplement has been a hot dinner of meat, vegetables and pudding, sometimes a glass of milk or a dose of cod liver oil and recently what is called the Oslo breakfast has come into favour. But as usual we are much too modest in broadcasting British successes. The Oslo breakfast has a British forerunner, the " Glossop Sandwich," devised by Dr. Milligan, M.O.H. for Glossop. Both Oslo breakfast and Glossop sandwich are devised on the same simple sensible basis. The defects of the local home food of the people are noted and the special meal is designed to make good the deficiencies. In this way an adequate and balanced diet is provided. It is seldom that the home food is lacking in energy value owing to the cheapness of sugar and white bread. The Glossop sandwich provides good quality protein and fat and vitamins A, D, the B complex, C and minerals. The sandwich was composed of whole-meal bread, butter, dried brewer's yeast, mustard and cress (or watercress, liver, beef or egg replaced the cheese. On other days

If the public were told of the results of vitamin deficiencies, the dramatic cures on a good diet, and the composition of such supplements as the Glossop sandwich they might pay more attention to their choice of food. Some such slogan as " Make your meals like a Glossop sandwich " might help in the work of teaching housewives and mothers.

INFECTIOUS DISEASES—BITS AND PIECES*

By I. M. McLachlan, M.D., B.Hy., D.P.H.,
Medical Superintendent, Infectious Diseases Hospital, Portsmouth.

I make no apology for this paper being entirely devoted to clinical work, which is likely to be of more interest to many medical officers than the administration of the law relating to infectious diseases. Its substance is a *résumé* of cases admitted to the Infectious Diseases Hospital of the City of Portsmouth from September 1935-38. The table shows the various admissions: —

Admissions to Portsmouth Isolation Hospital, 1935-38 Inclusive.

Disease Notified.	Age Group (Years).									Total at all Ages.
	0–1	1–5	5–10	10–15	15–20	20–35	35–45	45–65	65+	
Scarlet Fever	16	727	1,663	482	117	187	63	15	1	3,271
Diphtheria	22	264	602	213	65	88	16	12	—	1,282
Erysipelas	5	5	11	6	10	52	47	72	33	241
Enteric Fever	—	2	1	2	5	14	4	6	2	36
Cerebro-spinal Meningitis	3	4	1	3	1	1	—	1	—	14
Anterior Poliomyelitis ...	—	4	12	7	1	1	1	—	—	26
Puerperal Pyrexia ...	—	—	—	—	18	161	25	—	—	204
Other Infectious Diseases	67	8	16	13	16	33	34	48	14	249
Total	113	1,014	2,306	826	233	537	190	154	50	5,323

Since I delivered this address there has been an epidemic of cerebro-spinal meningitis. This is not included in the table but will be mentioned later.

Scarlet Fever

Since 1923 it has become established that the cause of scarlet fever is a haemolytic streptococcus, which it is possible to differentiate completely. This, however, takes some considerable time, but perhaps in the future some quick and practical method may be discovered.

During the past four years out of the 3,271 cases admitted only 2,366, or 66 per cent., proved to be scarlet fever. This indicates a certain difficulty in diagnosis. Anybody can recognise a " barn door " case. It is not these cases which create any difficulty, but the so-called tonsillitis occuring in households, when, because there is no rash, the last condition thought of by the doctor in charge is scarlet fever, and by that I mean a haemolytic streptococcus infection plus a rash. I have seen several epidemics due to infected milk, and in each case one of the characteristics was that in certain households supplied with the infected milk there occurred, first, severe cases of tonsillitis, followed in three or four days by cases of scarlet fever.

It is also in my experience common to find the so-called scarlatina *sine eruptione* amongst the nursing staff of a fever hospital. The danger of this type of scarlet fever is obvious. It is apparently a " mild " condition, but it has been my unfortunate experience to have some of the severest complications in the so-called " mild " cases.

In the actual diagnosis I place great reliance on the fine punctate rash visible on the soft palate, the occurrence of flexure staining and the appearance of the strawberry-raspberry tongue. Remembering that, whereas a rash may not be visible on the upper part of the trunk, one very often sees it on the thigh and dorsum of the feet.

Professor Topley in his book on immunology makes very definite reference to the fact that there are two different and distinct toxins secreted by the streptococcus, one the erythogenic toxin which gives rise to scarlet fever rash, the other causing the toxic condition. Whether or not the patient contracts scarlet fever depends upon his immunity to these toxins. If he is immune to the erythogenic toxin then he simply has tonsillitis. I may also remind you that simple tonsillitis is a rare condition in children under the age of five years.

Of the 2,366 proven cases of scarlet fever admitted to the Fever Hospital, Portsmouth, 553 developed complications, the most common complications being adenitis 212 cases, otorrhoea 130, relapses 51, nephritis 32, rhinorrhoea 28, mastoiditis 26, carditis 18 and rheumatism 12.

Complications Occurring in 2,366 Proven Cases of Scarlet Fever.

Adenitis ...	212	Conjunctivitis ...	2
Ototis media ...	6	Ethmoiditis ...	1
Otorrhoea ...	130	Axillary abscess ...	2
Mastoiditis ...	27	Angio neurotic Oedema ...	1
Relapses	51	Abscess of arm ...	1
Nephritis ...	32	Phlebitis	1
Carditis	18	Septic thumb ...	3
Rhinorrhoea ...	28	Cellulitis (thigh)...	1
Injection abscess	3	Multiple abscesses	1
Quinsy	6	Arthritis	1
Pneumonia ...	6	Laryngitis ...	1
Rheumatism ...	12	Late Albuminuria	1
Bronchitis ...	5	Appendicitis ...	1
	536		17

Total 553

Only occasionally do the cases of adenitis necessitate incision and drainage. All cases of mastoiditis required operation. Of the cases of nephritis one proved fatal, the others responding to ordinary treatment.

* Presidential Address to the Southern Branch, Society of Medical Officers of Health.

Scarlet fever, in my experience of it from 1923 to the present day, is becoming less severe, the average case mortality rate being well under 1—*e.g.*, 1935 (548 cases, 6 deaths) 1·02 per cent.; 1936 (604 cases, 2 deaths), 0·33; 1937 (810 cases, 5 deaths), 0·52; 1938 (952 cases, 9 deaths), 0·93.

As regards treatment I have a firm belief in antitoxin, and up to date have been very disappointed in the treatment by sulphanilamides.

In mastoiditis it is my belief that early operative interference is necessary. From 1923 to 1938 I did some considerable work on the importance of vaccine and serum therapy in scarlet fever for an M.D. thesis, and the conclusions reached then still, in my opinion, hold good, namely: —

(1) Scarlet fever antitoxin is of undoubted value as a prophylactic agent in the immediate control and prevention of this disease.

(2) Given in sufficient dosage on or before the third day of disease, the antitoxin is effective in controlling the toxaemia; the mortality and the incidence of complications bearing a direct relationship to the delay in administration.

(3) In moderate and mild cases antitoxin should be administered intramuscularly. In severe or toxic cases the intravenous route is absolutely indicated, and the serum should be given by this method if possible.

(4) Serum sickness occurs in 10 to 14 per cent. of cases, but produces no harmful effects. It should not be regarded as a deterrent in the giving of antitoxin.

Diphtheria

During the four years 1935 to 1938 inclusive, there were 1,282 cases admitted to the Portsmouth hospital. Unfortunately, in 1935 the records showing revised diagnosis were not kept, but in 1936, 1937 and 1938, 860 cases were admitted and of these 453 (slightly more than 50 per cent) proved to be diphtheria.

I would take this opportunity of mentioning one reproach to some members of the medical profession. A large fever hospital is a reception area for all cases of diphtheria occurring in a city, and over and over again cases are admitted after the disease has been going five, six, seven or more days. In some cases the membrane was actually hanging out of the mouth, and all because in the majority of cases the doctor in attendance had taken a swab which had been returned as negative. Very rarely the doctor has not even bothered to take a swab. The fallacy of the throat swab is well known to members of the public health services, and I consider it is our duty to enlighten the general practitioner.

A word or two on diagnosis. There is, of course, the usual period of invasion common to all infectious diseases. Some degree of sore throat is early complained of by most patients who are able to do so (remember the words "able to do so"). In the appearance of the throat the most characteristic thing is that, although an inflammatory process is occurring, there is very little congestion. The membrane is at first a pearly white colour, translucent at the onset but gradually becoming opaque and then assuming the colour of "cod's skin" and, of course, it is adherent to the underlying structure, and when removed leaves a bleeding surface. The membrane is not always continuous; there may be several simultaneous foci of infection—this gives an appearance resembling follicular tonsillitis. Let me emphasise that diphtheria in itself is not a painful disease. The "sore throat" is often trivial in severe cases and children swallow without difficulty, even when the fauces and pharynx are plastered with membrane.

In pure diphtheria the more severe the disease the lower the temperature. Fatal cases have often a subnormal temperature for some days before the end. The pulse in the initial stages is apt to be more rapid than the pyrexia warrants, later assuming a more normal relationship.

Albuminuria is most commonly found at the fourth and fifth days, and is nearly always present in severe cases. Its absence is a favourable sign.

The most fatal type is the so-called haemorrhagic. Cases of recovery have been reported, but personally, I have not seen recovery in this condition. As for the laryngeal type, text books describe three stages and also the precise moment when tracheotomy should be done. I would suggest that if one follows strictly the letter of the book the mortality rate of most operation cases would be very high. With a little experience of laryngeal cases in the second stage (stage of congestion) it very soon becomes obvious whether or not the patient is able to respond to conservative treatment. If the signs should especially suggest that the patient is not going to respond to treatment (increased restlessness, increase in pulse rate, climbing up the back of the cot, descreasing cyanosis, increasing rate of breathing or "shallow breathing") then operation should be performed without further delay whilst the child is still capable of putting up some resistance.

Intubation is becoming more and more popular and is good if carried out by the direct method. In large American hospitals every case of laryngeal diphtheria, however slight, is intubated by the direct method.

As for administration of serum, I rather favour massive doses given intramuscularly and, in severe cases, intravenously.

Of our 453 cases proved to be diphtheria, 205 developed complications, the most important being cardiac irregularity 63, palatal paresis 32 and otorrhoea 23.

Complications Occurring in 453 Proven Cases of Diphtheria.

Palatal Paresis ...	32	Antrostomy ...	1
Cardiac irregularity	63	Strep. tonsillitis ...	27
Strabismus ...	18	Abscess of buttock	2
Otorrhoea ...	23	Nephritis ...	2
Adenitis ...	8	Epistaxis ...	2
Vaginitis ...	4	Albuminuria ...	1
Br. pneumonia ...	1	T.s and A.s ...	8
Pharyngeal paresis	2	Conjunctivitis ...	1
Mastoiditis ...	1	Relapse	1
Tracheotomy ...	7	Abscess of neck ...	1
	159		46

Total 205

The case mortality rate has shown a very definite decline since 1935, when it was 9·24 per cent. (420 cases, 39 deaths). In 1936 (197 cases, 8 deaths) it was 3·35 per cent.; in 1937 (198 cases, 13 deaths), 4·19; and in 1938 (314 cases, 14 deaths), 4·63.

With regard to diphtheria then, my teaching was, first, that if the throat is sufficiently suspicious to warrant the taking of a swab for K.L.B., then it warrants the adminstration of diphtheria antitoxin, and secondly, that no ailing child has been properly examined unless the fauces have been inspected. I see no reason, despite modern discovery, to alter this.

No reference has been made to the work carried out by Manzullo for the quick diagnosis of diphtheria. At first this was received with acclammation, but further investigation failed to uphold the claims made for it.

Puerperal Pyrexia

This disease, as you are probably aware, is as old as the human race. Hippocrates discovered several cases with the characteristic onset of chills and later development of general peritonitis. To Semmelweiss of Vienna goes the credit of demonstrating that the disease was a womb infection due to introduction into the birth canal of septic bacteria from the examining fingers of the accoucheur, and that the instances of sepsis were greater in cases delivered in hospitals than at home. He insisted on the accoucheur washing his hands in chlorine water prior to attending the confinement, and thus reduced the mortality ten-fold.

Since then much work has been done, but in spite of all research, there are still 2,000 women who die every year from a preventable disease.

Etiology

(1) *Haemolytic Streptococci.*—These have been grouped and each group designated by a letter. There are nine altogether (A—K), Group A being the most common cause of puerperal pyrexia. There are 23 types of Group A. It has been shown that Group A haemolytic streptococci are almost always introduced into the birth canal of a parturient woman from without. 7 per cent. to 30 per cent. of normal healthy persons are carriers (including doctors and nurses). The patient herself may transfer organisms from the throat to the vulva. Further, anybody suffering from any septic wound or otorrhoea is liable to pass on the infection. Also attendants who have recently been in contact with any infectious disease or infectious patient are a potential source of danger. This type of infection follows normal labour just as frequently as abnormal labour, so that one must always be on the *qui vive*.

(2) *Anaerobic Streptococci.*—30 per cent. to 40 per cent. of normal women harbour these germs in the vagina in the latter months of pregnancy. This type of infection is more liable to follow difficult labour where there has been considerable trauma.

(3) *Staphylococcal Infection.*—Usually mild cases of transient puerperal infection, confined as a rule to the uterus, vagina and perineum, occasionally there may be septicaemia with multiple abscesses.

(4) *Bacillus coli.*—There is usually an accompanying urine infection.

(5) *Other Organisms.*—Such as gonococcus, *Bacillus welchii* and pneumococcus. Infection by these organisms is very rare.

Prevention of Puerperal Pyrexia.

In Hospital Practice.—A modern and efficient maternity hospital has three sections: —

(1) Wards for clean cases.
(2) Wards for suspects or cases suspected of having puerperal infection.
(3) Isolation ward for reception of infectious cases.

These should be staffed by separate and distinct nursing personnel and the nursing staff of the infectious ward should, wherever possible, be housed separately.

In the absence of such a maternity hospital as I have mentioned I am of the opinion that cases of puerperal sepsis should be nursed in an infectious diseases hospital, which should have a specialised unit for dealing with such cases. It is not, in my opinion, conducive to the eradication of puerperal pyrexia that cases should be nursed in a general hospital where it is impossible to have an isolated unit which is so essential in the prevention of this scourge.

It would appear from the foregoing remarks that the burden of infection rests with the nursing staff, but micro-organisms, and especially haemolytic streptococci, are no respecters of persons and are equally at home in the tissues of a doctor as a nurse. Also, doctors and surgical specialists are dealing with cases of septic infection other than those occurring in parturient women and are therefore very liable to become heavily infected and unwittingly the cause of transference of infection. Cases are recorded where the infection was directly due to a doctor delivering a woman when he had a bad cold.

It should be unnecessary to say that all labours should be conducted under strictly surgical aseptic and antiseptic precautions. Where the hospital is not a maternity hospital the practice of borrowing the nurses for a few hours from another department when the maternity unit is temporarily short staffed cannot be condemned too strongly.

Morbidity.—The figures for the City of Portsmouth the four years 1935-38 inclusive are: 1935, 61; 1936, 57; 1937, 38; and 1938, 48; total, 204. Comprised as follows: —

Puerperal sepsis...	121	Nephritis ...	1
Pyelitis	26	Rheumatism ...	1
Erysipelas ...	1	Tonsillitis ...	2
Mastitis	19	Pyosalpinx ...	1
Influenza ...	5	Phlebitis	1
Pneumonia ...	6	Bronchitis ...	1
Toxaemia ...	4	Salpingitis ...	1
Acute yellow atrophy of liver ...	1	Tuberculosis ...	3
	183	Other causes ...	10
			21

Total 204

Erysipelas

During the period 1935-38, inclusive, there were 277 cases of erysipelas notified in the City of Portsmouth. There were 14 deaths, giving a case mortality rate of 5·42. 241 cases were admitted to the fever hospital, of which eight proved fatal, giving a case mortality rate of 3·3.

Due to the recent discoveries in therapy in this condition, we no longer reckon it to be one of the more dangerous infectious diseases from a life-taking point of view. The average stay in hospital for a straight-forward case is seven or eight days. Prontosil tablets, two given four-hourly, appear to act like a charm in the cure of this condition.

Anterior Poliomyelitis

During the period 1935-38, inclusive, 26 cases of anterior poliomyelitis were admitted to the fever hospital in Portsmouth. It is well to remember that this disease may be the cause of obscure paresis or paralysis, *e.g.*, facial paralysis.

Cerebro-Spinal Meningitis

This condition has fortunately been of very low incidence until recently. There were only 14 cases during the period 1935-38, inclusive, and of these seven proved fatal, giving a case mortality rate of 50 per cent.

Treatment consisted in lumbar puncture and the administration of the polyvalent anti-meningococcal serum. Despite the fact that M. & B. 693 had the reputation of curing this condition, I was never heroic enough to rely solely on this preparation. In one case resort had to be made to cysternal puncture; unfortunately this case died.

Since I wrote the above there has been an epidemic and since the beginning of the current year 90 cases have been sent to the hospital; of this number 72 proved to be definite cases of meningococcal meningitis. Three cases were of particular interest in that the patients complained of severe headache with some slight rigidity of the neck; each had a very profuse haemorrhagic rash (photographs enclosed). Lumbar puncture showed the cerebro-spinal fluid to be under marked pressure, but perfectly clear. The meningococcus was isolated from the cerebro-spinal fluid and from the blood. These were typical examples of the septicaemic type. Faucial paresis was not uncommon. Labial herpes occurred in 20 per cent. of cases of the more severe type, and I always felt relieved when a severely ill patient had labial herpes, the prognosis being, as a rule, good.

Various forms of treatment were tried, such as intrathecal, intravenous and intramuscular injection of anti-meningococcal serum; intrathecal and intramuscular injection of Soluseptasine; M. & B. 693 by mouth (tablets three to four hours); and combinations of these. Of the drugs, excluding serum, M. & B. 693 is by far the method of choice, but I am not prepared, so far as my experience has gone, to omit all other forms of treatment and to rely solely on M. & B. 693.

Enteric Fever

During the period 1935-38, inclusive, 36 cases were admitted to the Fever Hospital, Portsmouth. Not an abnormal number. They were all sporadic cases, the exact origins of which we are unable to trace.

The diagnosis is more or less by elimination. The condition can be ascertained in the early stages, but the only true confirmation is the isolation of the organisms from the stools, urine or blood. The Widal reaction, whilst it is a helpful adjunct in diagnosis, must not be considered the be-all and end-all.

I have not had the opportunity of trying out typhoid anti-serum, so I am not in the position to criticise one way or the other. Nursing plays a tremendously important part in the treatment of typhoid fever. The main duty of the physician is to control the diet and see that the patient has an adequate supply of fluids.

Other Infectious Diseases

Of the other infectious diseases admitted to the Fever Hospital, Portsmouth, during the period 1935-38, inclusive, there were 249, comprising influenzal pneumonia, malaria, ophthalmia neonatorum, dysentery and undulant fever. Comment is not necessary, except to say that undulant fever is much more common than is generally realised.

Conclusion

More attention should be paid during the medical curriculum to infectious diseases. From what I know of students on qualification, their conception of infectious diseases is elementary in the extreme. After all, these diseases play a very important part in the life of a general practitioner.

Despite the many discoveries in regard to methods of diagnosis, of treatment and prevention, infectious diseases are still with us and take their annual toll. Case mortality rates are decreasing, but even so there is still room for improvement, especially in the direction of earlier diagnosis.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some of the recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointments.

BATLEY M.B.: M.O.H. (Acting), Dr. G. H. Pearce (formerly M.O.H., Batley). Salary £900 p.a.

HERTFORDSHIRE C.C.: C.M.O.H., Dr. J. L. Dunlop (Dep. C.M.O.H., Devon C.C.).

MANCHESTER EDUCATION COMMITTEE: A.S.M.O., Dr. Margaret M. Ross.

MINISTRY OF HEALTH: Dep. Chief M.O. (Acting), Sir Weldon Dalrymple-Champneys, Bt. (Prin. Reg. M.O.). From August 1st.

Senior M.O. (Acting), Dr. Dorothy M. Taylor (A.M.O.). From June 5th.

Prin. Reg. M.O. (Acting), Dr. E. L. Sturdee. From August 1st.

RETFORD M.B. & RETFORD & WORKSOP R.D.s: M.O.H. (Acting), Dr. Duncan Forbes (formerly M.O.H., Brighton C.B.).

STOCKTON-ON-TEES C.B.: M.O.H., Dr. J. A. A. Duncan (M.O.H., Brixworth & Brackley R.D.s, Brackley M.B., A.C.M.O.H., Northants C.C.).

THE AIMS OF A PROFESSIONAL SOCIETY*

By QUENTIN DAVIES, L.D.S., R.C.S. (ENG.),
Dental Officer, Glamorgan C.C.

We meet to-day in circumstances which, I am sure, none of us expected at our last meeting in May; circumstances which have caused us all some anxiety lest the meetings of the Group be seriously interrupted. I am sure we all regret the unavoidable cutting down of our activities, and hope that the disruption that a war causes will not part us too long or too much.

Looking back several years, when I commenced at a clinic for adults in the Rhondda Valley, I remember that I was continually questioned for my name. I agree with these Welsh people that to give a name to anything or anybody, is important, and I suggest that the kind of name is more important still. Have you ever thought of the power for good or bad that a word or name can have? For example, words like "Reds" and "Tory" have lost their real meaning and now indicate something quite different. The word "dentist," I am sorry to say, still carries the bogey implanted in it many years ago. There are other examples in our profession; "to have a tooth *filled*" sounds much worse than "to have a tooth mended." Similarly, "extracting," "drawing" and "pulling" are much worse than "*removal*." Yet the result is the same. "Knife," "drill," "needle"—all need alternatives and should never be used in the clinic. The unpleasant mind-pictures created by these words have a very considerable effect on children, and their avoidance is an important detail in handling our young patients.

We are a professional society which stands in the public eye largely on the impression our name makes. In my opinion, our name is far too cumbersome. We can shorten it to the Dental Officers' Group of the M.O.H. Society, but that is still too long. Shortened still further, we spoil everything—the D.O.G. of the M.O.H. Society! Our contemporary societies all have some short, snappy way of reference, for example, the B.M.A., the B.D.A. and these initials carry a wealth of meaning both to the public and to the profession. Again, the easier it is to refer to a Society in conversation with colleagues, the more frequent the reference and the more definite mind-picture encouraged. I think we might sometimes consider whether we ought not, if only for propaganda purposes, to re-name the Group and perhaps even readjust our position in relation to our "parent" Society.

The aims of any professional society can be divided into three groups. These are:—

1. The increase of knowledge;
2. The maintenance of professional status and traditions; and
3. The promotion of fellowship.

The first two do not need further remarks, but the third—the promotion of fellowship—*does*.

We all know the tremendous benefit we get from associating with our colleagues at meetings. Hearing one another's experiences gives one a better perspective of public dentistry—perhaps makes one realise that one's own particular appointment is not so bad after all (perhaps the opposite!). At all events, we get a more balanced idea of where public dentistry is in this country. Not only in this way do we benefit, but by discussing our various ways of running a clinic or a particular scheme, we often find that somebody else has a successful idea or system we have not tried. After all, the way we get about our work is just as important as the way we do it.

But at meetings we can only talk of these things. I should like to see a system of visiting one another's clinics, to see how the other fellow gets about his job. This other fellow would return the visit on some future occasion, and the resultant benefit would be mutual. Such visits, of course, need not be at all frequent—say one day a year. And I would like to see this visiting not only between officers on the same staff, but also between officers of different authorities. This would inevitably increase the feeling of brotherhood between dental officers and, consequently, our influence as a group of public servants.

The life of a dental officer—especially those in rural areas—can be very solitary and detached, and we must try to break down the barriers somehow. The Welsh Sub-Group has attempted a step in this direction, by trying to make a social connection between dental officers. An annual summer meeting ending with skittles and supper at a famous inn is always highly successful.

I would strongly urge that we allow some of our meetings (especially now, during the war) to become more social, more intimate, more for the promotion of fellowship. Thus we would develop a side of our Society too often neglected.

*Extracts from the Presidential Address to the Dental Officers' Group, London, October 28th, 1939.

APPOINTMENTS IN THE DEFENCE SERVICES

The following are some appointments to H.M. Forces additional to those previously recorded.

KERR, J. A. (M.O.H., Grimsby C.B.), Surg.-Cdr. R.N.V.R., H.M.S. *Lochinvar*.

LITT, J. P. (M.O.H., Lytham St. Anne's M.B.), Major R.A.M.C.

MACIVER, D. P. (M.O.H., Chertsey, Walton & Weybridge U.D.s, Bagshot R.D.), Major R.A.M.C.

RATNER, E. (Con. T.O., West Riding C.C.), Lieut. R.A.M.C.

READ, R. A. (A.M.O.H., Cambridge M.B.), Lieut., R.A.M.C.

SLEIGHT, B. (S.D.O., West Riding C.C.), Lieut., Army Dental Corps.

THOMAS, A. T. G. (M.O.H., Welwyn Garden City U. & R.D.'s, Hatfield R.D., A.C.M.O.H. Herts C.C.), F/Lieut., R.A.F.M.S.

YOUNG, W. RITCHIE (Asst. Cons. Dent., L.C.C.), Surg.-Lieut.-Cdr. (D.), R.N.V.R.

WILSON, J. WOOD (A.C.M.O.H., West Riding C.C.), Major, R.A.M.C.

THE MEDICAL OFFICER OF HEALTH AND FAMILY ALLOWANCES*

By E. C. DOWNER, M.A., M.B., L.M., D.P.H.,
Medical Officer of Health, Borough of Chorley.

The arguments adduced in favour of Family Allowances both as a permanent provision and now as a war expedient worthy of urgent consideration have been very ably and shortly stated by Miss Eleanor Rathbone, M.P., in her recent pamphlet written on behalf of the Family Endowment Society. A reading of Miss Rathbone's pamphlet (6d.), of "How to Pay for the War," by Professor J. Maynard Keynes (1s.) and of "Feeding the People in War-Time" (1s. 6d.) by Sir John Orr and David Lubbock, will render one familiar with the policy of Family Allowances at present advocated and its relation to our present-day problems of the Home Front and to the economic organisation of war. For those who wish to probe further, the addresses last year of Mr. L. J. Cadbury, and the articles in the *Spectator* of Messrs. Cadbury and Seebohm Rowntree are highly instructive. A debate initiated by Lord Samuel and in the course of which the Archbishop of York and Lord Dawson of Penn blessed the suggestion took place on June 22nd last, while the Right Hon. L. S. Amery has powerfully supported the policy in the Press. Lastly, it is now possible to study family allowances in operation in the great firms of Cadbury and Rowntree and in several smaller concerns. I shall confine myself to some of the claims made for family allowances which most closely touch on our work as medical officers of health.

It is claimed for family allowances (1) that they would check the recent decline in the birth-rate; (2) that they would secure a high standard of nutrition in the future generation; (3) that they would maintain the authority of the social and economic unit known as the family; (4) that they would replace constructively much of the expensive patchwork laboriously accomplished by our present system of social services and by public and private charity, and (5) that in time of war they are the only alternative to inflation, if the standard of living and nutrition is not to drop to a dangerously low level. Let us examine these claims.

(1) *The Birth-Rate.*—That they would check the decline in the birth-rate seems doubtful. They would no doubt engender a feeling of greater family security, but that this feeling would be expressed in additional offspring may be questioned. Our ideas as to whether the future happiness or prosperity of this country depends on the maintenance of a large or a small population may undergo great change in the next few years. Our more intimate concern is with qualitative health.

(2) *Nutrition.*—The question will be decided by the adequacy of the allowances in relation to the price level of essential foods, and by the strengthening of the family as a social and economic unit. By that is meant not only endowment but the education of the parent to a high standard of performance of duty and the provision of adequate housing conditions and sufficient leisure for the proper discharge of these functions. Granted these a high standard of nutrition follows.

(3) *The Family.*—Let us consider the British family in its relation to public health and as a social and moral unit in order to see whether we judge it to be an institution worthy of support or whether we should look rather to institutional or State control.

I have just concluded in this town an extensive nutrition survey of nearly three thousand children. For every two children suffering from malnutrition through *lack* of food, three had symptoms due to *faulty* feeding, five to faulty hygiene, lack of sleep, etc., and as many to untreated defect or disease. These latter groups must for the greater part be attributed to the unintelligence or indifference of parents. In all areas the M.O.H:, especially if he be also S.M.O., finds his patient work and that of his authority and staff to a greater or less extent frustrated by the non-co-operation of parents. There is a large amount of residual power left by Law to the parent by the untimely exercise of which he can and frequently does defeat all attempts to benefit his child or to protect it from disease. The irresponsible parent is by no means a *rara avis* and he leavens the community in an unfavourable sense.

Further, it is obvious to any student of sociology that all is not well with the British family on the moral side. The abdication of parental authority, the increased opportunities and taste for pleasure, and the easy technique of birth-control, all have diverted the modern parent from his duties. Children are regarded by some not as the normal and eagerly anticipated sequel to marriage but as an embarrassment. All these factors have led to a position where juvenile delinquency rivals juvenile malnutrition as a national reproach.

If one could accomplish the fusion of the germ cells *in vitro*, develop the embryo in an incubator and bring the child up in an institution, one might evolve an ideal child; or alternatively, if the child were removed from its mother at birth and its destinies confided to a committee consisting of a health visitor, a dietetics expert and a child guidance worker, it might avoid malnutrition, physical and moral. Such totalitarian expedients, however tempting in moments of exasperation, run contrary to all our ideals. It has always been the British way to eschew theoretical perfection and as practical men and women to take our social institutions and by reform, education, and persuasion remould them more nearly to the heart's desire. We must not condemn the British parent as a whole because our attention is so frequently drawn to those who fail to play their part. Thousands of parents try to do their best by their children, sometimes blundering through ignorance, sometimes failing through lack of wisdom, sometimes through lack of means. These parents are far more typical and they only need the support of a policy of family allowances, increased leisure and better housing to play their part and to co-operate with us.

(4) *Replacement of Social Services.*—The contention that family allowances would replace some of our present social services for the better is strengthened by the fact that in contrast to grants of free and aided milk and foods, etc., they would not tend to sap self-respect, as the responsibility for the spending of these allowances would rest with the parents themselves. The aim should be not to transfer responsibility from the parent but to show the parent how to discharge his duties, put the

* A paper read to the North-Western Branch, Society of Medical Officers of Health, April 12th, 1940.

means of doing so in his way and then to see that he does so. At first a large degree of supervision would probably be essential. Some sort of tribunal might well be created which could investigate alleged cases of misspending or abuse of the allowances, and could either take away the allowance or reduce it, or vest its spending in some other person than the defaulting parent, or have the allowance paid in the form of commodity vouchers. The services of inspectorial and health visiting staff would be needed in varying degree to see that the community was getting value for its money, and in extreme cases the Law could be invoked. But one would look, after the initial years, to a general rise in the standard of parental conscientiousness.

As regards the possibility of the money's being misspent or alienated to other purposes than that for which it was granted, it is gratifying to read the particulars of an enquiry which has recently been made by Messrs. Cadbury into the way in which the extra money granted under their scheme was actually being spent. Clothing and boots came out first, special food for the children (*e.g.*, extra milk) second, and better food for the family next. This was of course a highly satisfactory result, but it must be borne in mind that this was among the employees of a firm long noted for a high standard of welfare education, and moreover was where the allowance is an act of grace, and could be modified or revoked in case of abuse.

The view is spreading that the grant of family allowances must be accompanied by the *imposition of* a condition that the mother refrains from work other than her domestic duties. Motherhood and indeed later pregnancy is a whole-time job, and the care of children and their study postulates leisure. Moreover, such a provision would withdraw for several years the childbearing woman from the labour market and would have a stimulating effect on the employment of the unsupported single woman, who will in her turn have to contribute to finance the scheme.

(5) *An Alternative to Inflation.*—The final argument of the advocates of family allowances is that they represent the only alternative to inflation in time of war. It is essential that the general consumption of commodities be brought down, and these allowances, which in the end must be paid for by the childless, would be a means of adjusting the proportionate spending power of the families with children so that relatively they had more spending power than the childless.

The proposals range from an allowance of 5s. per week for every child under 15 down to 8s.; some advocate its payment in the case of each child of a family but some, notably Mr. Rowntree, favour payment for the children in excess of two or three. The Bournville scheme pays 5s. per week for each child in excess of two, Rowntree's scheme for each child in excess of three. Mr. Rowntree informs me that in his view Labour would object to a scheme where every child were to benefit as threatening to cause a general fall in wages. Miss Rathbone deprecates this. In my view the allowance must not be less than 5s. and should be payable in the case of all children and from the time of the establishment of the fact of pregnancy, which should be made notifiable.

In neither the Bournville nor the Rowntree scheme is the allowance money in any way mixed up with the weekly wage. It is delivered in a separate envelope addressed to both husband and wife. This is essential if the doctrine of equal pay for equal work is to be maintained. Miss Rathbone's insistence that the allowance should be payable to the wife is not in my view vital; I regard the condition as to maternal abstention from work as more essential.

Allowances might be payable either through a threefold contribution scheme, State, employer and employed; or through local authorities as a grant-attracting expenditure. Perhaps best of all by the State *via* the Post Office.

The cost, as estimated by Professor Keynes, of an allowance of 5s. for every child under fifteen would be £100,000,000 per annum, the estimate of Miss Rathbone for a similar service being £118,000,000; against which there would be considerable offsettings in the nature of present social and charitable services which would be redundant. From these maxima one may descend until the estimate for the State's share of a three-party contributory scheme of allowances at the rate of 8s. for all children subsequent to the second in families of insured workers is as low as £6,500,000. £100,000,000 taken as the annual cost of a really comprehensive scheme may be considered well within the capacity of a nation whose peace-time revenue amounted to over £800,000,000.

From the point of view of the public health, surely it is our policy that the scheme shall be a broad and comprehensive one and not one confined to persons living near the malnutrition limit? It should include a large proportion of the so-called middle-class and should by no means be limited to that portion of the population which is compulsorily insurable.

One must carefully distinguish between the war-time and peace-time significance of the policy of family allowances. As a war-time measure it is designed to redistribute money and therefore spending power in such a way as to ensure the satisfaction of the nutritive needs of families according to size. Family allowances alone can never do this unless there are concomitant measures such as the provision of a basic ration in the vitamin-containing and protective foods and unless there is a successful attempt on the part of the authorities to keep the price of essential foodstuffs within the purchasing power of the allowance by subsidy or by pegging the price. Measures to restrict the purchase of unnecessary luxuries may be necessary in order to avoid the diversion of the allowance money to them. As a peace-time measure family allowances would increase the general spending power of the family and would to a certain extent maintain it independent of such vicissitudes as parental unemployment, sickness or widowhood.

Broadly speaking, the adoption of a policy of family allowances would shift a greater proportion of the burden of running the nation on to the unmarried. It is interesting to see what they will have to say about that. They have cheerfully and willingly shouldered the great financial responsibility of paying what amounts to family allowances and even wife allowances to their married fellow-citizens who have been called to serve in the Forces of the Crown. In several firms where family allowances have been suggested as an alternative to an

all-round rise in wages the unmarried workers have agreed to see their married neighbours benefit while they get nothing. It resolves itself into a matter of far-seeing and enlightened patriotism. Our children are our national wealth; they are the future workers, the labour power of Britain, theirs will be the heavy task of reconstruction.

I commend to you this policy as worthy of your study if not as yet of your advocacy. It appears to me to promote in the best sense the public health and to do it by means that are agreeable and right. It will enhance the dignity and responsibility of family life, by ensuring the means and the leisure to bring up children aright, it will increase the pleasure and the interest which men and women can feel in their own homes and in their offspring, when children can no longer be regarded by them as a contributory cause of their poverty. It will tend to restore family discipline in a healthy sense, and that cannot fail to bring us more cordial co-operation from parents as regards our work.

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CORRESPONDENCE

ANOMALOUS RESULTS IN THE BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

To the Editor of PUBLIC HEALTH.

SIR,—As I am concerned with the bacteriological examination of large numbers of water supplies at this Institute I have followed with interest the correspondence on the above subject in your journal and in *Water and Water Engineering*. The difficulties experienced by Drs. Hughes and Wordley appeared to me to have been discussed by Dr. Suckling as adequately and as clearly as the limited evidence permitted. Dr. Seyler, writing in your May issue, has, I fear, misinterpreted Dr. Suckling's letter on the question of adding sodium thiosulphate. Dr. Suckling's point was that, from the wording of the original article, it appeared as though Dr. Wordley's practice was to add the thiosulphate after collection of the sample and that, if this were so, "such interference is unwarranted."

It is clearly laid down in Report No. 71, entitled "The Bacteriological Examination of Water Supplies" that thiosulphate, when used, should be placed in the sampling bottles before sterilisation.

Dr. Seyler himself recognises the desirability of strict adherence to the prescribed procedure, but nevertheless employs other sterilisation methods.

We all no doubt feel that our own methods are better than others, but Report No. 71 provides the answer, and this correspondence need not have arisen were it always followed.

Yours faithfully, E. GOODWIN RAWLINSON.

Royal Institute of Public Health,
Queen Square, London, W.C.1. May 16th, 1940.

BOOK REVIEWS

Brompton Hospital Reports: Volume VIII, 1939. Published by the Research Department of the Hospital. pp. 248. Price 5s. net.

It is a pleasure to welcome once again the Brompton Hospital Report. Of 21 articles in the present volume only eight are devoted exclusively to tuberculosis matters. The article on "Tuberculosis in Relation to Life Insurance" by Hope Gosse is of interest to all public health medical officers who deal with matters of superannuation, for it is in regard to tuberculosis that some of the most difficult decisions have to be made. It also provides a useful guide which may be of service to tuberculosis officers in assessing the grading of recruits referred to them by medical boards. The remaining tuberculosis articles are of general clinical interest.

The thirteen articles dealing mainly with non-tuberculous thoracic conditions remind us that it is not good enough in these enlightened days to allow ourselves to fall into the bad habit of limiting our differential diagnosis of thoracic conditions presented for opinion by general practitioners into "tuberculous" and "non-tuberculous." This is a pit-fall into which the busy tuberculosis officer can easily drop, as this is administratively speaking all he is required to do, and any effort to arrive at a more exact diagnosis of the non-tuberculous case depends to a large extent on his individual clinical enthusiasm. Such non-malignant diseases as bronchiectasis and bronchial adenoma are now as much within the scope of successful surgical treatment as pulmonary tuberculosis, and it is not entirely "wishful thinking" to believe that bronchial carcinoma may be diagnosed in its early stages often enough to warrant its removal by the newly devised method of dissection pneumonectomy described by Tudor Edwards.

Finally, but not less important, the articles by Scadding on "The Chronic Pneumonias" and "Disseminated Focal Pneumonia," throw much light on some of the puzzling cases which are constantly cropping up both in the dispensary and the sanatorium; a clearer recognition of cases of this type would do much to tidy up the "T.B. minus" lumber room.

Clinical Practice in Infectious Diseases. By E. H. R. HARRIES, M.D. (LOND.), M.R.C.P., D.P.H., and M. MITMAN, M.D. (LOND.), M.R.C.P., D.P.H., D.M.R.E., with a Foreword by W. ALLEN DALEY, M.D. (LOND.), F.R.C.P., D.P.H. Edinburgh: E. and S. Livingstone, 1940. pp. 468. 17s. 6d.

This is quite a London County Council family affair, the book being dedicated to Sir F. Menzies, whilst a foreword is contributed by the present M.O.H. The senior author, Dr. E. H. R. Harries, a former president of the Fever Group of the Society, requires no introduction to public health circles, and his co-author is already well known in the fever world. The book commences with a series of preliminary chapters on such general considerations as notification, infection and immunity, diagnosis, epidemiology and control, general management and diet. Individual diseases are grouped primarily into inhalation and ingestion infections. Haemolytic streptococcal fevers and epidemic diseases of the nervous system form

separate sub-groups, each preceded by a description of the features common to the group, the ingestion diseases being similarly introduced. The plan is therefore logical. It is also comprehensive in that, in addition to the common diseases including infectious enteritis of children, accounts are given of less usual conditions such as glandular and undulant fevers, psittacosis, and the infective jaundices. Certain diseases likely to assume increased importance under war conditions, *e.g.*, epidemic typhus, trench fever, relapsing fever, and tetanus are also given due prominence. In their treatment of individual subjects extensive use is made of cross headings, numbered paragraphs, and tabulation, and whilst this has a tendency to interrupt the train of thought, there is no doubt that many students, especially those preparing for examinations, like facts presented in this way. The views expressed on all aspects of current theory and practice in infectious medicine will be generally acceptable, indeed one could have wished that the authors had given greater scope to their own personal viewpoint in a number of matters on which this would have been welcomed. For example, in a large fever hospital the opportunities for arriving at conclusions regarding the dosage of sulphanilamide in a variety of conditions should obviate the necessity for depending on a quotation from the work of others. We repeat, however, that everywhere the teaching is sound and the young medical officer could not do better than model his practice on the instruction to be derived from the pages of this work. It will met a long felt want and in these perilous times the authors are to be congratulated on bringing their labours to such a successful conclusion.

The Chemical Composition of Foods. By R. A. MCCANCE, M.D., PH.D., F.R.C.P., and E. M. WIDDOWSON, B.SC., PH.D., Dept. of Medicine, University of Cambridge. And a Section on the Chemical Composition of Cooked Dishes containing several ingredients, with their recipes, by C. M. VERDON-ROE, B.A. Med. Res. Coun. Spec. Report Series, No. 235. 1940. H.M. Stationery Office. Pp. 150. Price 4s. net.

All those interested in the problem of nutrition will welcome the recent publication by McCance and Widdowson on "The Chemical Composition of Foods." This volume sets out the results of work at King's College Hospital, London, over a period of 14 years. The tables giving the composition of foods have been prepared in a most convenient form, showing quantities per 100 grammes and per ounce. A valuable part of this work is that dealing with the chemical composition of cooked dishes, for all dietary investigations by the individual method depend upon a knowledge of these.

The importance of research work on the composition of foods both in the raw state and cooked cannot be exaggerated, for in addition to the solution of the vexed problem of human nutrition, the success of the dietetic treatment of disease is now largely dependent upon the secrets which have thus been revealed. The work entailed is, of course, enormous since any single foodstuff may contain as many as 20 different constituents, and the analysis of each substance presents difficulties—the solution of which may require weeks or months of labour. The Medical Research Council are to be congratulated for appreciating the importance of this branch of work and for having supported Dr. McCance and his colleagues.

MINISTRY OF HEALTH PUBLICATIONS

The subjoined notes regarding recent Ministry of Health circulars, memoranda and reports are made available by courtesy of the Ministry. Readers are reminded that priced documents should be obtained not from the Ministry but from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, who will open deposit accounts and receive subscriptions for the regular supply of publications of a specialised nature. Documents which are not priced in the following list are not available from the Stationery Office, and if any reader wishes for a copy of one of these, it is open to him to apply to the Ministry direct.

Circular 1966 (encloses Form R.V. 3.) *Local Government Acts*, 1929 *and* 1937. Applicable to City of London and Metropolitan Borough Councils as Circular 1967 below.

Circular 1967 (encloses Form R.V. 3.) *Local Government Acts*, 1929 *and* 1937. Addressed to County Borough, Town, Urban District and Rural District Councils requesting particulars (on Form R.V. III) of the rateable values according to the Valuation Lists in force on the 1st April, 1936, for the areas as constituted on 1st April, 1937, for the purpose of determining weighted populations for the Third Fixed Grant Period.

Circular 1968, 1968*a*, 1968*b*. *Government Evacuation Scheme*. Notifies receiving Local Authorities of the number of children allocated to them under the new evacuation scheme.

Circular 1968*c*. *Government Evacuation Scheme*. Notifies evacuating Local Authorities of the number of children in respect of whom plans should be prepared under the new evacuation scheme.

Circular 1975. *Emergency Hospital Scheme*. Gives details regarding maintenance, preservation and replacement of sandbag defences to Hospitals.

Circular 1976. *Government Evacuation Scheme*. Notifies receiving Local Authorities that the return of children to their homes in evacuable areas for the Easter holidays is strongly deprecated and that the responsibility for any return must rest with the parents.

Circular 1977. *Government Evacuation Scheme*. Informs Local Authorities of new arrangements for payment of allowances to evacuated school teachers.

Circular 1978. *Government Evacuation Scheme*. Notifies evacuating Local Authorities that the provisions of Circular 1501 of the Board of Education as to the payment of allowances and travelling expenses to teachers should apply to certain other non-teaching staff who have been transferred to reception areas.

Circular 1979 *and B. of E. Circular* 1504. *Government Evacuation Scheme*. Deals with the arrangements for medical examination of children registered for evacuation under the new scheme.

Circular 1981. *Emergency Hospital Scheme*. Nursing Equipment for Inter-hospital Ambulances. Informs Authorities concerned of details of articles to be provided in inter-hospital ambulances.

Circular 1982. *Air Raid Precautions Act*, 1937. Informs Local Authorities of details of items to be included in stock-taking of equipment.

Circular 1985 (encloses Forms E.M.S. 125 and 126). *A.R.P. Casualty Services*. Issued to County Councils, County Borough Councils and other scheme-making authorities, encloses Forms E.M.S. 125 and 126—returns of personnel at First Aid Posts and in Ambulance services.

Circular 1987. *Government Evacuation Scheme*. Addressed to receiving Local Authorities. Encloses a

memorandum giving information on a number of points which will be useful to persons undertaking visits to householders who are being invited to join the roll of those willing to undertake the care of evacuated children.

Circular 1988. *Civil Defence Act*, 1939. *Supplies and Equipment issued for the Purposes of the Emergency Hospital Scheme.* Gives instructions to Local and other Authorities regarding the storage and preservation of certain supplies.

Circular 1989. *Emergency Hospital Scheme.* Issued to County Councils, County Borough Councils, Visiting Committees, etc., with hospitals in the Emergency scheme. Suggests that Medical Officers of Health and Public Assistance Officers be given authority to deal with minor items without waiting consideration of a Committee.

Memo. 234/*Med.* Price 2d. net. *Cerebro-spinal fever.* Issued to Medical Officers of Health. Summarises briefly the modern views in treatment of Cerebro-spinal Fever and includes observations on the epidemiology of the disease, the part played by the healthy "carrier" in its spread, the control of contacts, diagnosis and the general measures for prevention.

Circular (encloses manual). Price 3s. 6d. net. Addressed to Medical Officers of Health encloses Manual of the International List of Causes of Death based on the Fifth Decennial Revision by the International Commission and explains the numerous changes made in this edition.

With reference to the note in our April issue about the illness of Dr. E. H. T. Nash, we are now glad to report that radiographic examinations showed an operation to be unnecessary and that Dr. Nash returned to active work some weeks ago with his health much improved.

London School of Hygiene and Tropical Medicine

(UNIVERSITY OF LONDON)
Incorporating the Ross Institute

It is hoped to hold courses of instruction during the session 1940-41 for

The Diploma in Public Health (University of London) and for

The Diploma in Tropical Medicine and Hygiene (Eng.)

The course for the D.P.H. will last an academic year of nine months and the inclusive fee will be **£56 14s. 0d.**

The course for the D.T.M. & H. will last five months and the inclusive fee will be **£40 0s. 0d.** Both courses will begin on Monday, 30th September, 1940. Those wishing to enrol should apply to the Secretary as soon as possible.

Studentships. In the D.P.H. course: The Chadwick Bursary, value £56 14s.; and in the D.T.M. & H. course: the Andrew Balfour Studentship, value £15.

For additional information apply to the SECRETARY, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, KEPPEL STREET (Gower Street) LONDON, W.C.1. (MUSeum 3041).

AIR RAID RISKS OF MEDICAL OFFICERS

After consultation with the Institution of Municipal and County Engineers, who have also been in touch with the societies of Town and County Clerks, the Society has addressed the following letter to the Minister of Home Security: —

PERSONAL INJURIES (CIVILIANS) SCHEME.

SIR,

My Society has recently discussed with other associations of local government officers the position of their members under the above scheme, and we are now venturing to ask that the scheme be amended to accord with the special responsibilities of officers engaged in civil defence work.

Medical officers of health and assistant medical officers have undertaken many new duties of organisation and administration in connection with the A.R.P. casualty services. The operation of these services in war conditions will undoubtedly involve the medical officers of local authorities in risks which their original terms of appointment did not envisage.

It is true that the death or disablement of a medical officer while engaged on his civil defence duties will be to some extent compensated through the Superannuation Fund, but the consequent possible loss of service which would otherwise have been reckoned towards the officer's retiring allowance is a serious prospect against which the local government superannuation scheme does not provide. Medical officers are in any case in a disadvantageous position in regard to superannuation owing to their late entry into the local government service compared with other officials. We would urge, therefore, that the special responsibilities of medical officers and other officials in the civil defence organisation should be recognised by the granting of a higher rate of compensation for death or disablement than is laid down for "gainfully occupied persons" under the present scheme.

The anomaly of the present position is illustrated by comparing the positions of a medical officer who has been released by his authority for military service and of one who has been retained for public health and civil defence work. The former has his superannuation rights preserved by the Local Government Staffs (War Service) Act and is also eligible for a Service pension proportionate to his rank in the R.A.M.C. The latter, who has been retained for civilian duty which may prove to involve risks as great as the former's, has no compensatory provision to accord with his special responsibilities.

We beg to ask, therefore, that sympathetic consideration should be given to the proposal that special rates of pension should be provided under the Personal Injuries (Civilians) Scheme to local government officers who have civil defence duties to perform. If, as we hope, you can see your way to receiving a deputation on this matter, we shall be glad to attend jointly with the representatives of other interested associations of local government officers.

I am, Sir,
Your obedient Servant,
G. L. C. ELLISTON,
Executive Secretary.

Tavistock House South,
Tavistock Square, W.C.
May 20th, 1940.

SIR WILSON JAMESON, Dean of the London School of Hygiene and Tropical Medicine, has been appointed Medical Adviser to the Secretary of State for the Colonies from June 1st. The appointment is a part time one and Sir Wilson is continuing as Dean of the London School.

The Society of Medical Officers of Health

NOTICE OF ORDINARY MEETING

Notice is hereby given that an *Ordinary Meeting* of the Society will be held at Tavistock House, Tavistock Square, W.C.1 (a notice board in the Court Yard will indicate the meeting place) on Friday, June 21st, 1940, at 4.30 p.m.

AGENDA.

(1) Minutes.
(2) Election of the President of the Society for the session 1940-41, on the nomination of the Council.
(3) Elections under Article 12 as fully-paid Life Fellows of the Society on the recommendation of the Council and of the Branches. (Names will be reported at the meeting).
(4) Election of Fellows (see below).

By Order,
G. L. C. ELLISTON,
Executive Secretary.

(Members will note that the above meeting is purely a formal one for the holding of the above elections and that no paper or discussion is to follow.)

Candidates Awaiting Election on Friday, June 21st, 1940.

AS FELLOWS.

Branch.	*Name.*	*Address.*	*Appointment.*	*Proposer and Seconder.*
Met.	**Bennion, Edgar Rhodes,** M.B., B.S. (LOND.), D.P.H.	Health Department, Town Hall, Greenwich, S.E.10	T.O. & Dep. M.O.H., Greenwich Met.B.	Francis R. Waldron N. M. Donnelly
Met.	**Bentley, F. J.,** M.D. (DURH.), F.R.C.P., D.P.H.	County Hall, Westminster Bridge, S.E.1	Divl. M.O., L.C.C.	Andrew Topping A. Middleton Hewat
Wa.	**Clark, William Burns,** M.B., CH.B. (ST. AND.), D.P.H.	15, Allt-yr-yw Close, Newport, Mon.	A.M.O.H., Newport C.B.	H. W. Catto R. M. F. Picken
Sc.	**Dunlop, James,** M.A., M.B., CH.B. (GLASG.)	60, Culvain Street, Glasgow, E.2	A.R.P. M.O., Glasgow	W. G. Clark H. E. Seiler
H.C.	**Franklin, James Curtis,** M.B., B.S. (LOND.), M.R.C.S., L.R.C.P., D.P.H.	Civic Centre, Dagenham, Essex	Dep. M.O.H., Dagenham M.B.	Cecil Herington A. W. Johns
S.	**Hobson, William,** B.SC., M.D. (LEEDS), D.P.H.	"Windrush," Dilly Lane, Barton-on-Sea, Hants.	A.C.M.O.H., Hants C.C.	H. Leslie Cronk W. J. Hart
Wa.	**Jones-Davies, Thomas Ellis,** M.A. (CANTAB.), M.R.C.P. (LOND.), D.P.H.	Public Health Dept., County Buildings, Llandrindod Wells	C.M.O.H., Radnorshire C.C.	Thomas Evans T. W. Wade
Mid.	**Mackechnie, Donald Maclachlan,** M.B. (GLASG.), D.P.H.	Town Hall, Hanley, Stoke-on-Trent	S.M.O., Stoke-on-Trent	A. Wotherspoon J. Balsillie
E.M.	**Martin, Alec Edmund,** M.D. (MANCH.), D.P.H.	7, Marydene Drive, Evington, Leicester	Acting A.C.M.O.H., Leics. C.C. & M.O.H., Wigston & Oadby U.D.	J. A. Fairer Arthur A. Lisney
N.W.	**Ross, John Marshall,** M.B., CH.B. (ABERD.), D.P.H., D.R.C.O.G.	4, The Circuit, Withington, Manchester 20	A.C.M.O.H., Lancs. C.C.	F. Hall W. C. V. Brothwood
N.W.	**Settle, Herbert Leslie,** M.SC., M.B., CH.B. (MANCH.), D.P.H.	Health Department, Town Hall, Leigh, Lancs.	A. M. O. H. & A. S. M. O., Leigh M.B.	Henry John Peters George Jessel
Y.	**Townend, Mary,** M.B., CH.B. (LEEDS), D.P.H.	6, Hesketh Lane, West Ardsley, Nr. Wakefield	Pt.-time A.M.O.H., Batley M.B.	W. Twining McMath G. H. Pearce

BRANCH & GROUP MEETINGS

MIDLAND BRANCH.

President: Dr. C. W. Sharpley (M.O.H., Oldbury U.D.).
Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton).

The second meeting of the session was held at St. Chad's Hospital, Hagley Road, Birmingham, on Thursday, March 14th, 1940, at 3.15 p.m.

Present: The President, eleven members and three visitors.

The minutes of the previous meeting, which had been published in PUBLIC HEALTH, were taken as read, and signed.

The Honorary Secretary was instructed to write to Dr. Robinson wishing him a speedy recovery from the effects of his recent operation.

The President then delivered an address on the "Midwives Act 1936" in which he referred to the difficulties encountered in establishing a municipal midwifery scheme in Oldbury; criticised the working of this scheme, and made certain recommendations.

Although no discussion of a presidential address is usually permitted, Dr. Sharpley intimated that he was prepared to waive this condition. Comments were then made by Doctors Paul, Cassie, Massey and Maitland.

The Honorary Secretary proposed, and Dr. Cassie seconded a cordial vote of thanks to the President for his interesting address, which was carried unanimously, after which Dr. Sharpley briefly replied.

Dr. Griffin then made an enquiry *re* the standing of Medical Officers of Health in comparison with other local government officers, and also the relative size of their pensions as against those to which other chief officials would become entitled under the Superannuation Act.

The Honorary Secretary reported on the steps which the Society were taking in this matter and was instructed to enquire what the present position was.

The meeting then adjourned.

SOUTHERN BRANCH.

President: Dr. I. M. McLachlan (M.S. Isolation Hospital, Portsmouth).
Acting Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton).

A meeting of the Southern Branch was held at the Crown Hotel, Blandford, on April 26th, 1940. The members met for lunch, and the meeting followed. The President was in the chair, and 15 members and seven visitors attended.

The President welcomed the fact that Gen. F. Casement, the Deputy Director of Medical Services, Southern Command, and Col. L. Thurston, Assistant Director of Medical Services, found time to be present at the meeting.

Clinical Cases.—An interesting discussion took place on the recent epidemic of Cerebro-Spinal Meningitis. The following members took part: The President, Lt.-Col. D. G. Cheyne, Major G. Chesney, Dr. Eric Donaldson and Dr. H. C. Maurice-Williams.

Visit to Militia Camp at Blandford.—Following the meeting, the members proceeded to the Militia Camp at Blandford, where they were met by the Commandant, Col. Woodhouse.

The members were shown many things of great interest in connection with the Camp, and, after the visit, they were entertained to tea by the Commandant.

The President proposed, and Dr. Croft Watts seconded, a vote of thanks to Col. Woodhouse for his kindness in allowing the members to visit the Camp.

WELSH BRANCH.

President: Dr. J. Greenwood Wilson (M.O.H., Cardiff).
Hon. Secretary: Dr. H. W. Catto (M.O.H., Newport).

An ordinary meeting of the Branch was held at the Institute of Preventive Medicine, Cardiff, on Friday, April 19th, 1940. In the unavoidable absence of the President, Professor Ralph Picken was voted to the Chair. Fifteen members attended and six visitors, including Professor Lyle Cummins, Dr. Rosenheim and Colonel Hingston.

The Honorary Treasurer submitted a duly audited Financial Statement which was approved and signed. Following on the reading of a letter from Headquarters *re* the election of a President of the Society for the year 1940-41, the Branch unanimously resolved to nominate Dr. A. S. M. McGregor, Medical Officer of Health for Glasgow. The Honorary Secretary reported that Dr. T. Evans (*ex*-M.O.H., Swansea) and Dr. Kent (*ex*-M.O.H., Barry) had been accepted by Headquarters as members deserving of a Life Membership.

It was resolved that the Branch should support the Sessional Meeting of the Royal Sanitary Institute to be held at Aberystwyth on June 29th, 1940.

Before the business of the meeting was taken, a demonstration on a new method of Chest Radiography by means of a Micro-X-Ray apparatus was given by Mr. A. L. Cranch, supported by Drs. D. A. Powell and Gilchrist, of the Welsh National Memorial Association. The radiographs shown were observed to contain as much detail as could be seen in the larger radiographs hitherto obtaining, and in view of the fact that 1,000 cases could thus be radiographed at 1/20th the present cost made the method a very valuable one for Mass Radiography and commended itself to the meeting. (See PUBLIC HEALTH, May, 1940, p. 176.)

A hearty vote of thanks to Mr. Cranch and the Welsh National Memorial Association was passed unanimously.

At the end of the meeting, Dr. G. McKim Thomas (Medical Officer of Health to the Cardiff Rural District Council) introduced a discussion on the A.R.P. Casualty Services. He dealt at length with the various aspects of the Casualty Services and described some of the difficulties which occurred in a Rural Area. Many members took part in the discussion and the general instructions contained in the various Government Circulars came in for a fair amount of criticism. But, in spite of it all, the sense of the meeting was that it was incumbent on all to do their best under difficult circumstances.

YORKSHIRE BRANCH.

President: Dr. J. Sharpe (Dep. M.O.H., Leeds C.B.).
Hon. Secretary: Dr. Robert Sutherland (M.O.H., Brighouse M.B.).

An ordinary meeting of the Branch was held in the Committee Room, Civic Hall, Leeds, at 2.15 p.m., on Friday, January 26th, 1940. The President occupied the Chair and was supported by 11 members.

Letters were submitted:—

(*a*) From Dr. J. C. Pickup, thanking the members of the Branch for their expressions of sympathy in the recent loss he had sustained;

(*b*) From the Executive Secretary enclosing advance copy of proposals of Minister of Health for dealing with persons contaminated by gas. These proposals being optional it was decided that no action be taken.

(*c*) From Dr. J. Johnstone Jervis stating that the Royal Sanitary Institute were holding a provincial meeting in Leeds on April 27th, 1940, and suggesting that the Branch should hold a joint meeting with the Royal Sanitary Institute. This was agreed to.

As the only nomination received for the office of Honorary Secretary and Treasurer of the Branch was that of Dr. R. Sutherland (M.O.H., Brighouse M.B.), the President declared him elected to the post.

Reference was made by Dr. Bertram Hill to the recent sudden death of Dr. J. Buck, a Past-President of the Branch, and the members, standing in silence, passed a vote of sympathy with Mrs. Buck.

An ordinary meeting of the Branch was held at Lawn's House (Open Air School), New Farnley, at 2.45 p.m., on Friday, March 1st, 1940. The President occupied the Chair and was supported by 11 members and two guests. The Hon. Secretary was asked to convey the Branch's sympathy to Dr. J. M. Gibson on the illness which had caused his absence.

Dr. R. Sutherland accepted the office of Honorary Secretary and Treasurer and thanked the members of the Branch for the honour which they had conferred upon him. He resigned the appointment of Honorary Auditor and Dr. J. Galloway (M.O.H., Dewsbury) was appointed in his stead.

Subject to the convenience of Dr. Mair, former Honorary Secretary and Treasurer of the Branch, the President was authorised to arrange a luncheon to be held with the meeting of the Branch on Friday, March 29th, 1940, and for the presentation to Dr. Mair to take place on that occasion.

Defective Hearing. Dr. Stockwell (S.M.O., Leeds), spoke on Defective Hearing, and urged that children partially deaf to any degree, should be taught by an expert teacher with class aids to hearing and lip-reading methods before being introduced to individual hearing aids and taught in an ordinary classroom. Captain Andrews gave an interesting and instructive demonstration of the use of class aids to hearing and of lip-reading in two classes for the partially deaf. This was followed by a demonstration of a pure tone audiometer and an explanation of its usefulness and deductions to be drawn from the results obtained. He then delivered an interesting address on "Defective Hearing" which will shortly be published in PUBLIC HEALTH.

Dr. Buchan proposed a vote of thanks to Dr. Stockwell and Captain Andrews for a very interesting and instructive demonstration and address. He stated that in Bradford the number of deaf children was decreasing, probably because certain of the cases, *e.g.*, those caused by otitis media, were becoming less frequent. He suggested that the apparent increase in numbers reported elsewhere is due to better ascertainment and not to increased incidence. Dr. Pearce seconded the proposal and instanced the valuable work being done by Captain Andrews and his staff as an example of the many great improvements which he had seen in his professional career.

Annual Luncheon.

The Annual Luncheon of the Branch, was held in the Great Northern Station Hotel, Leeds, on Friday, March 29th, 1940, at 1 p.m. The President was in the chair and was supported by 69 members and guests, amongst whom were the official guests of the Branch, *viz.*: Dr. and Mrs. Mair, Dr. Mair's daughter, Mrs. Carr, Lord Harlech and the members of his suite, Mr. Turnbull, Commander Casswell, Dr. Chase and Dr. Good, Dr. Veitch Clark (a Past-President of the Society), Dr. Scott (a Past-President of the Branch), Dr. McIntosh of the Ministry of Health, Dr. MacDonald (Chairman of the Leeds Division of the British Medical Association, Dr. Massey (M.O.H., Coventry) and Mrs. Massey, and Dr. Pickles (M.O.H., Aysgarth).

After the health of the King has been proposed by the President, The Right Honourable Lord Harlech, P.C., G.C.M.G., Regional Commissioner, North-Eastern Area, proposed the toast of "The Society of Medical Officers of Health." He said that he was very much honoured at being asked to be the guest of honour on this occasion. He was glad to have the opportunity of paying a very genuine tribute to the Medical Officers of Health for the way in which they had swung over from peace-time duties to the exigencies of war requirements. He thought that a magnificent effort had been made and he was satisfied that he had got in his area a very fine provision for dealing with casualties. Lord Harlech stated that the Society of Medical Officers of Health had enjoyed a long and honourable tradition, although he thought there was even now an inadequate appreciation by the general public of the immense advantages in health and well-being which had resulted from the activities of the Medical Officers of Health and School Medical Officers. A good physician or surgeon was appreciated by everyone, but almost the last person who got recognition from the lay public was the Medical Officer of Health, although it was his activities which did much to produce a lower mortality rate, better sanitation, housing, water supply and so on. Medical Officers of Health were still struggling to obtain recognition of the national benefit which accrues from public health work. They had to fight for every £1,000 although we are a better and fitter nation as a result of that expenditure. The evacuation arrangements of last September showed that in spite of the tremendous efforts on the part of Medical Officers of Health, there were still all too many children living under insanitary and filthy conditions. It was quite clear that in the future there must be more internal co-operation between the Medical Officers of Health and the School Medical Service, where they are not already under one head. Disease had no regard for local government boundaries or for departmentalism and separate committees.

This country, he said, owed a debt of gratitude to its public health services. It was a matter of regret to him that more doctors did not take the Diploma in Public Health and did not realise the scope of preventive medicine. He thought that there was often a failure to realise that prevention is better than cure and that preventive medicine can do as much as, if not more than, hospitals, to tackle the problem of disease.

Dr. J. J. Buchan (M.O.H., Bradford) responded to the toast, and to the very generous tribute which Lord Harlech had made to the Society. He wished to thank him for his very kind words of appreciation, and for urging members on to still further conquests in pursuit of public health. He would like to assure Lord Harlech that anything they as medical officers of health could do with regard to A.R.P. arrangements in this country would be done, and that they would unflinchingly carry out any instructions which he chose to give. He agreed that evacuation had shown to large numbers of people in this country something of the actual conditions which exist in certain parts of our towns. Medical officers of health knew that these bad conditions prevailed in many places, and had referred to them constantly.

Presentation to the Retiring Hon. Secretary.

Rising to propose the toast of Dr. James Mair, the retiring Treasurer and Secretary of the Branch who had held office from 1932 until 1940, Dr. W. Bertram Hill said he hadbeen entrusted with the most important toast. Members did not need to be reminded of the faithfulness, courtesy, and quiet efficiency, with which Dr. Mair had carried out his duties. He was sure that Dr. Mair's successor would be inspired by the high standard which Dr. Mair had set. All members would miss Dr. Mair at their future meetings and extended to him their very best wishes for his future and for many years of happy retirement. They hoped they would be able to meet him as often as possible and to renew happy associations.

In making the presentation of a gold cigarette case to Dr. Mair, Dr. G. H. Pearce said that he was specially pleased to see that Mrs. Mair and her daughter were

present. He had great pleasure in making the presentation on behalf of the Society. It was a pleasant occasion and yet a sad one. Dr. Pearce then read out the inscription inside the cigarette case and handed it to Dr. Mair.

Dr. Mair, in reply, said that he hardly knew how to thank everyone for their good wishes. Dr. Buchan, Dr. Hill and Dr. Pearce, were very old friends of his who had known all his faults and virtues for many years and who had very kindly forgotten his faults and extolled his virtues. He would remain a member of the Society, and hoped to attend a good many meetings. He had had a very easy task as Secretary, as his predecessor had laid the foundations well. He thanked everyone once again for their good wishes and for the handsome gift which he would always treasure, and which would remind him of the many happy years he had spent with the Branch.

Proposing the health of "Our Guests," Dr. P. R. McNaught said that they were honoured by the presence of so many distinguished people.

In reply Sir George Martin, K.B.E., J.P., Chairman of the Health Committee, City of Leeds, said that he thought that Leeds perhaps did not fully appreciate the benefit which it derived from having Lord Harlech as Regional Commissioner. Sir George considered that the greatest tribute that he could pay to the Public Health Services was to direct attention to the remarkably higher standard of health of the recruits coming forward to-day than that of their predecessors in the last war.

The meeting was concluded after Dr. Gall had proposed a very hearty vote of thanks to Dr. Sharpe.

DENTAL OFFICERS' GROUP.

President: Quentin Davies, L.D.S., R.C.S. (D.O. Glamorgan C.C.).
Hon. Secretary: A. Gordon Taylor, L.D.S., R.C.S. (D.O. London C.C.).

A well attended meeting was held at the Society's offices on Saturday afternoon, May 4th, with the President in the chair. The occasion was the first showing in Europe of a film on "The Masticatory Process in Function," produced by Dr. M. Klatsky, of New York, and presented by him to Dr. J. Sim Wallace. Mr. George Thomson read an introductory paper from Dr. Klatsky and the film was then projected: it shows the mastication involved for various types of foodstuffs, *e.g.*, cake, celery and meat, through both ordinary and X-ray pictures. The members were much interested and a lively discussion ensued. The film will be available on loan on application to Dr. Sim Wallace. The two latest educational films of the Dental Board of the U.K. were also shown. [A fuller report of this meeting will appear in our next issue.]

Yorkshire Sub-Group.

President: Mr. George Kilvington, L.D.S., R.C.S. (School D.O., West Riding C.C.).
Hon. Secretary: J. Jackson, L.D.S., R.C.S.

Meeting held on November 4th, 1939:—This meeting was occupied by the Presidential Address of Mr. G. Kilvington, who began with a brief history of the establishment and development of the school dental services and gave the conditions and requirements needed for an ideally run clinic. He emphasised the lack of co-operation that is evident between dentist and parent in school dentistry, and showed how vastly different is the approach of the child to the P.D.O. and private dentist. He formulated a scheme whereby a child in its last school year could be issued with a certificate of dental fitness and in which the L.H.I. could co-operate in bearing the cost afterwards in certain cases. If this scheme should fail then some form of communal treatment would have to be established. Mr. Townend showed models for propaganda purposes; and Mr. Moxon a case of open bite.

Meeting held on December 16th, 1939:—Mrs. G. Long, spoke on "School Dentistry and Diet in Denmark." She described qualification in Denmark and outlined the schemes in operation in county districts and towns for the treatment of the school child and showed how they differed in essential points from our own schemes, such as hours of work, numbers treated, and function of senior dentist. Mention was also made of the methods of propaganda. The Danish diet contained more rye bread, milk, fat and less sweets than the English.

Mrs. Sclare, and Messrs. Batten, Buzza, Moxon and Todd took part in the discussion.

Meeting held on February 10th, 1940:—A symposium on "The School Dental Service" was contributed to by three speakers: Mr. Cocker, who spoke from the private practitioner's point of view; Mr. Cubit, as a school dentist, and Mr. Atha, as the headmaster of an elementary school. The President was in the Chair.

In opening the symposium, Mr. Cocker said that the school dental service, which had been established by national effort fortified by local government, now ran parallel with the L.H.I. scheme and he showed how both services could be used to the benefit of both. The speaker proceeded to contrast the differences between the school service and private practice with regard to the attitude of the public, the financial aspect, statistics, the control and lack of control by lay and other bodies, the spirit of competition, individualism and inspection. He said that although there were differences, common problems between the two branches of the profession do exist, *i.e.*, those of propaganda and prophylaxis.

Mr. Cubitt commenced by outlining the growth of the school dental service in Wakefield and gave details of the routine adopted in his clinic. He urged that the co-operation of the teaching profession should be enlisted and that statistics, though necessary, should not become the master. Dental treatment, he said, should be made a privilege only for those children whose parents approved of it.

Mr. Atha treated his subject from four aspects, *viz.*: (1) The co-operation of parents; (2) frequency of visits of the dentist; (3) accommodation, and (4) nervous derangement of the child. Each point was fully elaborated, mentioning propaganda, Parents' Associations, dental forms and travelling clinics.

An animated discussion followed in which there took part: Mrs. Sclare and Messrs. Batten, Jackson, Kilvington, Shenton, Sleight, Todd and Townend.

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 also available for a certain number of approved commercial advertisements. Application should be made to the Executive Secretary of the Society, at Tavistock House South, Tavistock Square, W.C.1.

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Editorial

The Society's Business

Recent news from France and the imminence of attack on Britain led to the postponement by our President of the Council and ordinary meetings which would otherwise have been held on June 21st. It is clearly unfair, and indeed unwise, to expect medical officers of health of important areas to leave their posts of duty and to make the journey to London in these times of uncertainty. For the present, the responsibility for taking urgent decisions on questions affecting the Society will have to be left with the President (Dr. F. T. H. Wood), the Hon. Treasurer (Dr. G. F. Buchan) and the chairmen of committees (Dr. Cyril Banks and Prof. R. M. F. Picken). We feel sure that our members will have confidence that the interests of the Society will be well cared for until it is possible to resume normal working. (Since this article was set in type the President has decided to call Council and Ordinary meetings for Friday, July 19th, and it is hoped that circumstances will permit the attendance of at least a quorum of members so that the necessary decisions can be taken.)

It has been decided to print in this issue (page 227, *et seq.*) the report of the General Purposes Committee which would have been placed before the Council. Particular attention is drawn to two items, Nos. 17 and 33. The former refers to the Presidency of the Society for the session 1940-41. Dr. A. S. M. Macgregor, of Glasgow, was the only nominee: he would have obtained election unopposed and have been welcomed as a worthy President. However, it was felt that his own wishes should be consulted as to taking office in present circumstances, and he himself has suggested that his year of office should be postponed until he can fulfil it with full adequacy. If, therefore, as seems probable, Dr. Wood undertakes a second year of office, he will earn the sincere gratitude of his fellow members for carrying on the work in time of need.

The other item concerns the Executive Secretary's request for release so as to volunteer for service with the Forces. On May 17th the Committee asked him not to apply for a commission until satisfactory alternative arrangements could be made for carrying on the work of the central office. Between that date and now the Executive Secretary submitted to the President, Hon. Treasurer and chairman of committees proposals by which the Consultant Secretary (Capt. G. S. Elliston, M.P.) would carry on the secretarial work of the Society, and the editing of the journal would be supervised satisfactorily. Formal approval of these

proposals was to have been sought of the Council on June 21st, but in view of the postponement of the meeting the officers of the Society who have already been consulted have agreed to the suggested arrangements, and the Executive Secretary has already been called up for a temporary commission, R.N.V.R.

The New Milk Scheme

The Press announcements and Ministry of Health circular 2053 of June 19th addressed to welfare authorities have indicated the broad outlines of the new Ministry of Food scheme for the supply of cheap and free milk to expectant and nursing mothers and children under five. Our members, however, will want to know the steps leading up to the new scheme and the extent to which the local authorities and the Society had their say. Actually, the associations of local authorities and the Society, were invited to send representatives to a conference with the Minister of Food held on June 14th. The notice was short but fortunately the Society's representation was in the capable hands of Dr. George Buchan. Dr. Macaulay, of Middlesex, was one of the representatives of the County Councils' Association and Drs. Borland (Bethnal Green) and Thompson (Lambeth) were among those of the Metropolitan Boroughs, so that the public health service had its case well voiced. Lord Woolton placed his proposals before the meeting and made it clear that the Government had already decided to operate a scheme on these lines through the machinery of the welfare authorities throughout England and Wales as soon as the rise in the retail price of milk came into force; he invited constructive criticism, especially in regard to the local administration of the scheme, but it was obvious that any serious opposition to it on matters of principle would not be admitted.

It will be noted that the new scheme differs essentially from that of Circular 1840 in the following respects: (1) the cost of the milk supplied, over and above the payments received from consumers, and that of administration will be borne entirely by the Exchequer; (2) the proviso as to the approval of source of supply by the M.O.H. disappears and there is free choice of dairyman; (3) the income scale under which free milk will be given is fixed on a national basis; and (4) provision of dried milk for the mothers and for children up to *one* year, where recommended on medical grounds, is included.

The Minister said that he had been very reluctant to drop the safeguards as to the quality of milk to be supplied but that it had been considered quite impracticable to introduce this feature in a national scheme covering every corner of the country both urban and rural.

The draft scheme which was put on the table on June 14th suggested that the duties of local Milk Officer would most suitably be undertaken by the M.O.H. Dr. Buchan opposed this suggestion strongly. He said that, had the scheme been one mainly based on medical considerations, he and his colleagues would cheerfully have undertaken to administer it, despite the present burdens on the health departments. Since, however, it was primarily a scheme for distribution of an essential foodstuff free or at a low price, he said that the public health service was of opinion that its administration should be entrusted to the Food Officers and the financial departments of local authorities. This alternative was accepted and has been incorporated in the scheme now published.

Lastly, there arises the burning question, what will be the effect of this scheme on the work of maternity and child welfare centres? The scheme is not intended to supplant the present supply of milk through the centres, but it may affect the attendances at centres whose main attraction has been the chance of obtaining free or cheap milk. Henceforward, maternity and child welfare will be more dependent on its real merits to attract its clientèle than in the past.

Seasonal Variations in Mortality

That the volume of sickness and death waxes and wanes with the seasons is a matter of common observation. It is not only in fever hospitals that beds tend to be vacant in the summer. Charts which have appeared annually in the Reports of the L.C.C. illustrate the seasonal fluctuations of admissions to general hospitals, with which every administrator is familiar, just as every undertaker knows that nowadays the summer is an off-season for burials. One of the fullest accounts of this seasonal variation was given by the Registrar-General in the *Review* for 1925,* when the interesting point was revealed that some diseases, *e.g.*, measles, scarlet fever and diphtheria, undergo striking seasonal changes when their behaviour is studied over considerable periods of time. Dr. E. Lewis-Faning has now compared the seasonal incidence of the general mortality and of the death-rate from certain causes in England and Wales with that in America and to a certain extent in Germany.† The general death-rate in this country is consistently higher in mid-winter and lower in the summer as compared with the U.S.A., and the same intersection with the German rates was evident from 1935 to 1938. When the mortality is analysed into its component parts, this phenomenon is shown to be the resultant of a complicated series of relationships for individual causes of death. Dr. Lewis-Faning's method is simple if laborious. It consists of standardising the average monthly death-rate for each of several causes over a series of years and reducing it to a rate per day for each month. Allowance is, therefore, made both for variation in the length of months and for differences in the age-distribution of the countries to be compared. The results are shown in tables and several of the most interesting are illustrated in simple and very clear charts. Most of the comparisons relate both to the U.S.A. Registration States generally and to the New England States in particular. In some instances, such as bronchitis, diphtheria, erysipelas and tuberculosis, the English rate is higher all the year round, and this is

*The Registrar-General's Statistical Review of England and Wales for the Year, 1925. Text. p. 85.

†Medical Research Council. Special Report Series, No. 239. 1940. London: H.M.S.O. 1s.

true of diarrhoea and enteritis when only New England is compared. For some other causes, *e.g.*, diabetes, violence and (as compared with New England only) heart diseases, the English figures are consistently lower. For still others, the picture resembles that of the general rate, the graphs intersecting so that the English rate is higher in winter and lower in summer; this occurs with pneumonia and, if New England is excluded, with diseases of the heart and diarrhoea and enteritis. In some instances, where there is no intersection, notably bronchitis and respiratory tuberculosis among those with high English rates and violence with comparatively low English rates, the excess or deficiency is much greater at one season than at others. Thus, a large part of the general English winter excess is due to the very high rates of mortality in winter from bronchitis, influenza and respiratory tuberculosis, whereas violence contributes heavily to the American summer excess. Because of the importance of bronchitis and pneumonia as causes of death in this country, Dr. Lewis-Faning devotes a section of the report to a study of the average annual age-specific mortality from these causes in the several regions of England and Wales, showing that whereas bronchitis in each area affects mainly the older ages, the death-rate from pneumonia is only slightly higher among the old than the very young in the less congested parts of the country and affects the youngest age-group most of all in the Northern, the Midland and the Welsh Regions; and that males are more affected by both diseases, especially in the age-group 45 to 64 years. When a similar analysis is made for New England, the relatively small part played by bronchitis is notable, whereas pneumonia appears more frequently as a cause of death than in England, especially in towns and at older ages.

Dr. Lewis-Faning suggests from these findings that it may be worth our while to concentrate our health policy on reducing the death-rates from bronchitis, pneumonia and respiratory tuberculosis which account for such a large part of our winter excess. This is probably as much as one could conclude from this very detailed and able analysis, since it is recognised that fashions in certification and different practices in classification make too close comparisons of cause-specific mortalities fallacious. This problem has been very fully discussed by Ross and McKinnon, with special reference to deaths at older ages.* When it is remembered that degenerative disease affects the heart, arteries, kidneys and lungs of most of its victims, it is easy to see that there may be much interchange in certification, as at one place or time and another, between heart disease, nephritis, bronchitis and pneumonia according to which system seems to the certifying practitioner most prominently involved at the time of death. Fallacies of this kind, however, could not account for the very high winter death-rate from respiratory causes in this country, since it is not balanced by an equally great deficiency in heart or other causes and also since such a large part of it belongs to the first few years of life, especially in certain areas.

*Heart Disease and Cancer Mortality Trends. M. A. Ross and N. E. McKinnon. *Canad. Pub. Hlth. J.*, 1939, **30**, 171.

A Sickness Survey of China

In England and Wales, where we have a century-old system of registration, we are still without knowledge of the prevalence of diseases, except those which have to be notified, or which bring mothers and children under the observation of the health departments. The mass of data accumulated under National Health Insurance has not so far been analysed as it has in those admirably annual surveys of incapacitating sickness which the Department of Health for Scotland issues each year. Even these deal only with a selected group of the population, just as the gathering volume of hospital statistics is selective both as to the section of the population involved and, more especially, as to the types of sickness affecting them. House to house canvasses which have been so extensively carried out in the U.S.A. are the only means of building up a true picture of morbidity, but their organisation is such a large task and so expensive that nothing comparable has yet been tried here. At first sight, therefore, it seemed a bold project to plan the morbidity survey of the vast population of China,* which Dr. Gear has made with the collaboration of the members of the China Medical Association. The only available sources of information were hospitals, most of which were situated in populous places and could not be regarded as giving a true account of even the hospital sickness problem of rural China. While in the towns also the data related only to the sick who sought hospital attention, they were perhaps less unreliable for survey purposes than their counterparts in western lands would be, as the records included out-patients and these hospitals were virtually the only providers of modern scientific medical care. To obtain the collaboration of 28 busy hospitals widely scattered over a land torn with civil war and invasion was no small task and Dr. Gear is to be congratulated on the result. In 19 chapters he deals with the occurrence of disease generally during 1933 and 1934, its age, sex and monthly incidence, and the problems presented by individual ailments or groups of diseases. The fallacies inherent to this type of survey are constantly mentioned by the author, but no-one who studies his work will fail to agree that it was worth doing. More space would be required than we can afford to give any conception of the number of interesting medical problems which are opened up, but the practical point emerges that the town-dwelling Chinese suffer most heavily from tuberculosis, crippling diseases of the eye and ear, venereal diseases, gastro-intestinal diseases, skin conditions and various types of helminthiasis. These being the dominant conditions, is the best use being made of limited resources by elaborating the refinements of general medical and surgical treatment in hospital when better returns might be obtained for the same outlay through widecast out-patient clinics where palliative treatment could be combined with education in hygiene and

*The First General Epidemiological and Morbidity Survey of China. By H. Sutherland Gear, M.D., B.SC., D.P.H., D.T.M. & H., Deputy Chief M.O., Union of South Africa. Chinese Medical Association. Special Report Series, No. 11. Shanghai. p. 183. 4s.

preventive medicine? This question propounded by Dr. Gear may evoke different responses from his former collaborators in China, but it deserves consideration by the authorities. His survey has at least shown that it is possible to gather useful data in China and it is satisfactory to learn that the National Health Administration is taking steps to continue it officially.

Should Spy-Fever be Made Notifiable?

Medical officers of health, like all other citizens, are subject to the special conditions of war-time, but we cannot forbear from commenting on the nervous suggestibility of certain persons illustrated by the recent episode as a result of which Dr. J. J. Paterson (M.O.H., East Berks united district) received some undeserved newspaper publicity. Many of his friends read with disquiet the story of the police visits to his home and his office and the removal of mysterious parcels of papers.

As Dr. Paterson's friends suspected, these papers turned out to be some relics of his internment in Germany during the early part of the last war and various documents in connection with the visits of foreign medical officers who had been regularly sent to Dr. Paterson, through the offices of the League of Nations' Health Section, for instruction in British rural hygiene. It seems most unfortunate that the ill-informed suspicions of local gossips should involve a busy medical officer of health and waste the time of the police when both have plenty of work on hand which is of national importance. It would appear really unnecessary to clear Dr. Paterson's name so far as members of the public health service are concerned, but we have inserted the above in order to allay the anxiety of his many friends who have been enquiring about this affair.

The B.M.A. on What to Eat

The British Medical Association has again shown its sense of responsibility as the greatest professional organisation in the country by appointing a special committee of experts to examine the problems of diet in war-time, especially in relation to rationing. This committee has now issued its report in the form of a booklet* for the guidance of the people, which should be a welcome "follow-up" to the shorter leaflets recently prepared by the Ministry of Food.

The booklet is practical and gets to the point at once. The opening paragraph reads:—

> This country is fighting for its life, and it cannot fight on an empty stomach. Much of our food comes from across the seas in ships that must carry "guns" as well as "butter." We must therefore choose our food with scrupulous care, to fill the stomach and at the same time to keep body and mind alert for their everyday tasks. This must be done with economy as well as with care. Waste is not just letting the fat go down the sink. Waste is choosing the wrong food and cooking it in the wrong way. Eating too much where less would do is waste. Eating too little of what is vital for the body's health is waste.

It goes on to describe the foodstuffs likely to be available in three groups—warmth and energy producers, builders and repairers, and protective foods. There are some informative notes on particular foods and then some general advice on the housewife's task in making the family's food interesting as well as nutritive. A most distinguished committee did the groundwork for this booklet, but the final result bears the mark of being the work of a single individual skilled in the use of lucid and attractive English. There are some excellent incidental illustrations in a lighter vein, we suspect by the same artist as has made Fortnum and Mason's catalogues a pleasure to receive in the past. We believe that this production should have a wide sale, not least to the public health departments.

* "The Doctors Tell You What to Eat in War Time. 1940. London: The British Medical Association. pp. 16. Price 3d. net.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the public health departments of various local authorities and to other bodies.

The Editor will be grateful if members of the Society will notify him at once of any new appointment.

BATLEY M.B.: M.O.H., Dr. W. J. Frain (M.O.H. & S.M.O., Pudsey M.B.).

CARLISLE C.B.: A.M.O.H. & A.M.O., M. & C.W., Dr. Christine M. Anderson (A.M.O., M. & C.W., Durham C.C.). Salary £600, rising to £700 p.a.

CLACKMANNAN C.C.: M.O.H., Dr. John A. Roughead (Dep. M.O.H., Northants C.C.).

CROSBY M.B.: M.O.H., Dr. A. J. W. Cunningham (Dep. M.O.H., Crosby).

DEVON C.C.: Dep. C.M.O.H., Dr. F. J. G. Lishman (Dep. C.M.O.H., Glos. C.C.). Salary £750 to £900.

DURHAM C.C.: A.S.M.O., Dr. Mary R. Anderson.

EALING M.B.: A.M.O.H., Dr. D. C. Logan (Dep. M.S., South Middlesex Fever Hosp.).

ENFIELD U.D.: A.S.M.O., Dr. Mary E. Niven. Salary £600, rising to £725 p.a.

MIDDLESEX C.C.: C.M.O.H., Dr. H. M. C. Macaulay (Dep. C.M.O.H., Middx.). Salary £2,000 rising by annual increments of £100 to £2,500.

MIDDLESEX C.C.: Dep. C.M.O.H., Dr. A. C. T. Perkins (A.C.M.O.H., Middx.). Salary £1,500.

NORTHALLERTON EMERGENCY HOSPITAL: Med. Supt., Dr. A. Curtis (Dep. Med. Supt., Halifax General Hospital). Salary £1,000 p.a.

SCUNTHORPE M.B.: M.O.H., Dr. I. M. McLachlan (A.M.O.H., Hull C.B.).

SOUTHEND C.B.: Temp. A.M.O.H., Dr. A. L. Smalwood.

SPENBOROUGH U.D.: M.O.H., Dr. J. B. McKinney (Dep. M.O.H., Morley M.B.).

STIRLINGSHIRE C.C.: D.O., Mr. K. Stewart, L.D.S. (D.O., Kincardineshire).

STOKE-ON-TRENT C.B.: Temp. A.S.M.O., Dr. M. D. Anderson. Salary £500 rising to £700 p.a.

STRETFORD M.B.: A.M.O.H., Dr. C. Janet Brown.

SWINDON M.B.: M.O.H. & S.M.O., Dr. Llywelin Roberts (Dep. M.O.H., Ealing M.B.).

SOME UNPROVEN ASSUMPTIONS IN EPIDEMIOLOGY*

By B. A. PETERS, M.D., B.A., B.CH. (CANTAB.), D.P.H.
Medical Superintendent, Ham Green Hospital and Sanatorium, Bristol.
Lecturer in Infectious Diseases, University of Bristol.

STATISTICAL ANALYSES
By HORACE TODD, B.A. (CANTAB.).
Lecturer in Mathematics, University of Bristol.

Certain aspects of epidemiology and immunology seem to have been widely accepted on what appears to me to be slender evidence, especially as regards diphtheria and scarlet fever. Serious errors have arisen in the past owing to a general human failing of arguing from the particular to the general. These errors are of more than academic importance, as until they are exposed progress is inhibited. I need only remind you of the "drain period" of epidemiology when the brillient advances against the water-borne diseases, cholera, typhoid and dysentery, were hopefully expected to be successful when applied to other diseases in which the etiology was later found to be quite different from those diseases. The errors one then laboriously taught the public are still present in their minds and may adversely affect such campaigns as that against diphtheria.

I have never felt satisfied with the current explanation of the age incidence curve of Schick-positive or Dick-negative reactors. The explanation usually given for the observed fact that nearly all infants give negative reactions, is that it is due to the transference of antitoxic immunity *via* the placenta from the mother to her infant. It has been noted that this occurs in humans and certain other mammals but not in others, depending on the number of the layers of cells in the placenta between the foetal and maternal circulation. This explanation of species difference seems to be a poor one, as if a molecule of antitoxic globulin can diffuse through one layer of cells easily it seems improbable that it would be entirely held up by two layers unless the permeability of each was different.

Another difficulty in accepting the current view is that the foetal blood contains a very small amount of globulin compared with the maternal blood, which fact suggests that there is very little if any transference of the antitoxin globulin from the mother to the foetus. If transference through the placenta were easy, one would expect the amount of globulin in the maternal and foetal circulations to be approximately equal.

I have observed on former occasions where puerperal cases have been under my treatment with typical scarlet fever that they gave a positive Dick test while their infants were negative. They could not possibly have transmitted an immunity which they did not possess. We know that about 20 per cent. of adult women are still Schick- or Dick-positive. We also know that genuine diphtheria or scarlet fever is almost unknown amongst young infants. In 30 years I have only seen one case of clinical faucial diphtheria in a young infant under six months. If 20 per cent. of infants were born with no possibility of having acquired immunity from their mothers, how can we explain this extreme *clinical* insusceptibility on these hypotheses?

This immunity of infants does not extend to measles and whooping cough, and yet 25 c.c. of the mothers' serum will generally protect a child against measles if given parenterally. If the relatively low immunity of the mother against diphtheria is transmitted *via* the placenta, why not the much more potent immunity against measles? I think you must agree that the current explanation cannot be true in many cases, but some other mechanism must be acting.

The number of positive reactors decreasing with age is commonly believed to be due to immunity conferred by sub-clinical attacks of these diseases. No matter in what part of the world observations have been made, a very similar age curve is observed whether diphtheria is present or absent amongst the population. It is true that in some, and some only, isolated areas the proportion of Schick-positive reactors is lower at each age group than in areas where diphtheria is endemic. Even amongst different social strata in the same city these differences are so marked that we observe the extraordinary paradox that diphtheria is less common amongst classes where the number of Schick-positive reactors is highest, even though, in a great city, repeated contact with disease or carriers must occur amongst the more favoured classes fairly frequently. The current theory is based on the idea that infection by a dose of K.L.B. insufficient to produce the disease produces a small amount of toxin which evokes a production of antitoxin.

This is based on the completely unproven hypothesis that a K.L.B. always produces toxin. I may remind you that *in vitro* this is quite untrue. Production of toxin by the organism *in vitro* demands very special conditions of aerobiosis, pH, and the presence or absence of certain pabula. There is no evidence that these conditions are always present in the nose or throat of an individual carrier, hence this part of the hypothesis must be regarded as unproven.

Dudley's works (1923) appeared to support the popular view, but he completely ignored the possible effect of the small doses of toxin which he introduced in his repeated Schick tests into the boys under observation. Peters and Allison (1928) showed that it was possible to convert a Dick-positive into a Dick-negative by giving as few as one or two of the minute skin test doses.

The same may be true with smaller doses of diphtheria toxin, although I have been unable to carry out a similar series of tests for diphtheria, as here the production of immunity is so much slower. Dudley's observations were made on adolescent boys living in barracks in close contact. The findings, on such a group of limited ages and conditions, is not necessarily applicable to a population of all ages living under very different conditions. However, if one studies impartially the evidence as collected by Topley and Wilson (1936, p. 843) one finds convincing evidence for and against the popular view! I would suggest that the reason for

*Presidential Address to the West of England Branch, Society of Medical Officers of Health, April 26th, 1940.

this disparity is that there may be two forms of toxin neutralisers or destroyers, a non-specific one, naturally present and increasing as a function of age, and a specific one evolved by sub-clinical attacks of the disease. Pathologists have tacitly assumed that any substance which neutralises diphtheria toxin must always be specific antitoxin. As against this view it has long been known that lipoids can neutralise toxin *in vitro*. Walsh and Frazer (1934) have shown that emulsions of simple fats can neutralise considerable amounts of toxin if the dispersions of the fat is fine enough. Such fine, rich dispersions of neutral fats and lipoids are normally present in the blood stream of a healthy individual and can be readily seen by the ultra-microscope. On a former occasion (Peters, Boulton and Short, 1934) I have produced evidence suggesting that this ultra-microscopic appearance of the serum and the resistance of a patient to streptococcal infection were in some degree correlated.

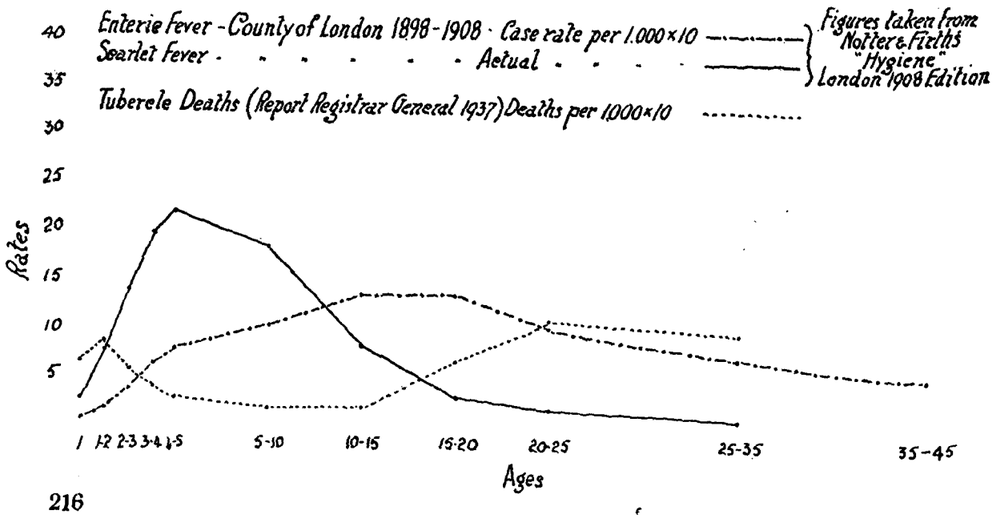
If one compares the age incidence curve of different diseases such as scarlet fever, enteric fever and tuberculosis (Graph I) one observes that the curve for scarlet fever and tubercle are exactly the opposite to each other, whilst enteric fever occupies an intermediate position. No known hypothesis covers them all. The theory of increasing immunity due to sub-clinical attacks breaks down completely for enteric fever and tubercle. Ringworm of the scalp is another striking example which tends to disappear about puberty. Such curves seem to me to suggest some biochemical or hormonal difference at different ages which renders the tissues less susceptible to certain infections at one age than another.

All recent work on diphtheria toxin shows that it is a protein of rather low molecular weight (15,000 to 20,000). Pappenheimer, Jr. (1938), showed that acetylation of the amino groups of the lysine fraction inactivated the toxin; the same groups are probably attacked by formalin to produce toxoid. This suggests that possibly some chemical or enzyme action may play some part in animals in inactivating diphtheria toxin, and that the measure of this activity is the m.l.d. of toxin for that animal. If an animal's tissues were unusually rich in free proteolytic enzymes for foreign proteins, one would expect it to be less susceptible to diphtheria toxin and to anaphylactic shock because in each case the foreign protein, if not fixed by the tissues too rapidly, would be destroyed before it could act. Such an animal is the rat which needs about 500 times as much diphtheria toxin to kill it as the guinea-pig weight for weight and is also very refractory to anaphylactic shock. There is no evidence as yet that it possesses such tissue enzymes in quantity but the fact that it can live in almost any filth, decomposing or otherwise, would suggest that it is able to utilise decomposing proteins or polypeptides better than most other mammals, and is able to detoxicate products or putrefactive bacilli which would produce illness in other animals.

In an attempt to throw some light on some of these problems of epidemiology I have collected 7,152 observations extending over the past eleven years. We have been Dick testing all diphtheria admissions during that period, primarily in order to take measures to protect them against developing scarlet fever during convalescence. The percentage of positive Dick reactors under four age groups has been tabulated year by year.

If there is excess epidemic prevalence of scarlet fever in any year it is undoubtedly associated with a far greater number of attacks of streptococcal sore throats which may not show signs sufficient to produce the reactions which are notified as scarlet fever. I think one may conclude that scarlet fever notifications are an index of the prevalence of a much wider invasion of the population by erythema-producing streptococci and, if current views are correct, a year of high incidence of scarlet fever should be followed by some reduction

GRAPH I. AGE INCIDENCE CURVES OF SCARLET FEVER, ENTERIC FEVER AND TUBERCULOSIS.



in the numbers of Dick-positive reactors amongst a fair sample of the population if a wave of immunity follows, under field conditions, a wave of infection. The crest of the annual epidemic curve of scarlet fever occurs in midwinter so that the ordinary records of notifications in the annual reports of Medical Officers of Health are the sum of two independent half waves. To demonstrate the whole wave more clearly, Dr. Parry has kindly given me the figures of notifications for each year from August 1st to July 31st. By a happy chance a still larger series of figures have been collected and published yearly by Dr. Sutherland of Monsall Hospital in the reports of the Medical Officer of Health of Manchester, and can be plotted against the incidence of scarlet fever from June to June by figures taken from Dr. Veitch Clarke's reports (Tables I and II and Graph II). If the incidence of scarlet fever affects the number of Dick-positive reactors amongst the population, the curve for scarlet fever notifications should move in contrary motion to the percentage of Dick-positive reactors and there should be a negative correlation between the two series of observations. Expert statistical analysis (see Appendix) by Mr. Horace Todd shows no significant correlation for the Bristol figures and even less for the Manchester curves.

I have plotted the same curves but have dissected the Dick-positive reactors into their age groups (Graphs III and IV). In the Bristol figures a curious effect is shown. The two age groups 0–5 and 5–10 give nearly parallel curves, showing very slight undulations about the mean with not the slightest relation to the number of scarlet fever notifications. The two age groups 10–15 and 15 upwards are again roughly parallel but show an entirely different curve from the two younger groups, and tend to show a negative correlation with the scarlet fever notification curve, especially at the years 1934–36, where the percentage of Dick-positive reactors dips steeply. The fact that the curves for these two double groups follow each other so closely seem to rule out a chance variation. During those three years (1934-36), the type of scarlet fever prevalent in Bristol was clinically much more severe than before or since, as a high proportion of complications such as nephritis, otitis, mastoiditis, relapses and return cases characterised those years With the prevalence of the milder disease again from. 1937 onwards these curves tend to rise again to the mean.

The dissected Manchester figures show a similar dip affecting all ages in the years 1936 and 1937. Dr.

TABLE I.

BRISTOL.

Year.	0–5.		5–10.		10–15.		15 and Over.		Totals.		Notifications of Scarlet Fever.
1928–29	79	*69·6*	251	*62·0*	86	*40·6*	68	*29·4*	484	*54·9*	1,109
1929–30	216	*67·5*	624	*77·4*	256	*51·1*	180	*50·0*	1,276	*57·3*	1,008
1930–31	174	*68·3*	386	*57·0*	204	*51·0*	148	*50·7*	912	*56·8*	564
1931–32	112	*74·0*	211	*66·0*	105	*58·0*	103	*46·6*	531	*62·3*	430
1932–33	120	*63·3*	180	*56·0*	127	*43·3*	95	*32·6*	522	*50·1*	895
1933–34	105	*73·3*	207	*58·0*	88	*16·5*	100	*26·0*	500	*50·6*	723
1934–35	124	*58·0*	282	*48·2*	161	*27·3*	244	*23·7*	811	*38·2*	1,209
1935–36	80	*71·2*	103	*54·3*	91	*20·8*	129	*16·2*	403	*38·0*	954
1936–37	75	*60·0*	111	*52·2*	81	*25·9*	77	*26·0*	344	*41·8*	654
1937–38	80	*67·8*	153	*61·3*	95	*39·0*	88	*27·2*	418	*50·2*	830
1938–39	135	*55·5*	284	*56·0*	176	*37·0*	154	*33·7*	749	*47·0*	1,054

The numbers of Dick tests and results carried out on diphtheria admissions to Ham Green Hospital, Bristol, over each year. The second column in italics is the percentage of Dick positive reactors in that age group.

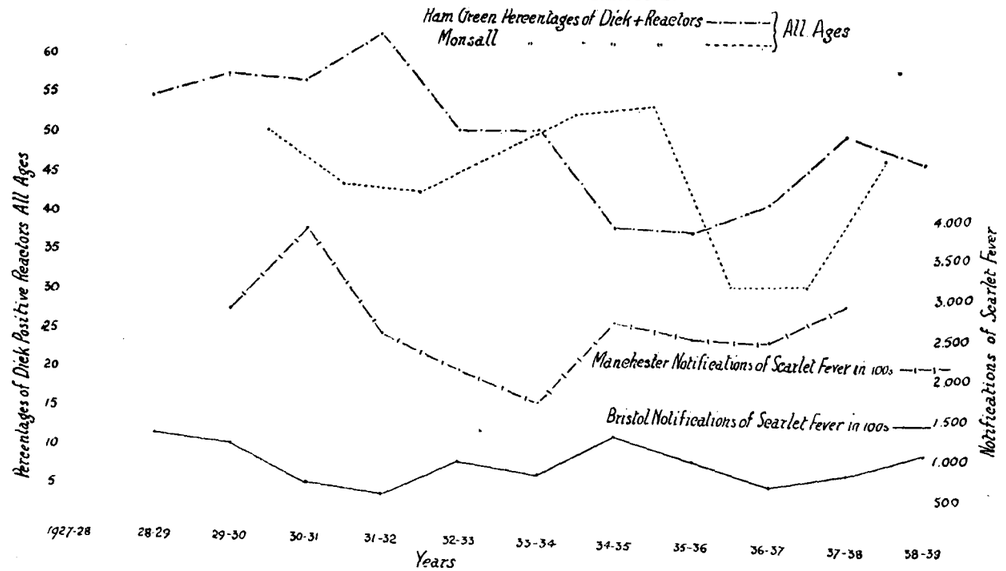
TABLE II.

MANCHESTER.

Year.	0–5.		5–10.		10–15.		15 and Over.		Totals.		Notifications of Scarlet Fever.
1930	324	*61·4*	372	*56·4*	162	*32·7*	121	*34·8*	979	*50·2*	2,751
1931	215	*46·0*	265	*52·1*	110	*36·4*	102	*21·5*	692	*43·1*	3,806
1932	252	*53·6*	378	*45·8*	185	*36·8*	198	*27·3*	1,013	*42·4*	2,454
1933	222	*62·2*	313	*44·7*	161	*36·0*	111	*39·6*	807	*47·1*	2,015
1934	216	*63·4*	355	*57·8*	139	*37·4*	92	*29·4*	802	*52·5*	1,649
1935	110	*61·0*	170	*51·8*	99	*53·5*	65	*46·2*	444	*53·6*	2,666
1936	322	*36·6*	489	*31·1*	261	*29·1*	188	*25·0*	1,260	*31·2*	2,493
1937	468	*40·2*	598	*31·6*	276	*21·7*	180	*23·9*	1,522	*31·5*	2,451
1938	700	*49·0*	626	*53·7*	195	*30·8*	206	*40·8*	1,727	*47·5*	2,913

The numbers of Dick tests and results carried out on diphtheria admission to Monsall Hospital, Manchester, by the Medical Superintendent, Dr. D. S. Sutherland, over each year. Notifications of scarlet fever are from June to June. The second column in italics is the percentage of Dick positive reactors in that age group.

GRAPH II. BRISTOL (HAM GREEN) AND MANCHESTER (MONSALL) NOTIFICATIONS OF SCARLET FEVER AND PERCENTAGE OF DICK-POSITIVE REACTORS.



Sutherland informs me that during that period there was no alteration in the type of scarlet fever prevalent in his area to account for it. The material used for the test was procured by Dr. Sutherland from the same firm all the time and by me all the time during which these two dips were recorded in Bristol and Manchester. This proves that it was not due to variation in the material or our dips would have occurred simultaneously instead of which my lowest records—1934-35—were contemporary with Dr. Sutherland's highest records of Dick-positive reactors.

From the two series of records from two cities it emerges that higher or lower incidence of scarlet fever produces no impression whatever on the number of Dick-positive reactors under ten years, taking a fair random sample of the population. The Bristol figures suggest that possibly a more virulent strain of scarlet fever may produce an impression on the number of Dick-positive reactors in the ages above ten, but none whatever on those below ten, amongst whom there is the greatest natural incidence of scarlet fever. Even in the higher age group the effect is transitory. The Bristol figures also suggest that observations such as Dudley's applied to one age group only may not be applicable to all ages under field conditions, although my findings may not be applicable to the closely-related disease, diphtheria.

It has been suggested that the fact that these observations have been carried out in a series of cases suffering from early diphtheria invalidate the findings so that the sample analysed is no longer a random one. In order to throw light on this point, I have collected and tabulated the results of a series of Dick and Schick tests carried out simultaneously on 830 new entrants to our staff (females, age 18–24). Our staff is recruited from a wide area in England, Wales, Scotland and Ireland, both town and country areas. The results were :—

	Dick-Positive.	Dick-Negative.
Schick-positive	92	201
Schick-negative	88	499

From Mr. Todd's analysis of this table, it is perfectly certain that the results of the Schick and Dick tests are not two independent variables. Assuming that the majority of patients tested are Schick-positive (seeing they were suffering from diphtheria), it would appear that the proportion of Dick-positives is generally higher in this group than in a random sample of the population. These findings suggest that there may be a genetic variation determining the number who have become negative to these two tests in this age group (although other explanations are possible). I do not think that they completely invalidate my findings. It would affect the heights of my curves of positive reactors but if the epidemic is producing a wave of immunity, its effect should still be discernible superimposed on my curves. As the tests were done early in the attack of diphtheria, alterations in immunity response, if present, could hardly have had time to develop. If diphtheria produced any effect on the reaction one would expect it to be constantly additive or subtractive to the height of the curve.

The type of diphtheria present in Bristol has been fairly constant during that period and there is not the

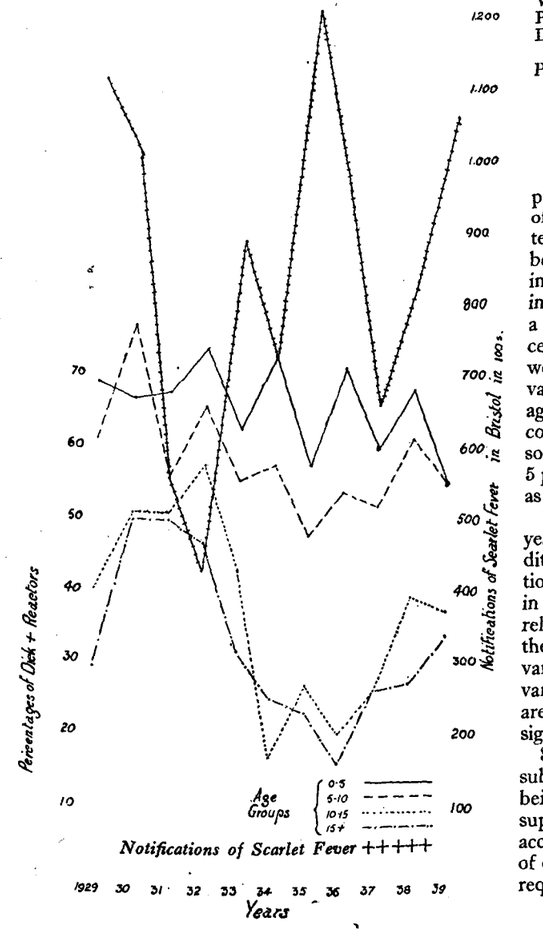
slightest correlation between the death rates from diphtheria during that period and the percentage of Dick-positive reactors. On these grounds I think that the results on the sample analysed are the same as would be found in any other random sample of similar dimensions.

I fear these observations throw no light on the problem of the epidemiology of scarlet fever, but they certainly tend to be destructive of many current views. Epidemiological studies of recent years have been concentrated more on the soil than on the equally or more important seed and have ignored largely telluric conditions which in a variable climate such as ours are obviously of the greatest importance. Such an investigation as I have shown you would be of much greater value if the period could have been extended to half-a-century.

In conclusion, I would urge the provision of means in every city for continuing research. We are spending vast sums in the public health service in the erection of hospitals and on the treatment of the sick. Most of our time is absorbed by routine duties and any research work has to be done in spare time which should be devoted to rest and recreation. The whole time research worker is the mendicant friar of medicine and can never attain to even a modest dependable livelihood under present conditions. I believe local authorities would lend a sympathetic ear to some allocation of funds for research. To you, therefore, who have the advantage of being the principal medical advisors of local authorities, I urge to try and get this sad state of affairs mended. Even a small allocation would establish a precedent which might be followed generally.

I should like to acknowledge with many thanks the great help given by Miss E. M. Perkins in assembling this great mass of data.

GRAPH III. HAM GREEN PERCENTAGE DICK + REACTORS AT DIFFERENT AGE GROUPS



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APPENDIX.

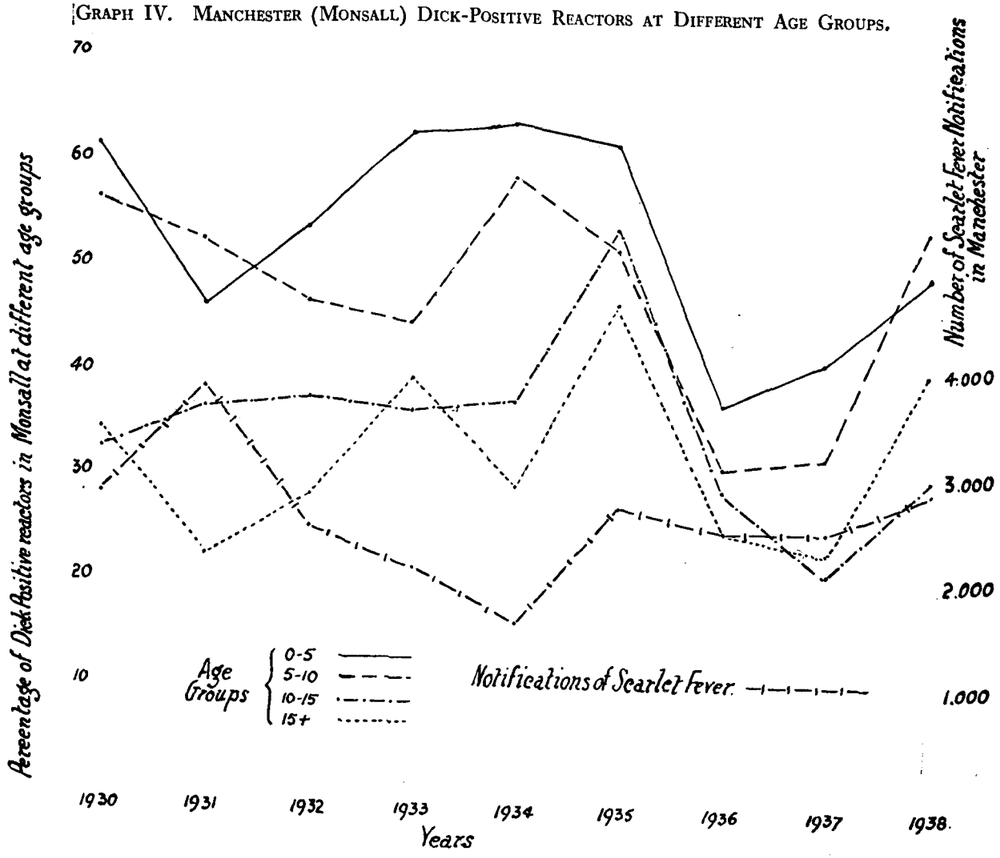
ANALYSIS OF THE STATISTICS BY HORACE TODD, B.A.

1. If there is any causal relationship whereby a prevalence of scarlet fever increases the proportion of immunity in the population as shown by the Dick tests, we may expect a significant negative correlation between the number of notifications of scarlet fever in any year with the percentage of Dick positive cases in the year following: from the Ham Green figures a correlation coefficient of 0·04 is found, which is certainly not significant by any standard. If, however, we calculate the correlation coefficient between the variates for the *same* year, we find 0·47; the odds against this arising in a random sample of the size considered (eleven observations) are about 6 to 1, so since the conventional level used is 19 to 1 (*i.e.*, the 5 per cent. level), this correlation cannot be looked upon as significant.

2. It was thought that, as children of under five years of age are perhaps not subject to the same conditions of infection as school communities, the correlation sought might have been masked by their inclusion in the figures. However, on subtracting the figures relating to these children in the age group 0–5 years, the correlations were found to be 0·05 between the variates at one year difference, and 0·40 between the variates in the same year: the odds against this latter are about 3 to 1, and clearly neither coefficient is significant.

3. The percentage figures given are, of course, subject to standard errors of random sampling, these being of the order 2 per cent. We cannot, however, suppose that if the proportion of Dick-positives was accurately known we might thereby increase the values of our correlation coefficients to the level of significance required.

GRAPH IV. MANCHESTER (MONSALL) DICK-POSITIVE REACTORS AT DIFFERENT AGE GROUPS.



4. The fourfold table of Dick- and Schick-tested individuals shows conclusively that these two tests are not independent, if, in fact, they had been the odds against such a distribution arising, as the actual odds are much greater than 10,000 to 1 (χ^2 = 25·15, one degree of freedom). The proportion of Dick + in the general population from which this sample is taken, is 21·7 per cent. with a standard error of 0·5 per cent.: the proportion of Dick-positive in the part of the sample which is Schick-positive is 28·5 per cent., and in that part which is Schick-negative is 16·7 per cent. Each of these differs from the proportion of Dick-positive in the whole sample by more than ten times the standard error, so we accordingly conclude that the samples with Schick-positive and Schick-negative are not fair samples of the whole population as regards Dick testing.

OBITUARY

JESSIE BALSILLIE, M.B., CH.B. (ST. AND.).

We regret to record the recent death of Dr. Jessie Balsillie, who had been medical officer in charge of maternity and child welfare at Stoke-on-Trent for the last 25 years. She had always taken a very close interest in the work of the Maternity and Child Welfare Group of the Society, on whose committee she served for many years. She will be much missed by her many friends in the Society, of which she had been a Fellow since 1926.

VIOLET KELYNACK, M.B., CH.B. (EDIN.).

Dr. Kelynack, whose death at the age of 64 occurred on May 23rd, was one of the original honorary secretaries of the Medical Women's Federation; in 1921 she became medical secretary and editor of the Federation's official journal. She held both these offices until her death. She was a leading figure in looking after the interests of women in the medical profession, not least in the public health service. We extend our deep sympathy to Dr. T. N. Kelynack, her widower, and her daughter, Dr. A. Violet Kelynack.

PATHS OF SPREAD OF ACUTE STREPTOCOCCAL INFECTIONS*

By V. D. ALLISON, M.D., D.P.H.,
Medical Officer, Ministry of Health.

Remarkable advances have been made in recent years in the extent of our knowledge of the haemolytic streptococcus and its habits—mainly as the result of the classification of haemolytic streptococci by Lancefield into groups by means of a precipitin test, depending on the presence in the streptococci of reacting carbohydrate "C" substances, characteristic for each individual group. Eleven groups have now been defined but only strains belonging to Groups A, B, C and G have so far been found as the cause of acute infection in man. Strains belonging to Group A, known as *Str. pyogenes*, are responsible for the great majority of acute streptococcal infections in man and are of considerable epidemiological importance, causing such epidemic disorders as scarlet fever, tonsillitis, erysipelas, puerperal fever, pneumonia, impetigo contagiosa and infections such as whitlows, cellulitis, septic infections of wounds and burns, otitis media and sinusitis. Group B strains occasionally cause infection in man, *e.g.*, tonsillitis, erysipelas, puerperal infection and wound infection; members of this group, known as *Str. agalactiae*, are the most frequent cause of mastitis in cows. Group C strains may be divided into human-pathogenic and animal-pathogenic, based on fermentation tests, and in man strains have been found as the cause of tonsillitis, erysipelas, puerperal infection and wound infection. Members of Group G are only rarely the cause of human infection, *e.g.*, tonsillitis and puerperal infection, usually mild in type. Strains belonging to Group B, C and G producing infection in man are not at present considered to be of epidemiological importance. It has been shown by the examination of several thousand strains of haemolytic streptococci isolated from human infections that over 97 per cent. belonged to Group A, while strains of haemolytic streptococci isolated from human beings and their environment in the absence of disease showed a very high percentage of strains belonging to Groups other than Group A. Group classification by the Lancefield test may be of considerable value in eliminating a "carrier" strain, if not Group A, as a possible source of infection.

A further important advance was the work of Griffith, who showed by serological analysis that strains belonging to Group A (*Str. pyogenes*) comprise a number of well-defined types identified by agglutination tests; some 26 serological types have already been identified, and serological typing has proved of considerable value in tracing the source and paths of spread of infection in outbreaks due to *Str. pyogenes*. No one serological type is exclusively associated with a typical clinical syndrome, and any one type may cause scarlet fever, tonsillitis, puerperal fever, wound infection, or any of the protean manifestations of acute streptococcal infection; this has been shown by the investigation of outbreaks of infection due to a single serological type in public schools and in other closed or semi-closed communities.

The spread of acute streptococcal infections has been shown to originate from the upper respiratory tract of man, which is the main reservoir of *Str. pyogenes*. The paths of spread include (*a*) food (*e.g.*, milk); (*b*) droplet infection directly from coughing, sneezing, talking, or via dust or syringes from infected inoculum; (*c*) infection from the face (kissing), fingers (toys, sweets, eating utensils), fomites, *e.g.*, handkerchiefs; or (*d*) infective discharges via fingers, dressings, fluff or dry dust. Infection has repeatedly been shown to occur via all these routes.

As an example of an infection spread by milk, the explosive outbreak of streptococcal infection among pupils of two schools in the Eton Rural District in 1935 was quoted. This outbreak of scarlet fever and tonsillitis, due to *Str. pyogenes*, type 1, was spread by the drinking of raw milk infected by a milker suffering from a "cold" and whose two children were recovering from "influenza" which proved on examination to be scarlet fever. There were 87 primary cases of scarlet fever among the school children and from the throats of these, as well as from the milk, the throats of the milker and his two children, *Str. pyogenes*, type 1, was isolated. No cases occurred in children who either drank malted milk or drank no milk.

An outbreak of inoculation infection with *Str. pyogenes*, type 1, among nurses being immunised with T.A.F. was described; 11 nurses and one doctor were infected with severe lymphangitis and hyperpyrexia necessitating free incision and drainage. The outbreak was traced to a sister in charge of the inoculation who was suffering from a "cold," due to *Str. pyogenes*, type 1, there being little doubt that infection was spread via the hands or throat and saline used to rinse out syringes and needles.

Investigations carried out in scarlet fever and other wards of isolation hospitals over several years have shown that scarlet fever may be caused by at least 21 different serological types of *Str. pyogenes*, and when scarlet fever patients are nursed together in a multiple-bed ward reinfections are bound to occur. It has been conclusively shown that infection with one type of *Str. pyogenes* does not always or often protect against infection with another type, and that the so-called "relapse" in scarlet fever is in reality a fresh infection by a strain of *Str. pyogenes* picked up in the ward and differing serologically from that causing the original infection. In multiple-bed scarlet fever wards from 50 to 70 per cent. of patients become reinfected with fresh types of *Str. pyogenes* during their period of detention in hospital. Such reinfections may be latent, *i.e.*, there may be no clinical evidence of reinfection, or more frequently the reinfection may be manifest, *i.e.*, accompanied by clinical signs and manifestations. Out of more than 50 patients, infected with various serological types, nursed in cubicles and 12 patients infected with *Str. pyogenes*, type 1, nursed together in one ward, all swabbed weekly during their stay in hospital, none became reinfected and their type remained the same throughout.

* Abstract of a paper read to the Welsh Branch, Society of Medical Officers of Health, Cardiff, May 24th, 1940.

In one investigation in a 22-bed scarlet fever ward patients were swabbed twice weekly over a period of 13 weeks. Out of 49 patients investigated only one was admitted infected with *Str. pyogenes,* type 5, and this patient reinfected five other patients in the ward, two infections being manifest and three latent. The patient infected primarily with type 5 himself became reinfected with *Str. pyogenes,* type 2, and suffered a "relapse" or second attack of clinical scarlet fever.

Bacteriological examination of toys, handkerchiefs, sweets, eating utensils and dining tables in scarlet fever wards has shown that they are regularly infected with several serological types of *Str. pyogenes,* and the strains isolated and identified from such sources have been found to be the same types as those infecting the patients in the ward at the time. Furthermore, out of 8 convalescent patients in one ward investigation, only one still carried the primary infecting type of *Str. pyogenes* with which he had been admitted; all the other seven patients were harbouring fresh serological types with which they had become reinfected in the ward.

The part played by infection from hands and from the upper respiratory tract in the occurrence and spread of puerperal infection has been fully demonstrated and proven. The continuance in maternity work of a medical attendant or midwifery nurse with a chronic Group A streptococcal infection of the upper respiratory tract can in no circumstances be justified, and all persons with any acute upper respiratory infection should be rigorously excluded from contact with parturient women.

The importance and danger of spray and droplet infection has long been recognised and accepted but in recent years the importance of dry dust particles as a factor in transmission of acute streptococcal infection has been receiving increasing attention. Experiments involving the exposure of blood agar plates in scarlet fever wards and in oto-rhinological wards of general hospitals, with subsequent incubation of the plates and isolation and serological identification of haemolytic streptococci present in the cultures have shown that—(*a*) *Str. pyogenes* can regularly be isolated from the air of such wards, (*b*) the serological types identified correspond exactly to those found in the upper respiratory tract of the patients in the ward at the time and causing their infections, and (*c*) infection of the air with *Str. pyogenes* is heaviest in the morning when ward activity is at its greatest—sweeping and polishing of floors and furniture, making beds, washing, treating and feeding patients, continuous to and fro movement of staff and opening and shutting of doors. This air infection decreases during the afternoon and evening and is negligible or absent during the night hours when stillness reigns in the ward. In one investigation calculations based on (*a*) the area of exposed plates, (*b*) the number of colonies of *Str. pyogenes* which grew on the plates, (*c*) the floor area of the ward and (*d*) the unwarranted assumption that one colony on a plate represents the growth from a single *coccus,* showed that the numbers of *Str. pyogenes* which might reasonably be expected to fall over the floor area of a ward containing 23 patients during three-hourly periods in the night (12.30—3.30 a.m.), morning (7—10 a.m.) and afternoon (1.30 to 4.30 p.m.) were 13,614, 1,075,506 and 1,157,682 respectively. Such astronomical figures indicate that air-borne infection by dust particles is more than a possibility. Similar findings have been obtained by exposure of blood agar plates in burns wards and maternity wards, where patients with acute streptococcal infections were being nursed.

Most of these findings have been based on investigations in scarlet fever wards, as these form the best environment for the study of the epidemiology of infections with *Str. pyogenes,* but the problem has been shown by similar studies to be of equal importance in measles and diphtheria wards, in oto-rhinological wards, and in the medical, surgical and children's wards of general hospitals. Epidemic outbreaks in wards of general hospitals have been reported lasting for months and in one instance investigation of the serological types of *Str. pyogenes* isolated from the patients showed that the epidemic in reality consisted of six superimposed epidemic waves, each one due to a different serological type of *Str. pyogenes.*

In view of this recent work it is interesting to read that 21 years ago the haemolytic streptococcus was found to be responsible for all severe complications of war wounds. *Str. pyogenes* was present in 15 per cent. of wounds shortly after infliction. In cases in hospital more than a week nearly all wounds (93·3 per cent. in one instance) were found to be infected with *Str. pyogenes.*

Convalescent homes and heart hospitals at present demand that patients for admission shall not be carriers of diphtheria bacilli. From a preventive medicine point of view should they not also be declared free from infection with *Str. pyogenes?* Clinicians are well aware that acute infection with haemolytic streptococci is frequently a disaster in heart cases, in asthmatics, in cases of thyrotoxicosis and in rheumatic fever subjects. The present trend seems to be to lay too much stress on puerperal fever as *the* streptococcal infection because it has become established as the classic type of grave streptococcal disease.

Finally, it cannot be too strongly stressed that acute infection with *Str. pyogenes* from whatever source, by whatever portal of entry, with whatever clinical manifestations and call them by what names you will, are fundamentally the same, possessing the same tendency to epidemic spread and requiring the same methods of prevention and control.

A member of the Society reports that he has received the following sympathetic message from an American colleague well-known in the public health world: —

"I want you to know how deeply we are all feeling for you in this hour of trial. We can scarcely tear ourselves away from the radio and those of us in this country who are well informed realise that England is fighting not only for herself and the small nations of Europe, but for us and for the whole cause of world civilisation."

AN INVESTIGATION OF A SMALL EPIDEMIC OF DIPHTHERIA IN THE HOP-FIELDS

By S. CHALMERS PARRY, M.R.C.S., L.R.C.P., D.P.H.,
Deputy County Medical Officer, Worcestershire C.C.

During the temporary illness of Dr. A. Sanders Green, I acted on his behalf as Medical Officer of Health for one of the rural districts in Worcestershire; and it was during this period that diphtheria broke out at one of the hop-farms.

Of the six cases that occurred, the last two patients were immediate contacts who developed the disease subsequent to their return home from the hop-fields. Owing to the reported severity of the first case, virulence tests were performed; and, in addition, the organisms were typed. All four cases of diphtheria removed from the hop-farm proved to be of the *gravis* type. They were all sent to the isolation hospital as clinical cases without waiting for the results of the swabs to be confirmed.

On September 26th the first patient (J.H.), a boy aged six years, was taken to a doctor of wide experience in infectious disease, and was claimed by him to have been one of the worst cases he had ever seen. He said he was literally "up to his teeth in membrane." The child gave a history of sore throat for two days; and, in spite of a very severe attack including the complications of aural discharge and nasal speech, recovered evidently only owing to the unremitting care and attention received at the isolation hospital. During the course of his illness, he had a total of 130,000 units of antitoxin.

On September 27th (M.M.), a girl aged 16, reported that she had had a sore throat since the night before. Her mother stated that she was very subject to sore throats, and had, in fact, had a similar attack before the first case (J.H.) was ill. On examination, her tonsils were found to be unhealthy and inflamed—but no evidence of any membrane was present. The throat swab, which was taken, proved to be negative. On the morning of September 28th, there was still no membrane; but, in the evening, there was definite evidence of diphtheria.

On examination of her sister (J.M.), aged 11, who complained of sore throat on that same evening, a patch was found on her right tonsil; so both patients were transferred to the isolation hospital.

On the following morning their brother (D.M.), aged 2½, was also removed from the farm. The rapidity of onset in his instance was even more dramatic than in that of his two sisters. Throat swabs, taken on September 27th from the last two cases—(J.M.) and (D.M.)—before the onset of symptoms, were negative.

The diphtheria organism, cultured from the nose and throat swabs of these four patients, proved very virulent to guinea-pigs—producing death, in each case, within 24 hours.

No clinical case of diphtheria was discovered among the contacts. The 23 immediate contacts, occupying the same barn quarters for sleeping, had their throats swabbed before sending them home; and the district M.O.H. was notified in the usual way. Three positive swabs were found, and all of these were due to the *mitis* type. However, only two of these three "carriers" proved on animal inoculation to be virulent—producing death within 48 hours.

It is of particular interest that swabs, taken previously (on September 27th) from these two virulent "carriers," proved to be negative.

Dr. Geoffrey Dudley, who was then Medical Officer of Health of the home town of one of these virulent carriers, kindly furnished me with the following details. She was a girl (A.M.), aged seven, who had been removed to an isolation hospital two years previously, on account of a positive throat swab. On that occasion, he took her swab for the same reason—owing to the fact that she was an immediate contact of some cases of diphtheria; she was, moreover, thought to have been the cause of that outbreak which occurred in a school, and consisted of four mild cases. On examination of the throat, this child's tonsils were found to be unhealthy; indeed, on her first visit to the isolation hospital, Dr. Dudley states that removal of the tonsils had been recommended—but that advice was not followed. However, on her return visit to the isolation hospital, it is satisfactory to record that consent was eventually obtained from the parents and that tonsillectomy was performed. Incidentally, this child, who was proved to have been a "carrier" two years ago, was a sister of the three cases of diphtheria *gravis.*

The other virulent *mitis* carrier (B.B.), a girl aged six, was a sister of the two remaining cases of diphtheria that developed five days after their return home.

The patients, (D.B.) a brother aged three, and (J.B.) a sister aged five, developed the same type of diphtheria as their sister who was proved to have been in carrier-state; and it is evident that they must have contracted it from her.

It is noteworthy that the second case of diphtheria *gravis* (M.M.) was exceedingly ill in hospital, and that, after developing the complications of bull-neck and albuminuria, remained swab positive for five months—in fact, until her tonsils had been removed. A virulence test was repeated on February 5th, 1940, and the guinea-pig died within 26 hours.

The origin of the first case of diphtheria *gravis* (J.H.) remains a complete mystery unless it can possibly be surmised that the second case (M.M.) carried the germ at some time prior to her second recent attack of tonsillitis.

Summary

(1) The diphtheria organisms were typed and virulence tests were performed.

(2) The history of a *chronic* virulent throat carrier is described. During an epidemic two years previously, a positive swab was obtained; and she was thought, on that occasion, to have given rise to four cases of mild diphtheria in a school. But, in this epidemic, the two cases of diphtheria *mitis* that developed (subsequent to their return home from the hop-fields) were almost certainly infected by their sister and not by her.

(3) The characteristic intermittent presence of K.L.B. in throat carriers is demonstrated by the two virulent *mitis* carriers whose swabs, taken on September 28th, were both reported negative.

In connection with the method of procedure adopted in the examination of swabs at the County Laboratory, Mr. H. E. Monk, County Analyst and Bacteriologist, had all of these cultured in duplicate media (Loeffler's and Clauberg's).

His experience definitely confirms the superiority of the Clauberg Method—especially concerning swabs containing few organisms.

Conclusions

(1) It is evident that the immediate contacts, who came from a thickly populated district, must have acquired a fair degree of immunity in order to resist the virulence of *C. diphtheriae gravis*.

(2) The typing of the organisms demonstrated the presence of mixed strains; this feature only confirms the importance of being on the look-out for cases of diphtheria *gravis* in the midst of any epidemic of diphtheria, however mild.

Apart from the fact that it may be possible to incriminate one of the virulent carriers as the culprit responsible for the source of infection—from a public health point of view—this laboratory procedure would appear to be mainly of academic interest.

(3) The advantage of determining the virulent carriers is clearly shown. Virulence tests would appear to be of more practical value than typing of the organisms.

I am indebted to Dr. Wyndham Parker, County Medical Officer, and to Dr. A. Sanders Green, District Medical Officer of Health, for kind permission to publish this report.

I also wish to thank Mr. Monk and his staff for their enthusiastic co-operation in performing the virulence tests and typing the organisms.

Evacuation of Mothers and Toddlers.—A crowded meeting of the National Baby Welfare Council on June 14th debated whether evacuation of mothers and children under five should be carried out and, if so, whether it should be compulsory. The Chairman (Dr. D. H. Geffen) said that the Minister of Health had already declared against the principle of compulsion. The Empire reception scheme appealed to many but the break-up of the family was the greatest deterrent. Mr. S. C. Copeman spoke forcefully in favour of compulsion, basing his views on experience in Spain. Dr. E. Ashworth Underwood put the pros and cons extremely well: he wondered whether it would be possible to link up the idea of evacuating mothers with young children with the demand for female labour in war industries. Dr. Nora Wattie appealed against the interference with essential public health work through putting civil defence duties on to public health personnel, and Dame Louise McIlroy urged that expectant mothers in the penultimate as well as in the last month of pregnancy should be eligible. The meeting passed resolutions in favour of the Empire scheme and of compulsory evacuation from vulnerable areas.

A STANDARD FOR PUBLIC DENTISTRY

By KEVERN BATTEN, L.D.S., R.C.S. (ENG.),
School Dental Officer, West Riding C.C.

About a quarter of a century ago, school dentistry being in its infancy, a dental surgeon, on taking up an appointment as "school dentist," generally found that as no dental scheme existed it was up to him to produce one. One of the first things met with was an intimation from the school medical officer that he could not help much, being ignorant of all dental matters. Thus, this "school dentist" not only had to produce the rabbit from the hat alone, but often without many scenic effects to help. Dental schemes were scarce and mostly experimental, and not a lot of help could be obtained from clinics; in any case, to visit such during working hours would not have made one popular with either committee or school medical officer. Owing to very unwise administration in high places a school dentist's job was considered to consist of seeing a certain number of children, of performing a certain amount of practical work or a certain number of inspections at each session; and possibly of doing all his clerical work, or in many instances, as no nurse or dental attendant was provided, of wasting his time on trivial duties. The Board of Education did not exist as we know it to-day and such advice as was given from governmental sources resulted in that "greatest good for the greatest number" idea, which persisted for so long with its attempts to serve up dental treatment rather indiscriminately to too many children. Figures were produced to show what a lot of work was being done, and how much ground was being covered. Vast numbers of fillings were done, but for vast numbers of children. Viewed generally, the work was not constructive, as the mistake was made of attempting reparations for too many children, but as things were, such a state of affairs was inevitable.

As a result, committees were unintentionally but unavoidably misled regarding the progress of dental affairs, a reaction which interfered with the growth and proper staffing of the service. Consequently, when the next baby of local authorities, maternity and child welfare services, was conceived, many authorities tacked all the dental work needed by this infant on to an already distracted and overworked school dental service, frequently lopping sessions from the latter to fit the work in.

With regard to administration, annual reports requests for improved conditions or salary increments increases in staff, all had to be presented to the committee through the medical officer of health. Is it to be wondered that the M.O.H. would not press unduly for extra dental staff, when frequently he was experiencing difficulty in staffing his own medical services? In view of all things, it should cause no surprise that a lack of cohesion exists among dental services, and that such great differences exist between the dental schemes of the various local authorities. It is the more surprising that there is a fairly general adoption of the policy of applying preventive treatment and particularly at certain accepted ages by what may be described as the avoidance of dental trouble "including caries and certain dental irregularities" by intelligent anticipation followed by suitable treatment.

It is difficult to avoid mentioning dental propaganda; to put it briefly, can we not manufacture our own by making the dental service and the treatment dispensed so thorough, that its benefits are bound to be recognised by its recipients, who will, therefore, make such demands on our time that this is bound to be noticed by medical officers and councillors, influencing them to improve staffing conditions and at the same time remember our maximum, not minimum, salaries?

All the different public services seem to need a co-ordinated policy concerning ideals and aims and methods of bringing them about. For instance, should we not adopt a generally accepted definition of what condition a mouth should be in that it may be passed as sound? It would prove interesting and would no doubt give illuminating evidence concerning the great diversity that exists to-day and is shown by figures purporting to represent the dental conditions and dental requirements of school children.

Dental fitness among the people is generally admitted to be a necessity; and if the State or local authorities provide dental treatment at all it should be available to all qualifying for it, under equally good conditions in every part of the country. To ensure this, the dental service could be allied to local authorities, not necessarily run by each of them as at present with very varying ideas of what constitutes a sound service and equally varying financial capabilities of providing it. If the present disadvantage of having to recognise geographical boundaries of separate local authorities could be removed the calling-up of cases for special treatment, such as general anaesthetics, X-ray diagnosis, etc., to central clinics, would be a great boon for the public and the service. The public dental service would benefit tremendously if it could be united under one control such as that of the Ministry of Health, who would provide all the dental treatment needed by nursing and expectant mothers, pre-school and school children, both elementary and secondary, adolescents, mentally defectives, public assistance cases, and, in fact, all cases for whom local authorities have to provide dental treatment. Under such unified control it could be carried out with uniformity.

*Extracts from a Presidential Address to the Yorkshire Dental Officers' Sub-Group.

THE MINISTER OF HEALTH, the Rt. Hon. Malcolm MacDonald, M.P., has appointed Mr. G. E. Yates to be his Principal Private Secretary in place of Mr. S. F. Wilkinson, who has been promoted to the rank of Assistant Secretary (Acting).

THE SECRETARY TO THE MINISTRY OF HEALTH, Sir George Chrystal, K.C.B., has appointed Mr. R. F. Tyas to be his Private Secretary.

DR. E. STANLEY ROBINSON, J.P., Lombard Street, Stourport, Worcs., has back numbers of PUBLIC HEALTH for several years past, which he can no longer store. Members in search of back numbers should apply to Dr. Robinson as quickly as possible.

CORRESPONDENCE

IS A.R.P. A "GAINFUL OCCUPATION"?

To the Editor of PUBLIC HEALTH.

SIR,—I have seen the letter written by the Executive Secretary to the Minister of Home Security.* I appreciate the noble effort. In it is used a quaint phrase which has been put in inverted commas—"gainfully occupied persons." I should be interested to know when a Medical Officer of Health can be said to be gainfully occupied in performing A.R.P. duties. A.R.P. is costing me out of my own pocket roughly £100 per annum and has been doing so for the last three years and I don't expect I am unique!

Yours, etc.,
M.O.H.

June 5th, 1940.

ANOMALOUS RESULTS IN THE BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

To the Editor of PUBLIC HEALTH.

SIR,—A recent article by Drs. Hughes and Wordley, published in *Public Health*, 1939, Vol. 53, p. 55, and in *Water and Water Engineering*, March, 1940, p. 68, in which attention was drawn to very wide discrepancies in the results of bacteriological analysis of water samples raised questions of the gravest importance, not only to water undertakings, but also to Medical Officers of Health and others concerned with the national health.

The case against the reliability of bacteriological examinations of water supplies was admirably answered by Dr. E. V. Suckling in a latter published in *Public Health*, April, 1940, p. 160, and in *Water and Water Engineering*, April, 1940, p. 161, and it appeared that no further correspondence on the subject was necessary, but subsequent letters have shown that some differences of opinion still remain. It would appear necessary, therefore, that some further light should be thrown upon this problem.

Dr. Wordley drew attention to the reliability and consistency of the results obtained at the laboratories of the Metropolitan Water Board. In a laboratory where routine examinations of the same waters are made daily it is a simple matter to detect any irregularity in results, and it may be said with confidence that the results obtained in these laboratories are in high degree consistent with probability. Furthermore, the laboratories have recently, on more than one occasion, examined supplies in parallel with private and government laboratories of excellent repute, and the results obtained by the different laboratories have shown such a high degree of conformity as to occasion surprise.

These facts alone appear to be sufficient evidence that bacteriological analysis, if properly carried out, is reliable.

The subject has, however, been reopened by a letter by Dr. C. A. Seyler in *Public Health*, May, 1940, p. 178, and *Water and Water Engineering*, June, 1940, p. 229. He agrees with Dr. Wordley's belief that samples need not be treated with thio-sulphate at the time of drawing them, but this contention is supported only by a statement to the effect that he does not think that the

*PUBLIC HEALTH, June, 1940, p. 206.

continued action of chlorine during transit would make the difference between a good and a bad water. It would, in my opinion, be a most dangerous practice to allow any such assumption to play a part in the technique of bacteriological tests performed with a view to the control of purification processes.

The influence of chlorine in the sample bottle would depend upon several factors such as the time between the drawing of the sample and the inoculation of the media, the concentration of chlorine, the chemical constitution of the water, and the temperature, but it can be definitely stated that no reliable indication of the bacteriological state of the water going into supply, either at the time of drawing the sample or indeed at any other specified time, can be obtained from an analysis of a sample which contains active chlorine and which has been transported to the laboratory without the prior neutralisation of that chlorine.

It has frequently been suggested and, indeed, the suggestion is repeated in Dr. Seyler's letter, that the time spent in the sample bottle may be accepted as the equivalent of the contact time usual in the mains. Even were these periods of similar duration, this suggestion could not be accepted, because conditions which materially influence the bactericidal velocity of chlorine may be, and usually are, quite different in the bottle and in the main. It has been my experience that, in some mains, chlorine and chloramine are rapidly dissipated. It can, moreover, be definitely accepted that if the residuum which is passed into supply is sufficient to be of value in the mains, a contact period in the sample bottle of only a fraction of the time usually taken in transporting a sample to the laboratory may completely transform the picture obtained.

As suggested by Dr. Suckling, there can be no doubt that the wide discrepancies reported by Drs. Hughes and Wordley were not due to sampling errors but to defects in technique, or the employment of unsuitable methods of analysis.

The Ministry of Health has, after serious consideration and consultation with authoritative opinion, drawn up Report No. 71 (Revised Edition, 1939) in which they have correlated tests and suggested standards for a routine in water examination.

If the methods subscribed to in this memorandum were universally employed and the technique followed in detail by all laboratories examining water supplies, there is no doubt that a very much greater degree of accuracy and consequently of conformity in results would immediately be achieved. Unfortunately, many analysts consider that the methods they employ have served them well for many years and can see no reason for change, but it is held that the action of the Ministry has provided a much-needed opportunity for the standardisation of methods which should not be neglected. If analysts are unwilling to accept this opportunity, it is suggested that Water Undertakings and Local Authorities could bring about the imposition of the desired standards by including a clause in all agreements for bacteriological analysis of water supplies to the effect that they shall be performed in accordance with the methods and by the technique prescribed in Report No. 71. In laboratories which have maintained records over long periods it is not always possible to change the methods suddenly or too rapidly. This is the case in the laboratories of the Metropolitan Water Board and although much has already been done in an endeavour to conform to the methods advocated in Report No. 71, certain changes still remain to be made. The outstanding reforms will be introduced as opportunity offers.

If the policy of standardisation is to achieve a full measure of success, the Ministry must ensure that the best methods are available to all by the publication of revised editions of Report No. 71 as often as is necessary.

Yours faithfully,

E. F. W. MACKENZIE,
Director of Water Examination.

Metropolitan Water Board Laboratories,
177, Rosebery Avenue, E.C.4.
June 7th, 1940.

THE DEFENCE SERVICES

ELLISTON, G. L. C. (Executive Secretary, Soc. M.O.H.), Temp. Sub-Lieut., R.N.V.R.

KELMAN, R. P. S. (Med. Supt., Selly Oak Hospital, Birmingham), appointed Lieut.-Col., R.A.M.C.

WILLOUGHBY, HUGH M. (Dep. M.O.H., Port of London Authority), Surg.-Cdr., R.N.V.R., was promoted from Surg.-Lieut.-Cdr. in November last.

London School of Hygiene and Tropical Medicine
(UNIVERSITY OF LONDON)
Incorporating the Ross Institute

It is hoped to hold courses of instruction during the session 1940-41 for

The Diploma in Public Health (University of London) and for

The Diploma in Tropical Medicine and Hygiene (Eng.)

The course for the D.P.H. will last an academic year of nine months and the inclusive fee will be **£56 14s. 0d.**

The course for the D.T.M. & H. will last five months and the inclusive fee will be **£40 0s. 0d.** Both courses will begin on Monday, 30th September, 1940. Those wishing to enrol should apply to the Secretary as soon as possible.

Studentships. In the D.P.H. course: The Chadwick Bursary, value £56 14s.; and in the D.T.M. & H. course: the Andrew Balfour Studentship, value £15.

For additional information apply to the SECRETARY, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, KEPPEL STREET (Gower Street) LONDON, W.C.1. (MUSeum 3041).

The Society of Medical Officers of Health

COUNCIL AND ORDINARY MEETINGS

Notice is hereby given that the meeting of the Council and the Ordinary Meeting postponed from June 21st will be held on Friday, July 19th, 1940, at Tavistock House, Tavistock Square, W.C.1.

The Council will meet at 2 p.m., and members are asked to take the papers previously sent to them as the agenda for the postponed meeting. Certain additional papers are being circulated.

The Ordinary Meeting will be held immediately after the conclusion of the Council Meeting, that is, at 3.30 p.m., or as soon as possible thereafter, and the agenda will be as printed in the June issue of PUBLIC HEALTH, page 207, with the addition of the subjoined names to the list of candidates for election.

By Order,
G. L. C. ELLISTON, *Executive Secretary.*

ADDITIONAL CANDIDATES FOR ELECTION ON JULY 19th, 1940.

Branch.	*Name.*	*Address.*	*Appointment.*	*Proposer and Seconder.*
N.	**Clayton, Thomas Morrison,** M.B., B.S. (DURH.), B.HY., D.P.H.	"Oakpool," Grange Road, Ryton-on-Tyne	M.O.H., Ryton & Blaydon & Whickham U.D.s	James Grant J. A. Charles
Mid.	**Woolf, Rowena,** M.B., B.S.(LOND.), D.P.H.	16, Wake Green Road, Birmingham, 13	A.M.O., M. & C.W., Birmingham C.B.	V. Mary Crosse B. G. Jemson
Y.	***Levinson, Samuel,** L.D.S., R.C.S. *As Associate.	99, Harehills Avenue, Leeds, 8	Dent. Surg., West Riding C.C.	James Todd B. R. Townend

GENERAL PURPOSES COMMITTEE MEETING

1. A meeting of the General Purposes Committee was held at Tavistock House, Tavistock Square, on Friday, May 17th, 1940, at 2 p.m.

PRESENT.—Drs. J. S. Anderson, Vynne Borland, R. H. H. Jolly, Professor R. M. F. Picken, Drs. J. A. Stirling and Ernest Ward.

Apologies for absence were received from the Chairman (Dr. Cyril Banks), the President (Dr. F. T. H. Wood), and six members. Professor Picken was elected to take the chair at this meeting.

2. MINUTES.—The minutes of the last meeting, held on March 15th, were confirmed and signed.

3. CIVIL DEFENCE.—The report presented to the Council on April 5th and printed in PUBLIC HEALTH, May, p. 180, was confirmed.

4. EVACUATION OF EXPECTANT MOTHERS.—At the Council meeting on April 5th the question was raised of the new instructions by the Ministry in regard to the above aspect of evacuation. This question was discussed at the Ministry on April 26th. The Ministry stated that they were preparing no new scheme in connection with evacuation of expectant mothers, but that their regional officers had been asked to enquire of evacuation and reception authorities what arrangements they could make for an extended scheme if the necessity arose. In the circumstances the Ministry had not thought it necessary to consult the Society.

The Committee had before them a letter, dated May 11th, from Dr. J. A. Charles reporting the recent discussions in the Northern Region with the Ministry's Regional Officers. As there still appeared to be some doubt about the future arrangements for the evacuation of expectant mothers, the Executive Secretary was instructed to send an enquiry to the Ministry as to what stages of pregnancy were to be classed as eligible.

5. CIRCULAR 1840. (See PUBLIC HEALTH, May, p. 180, item 5.)—It was reported that the Association of Municipal Corporations and the Town Clerk of Hull had sent letters thanking the Society for its comments which were approved at the last Council meeting. It was understood that Newcastle-on-Tyne City Council was still negotiating with the Ministry with regard to the financial aspect of operating the scheme in that City.

It was also reported that the Ministry of Food was expected to be interesting itself in the question of the rising price of dried milk.

6. APPOINTMENTS TO PUBLIC HEALTH SERVICE VACANCIES DURING THE WAR. (See PUBLIC HEALTH, May, p. 181, item 6 (ii)).—The following report was submitted :—

On April 26th a deputation consisting of Professor R. M. F. Picken, Dr. G. F. Buchan and Dr. Charles Hill (representing the British Medical Association), and the President and Executive Secretary of the Society went to the Ministry of Health to discuss the above question with Mr. H. A. de Montmorency and other members of the Ministry's staff. After the case had been stated by Professor Picken, the Ministry suggested that the B.M.A. and the Society should approach the associations of local authorities and ask them to circularise their members. Our representatives, however, submitted that a circular addressed by the Ministry of Health to local authorities would be more likely to receive attention. This view was accepted by the Ministry, who said, however, that they would have to approach the associations of local authorities and ascertain their views before taking any further action. The position in regard to superannuation rights of medical officers appointed to temporary appointments was discussed. The Ministry stated that a temporary appointment could be made superannuable at the option of the local authority, unless it were limited to less than two years. In any case if such a temporary appointment in fact extended to a longer period than two years it became superannuable.

A further point discussed was the existing practice of imposing an age limit of 45 in connection with senior appointments in the public health service. Our representatives pointed out how this limit interferes with the proper fluidity of movement inside the public health service and with promotion of the most experienced officers to senior posts. It was pointed out that such an age limit is no longer justifiable on actuarial grounds because the new Superannuation Act ensures that an officer of whatever age has a transfer value. The Ministry agreed to discuss this matter with the associations of local authorities. A further point was the position of women medical officers in regard to the termination of appointment on marriage. It was understood that in the civil service married women could be appointed to war-time posts. It was suggested that a similar practice might be followed by local authorities during the war.

The proceedings of the above meeting have been drawn to the attention of certain medical officers of health known to be in touch with the Association of Municipal Cor-

porations, of the Town Clerk of Hackney, who is the Secretary of the Society of Town Clerks and a member of the General Purposes Committee of the A.M.C., and of Dr. Ruddock-West, Hon. Secretary of the Association of County Medical Officers, who act in an advisory capacity to the County Councils Association.

Professor Picken drew the attention of the Committee to certain current problems relating to salaries of temporary appointments. In the case of temporary officers carrying out public health duties, he had suggested that the B.M.A. might accept advertisements which offered the appropriate commencing salary laid down by the Askwith Memorandum. A second question was that of the salaries appropriate for medical superintendents of up-graded hospitals in the Emergency Medical Scheme; it was thought that the scales laid down in the Askwith Memorandum were not appropriate to these up-graded hospitals, which were not normally comparable with other hospitals merely on the basis of a number of beds. A third point related to the appointments of junior resident medical officers whose term of appointment under the Askwith Memorandum to one year, later tacitly extended to two years; a large authority were at present seeking to continue these junior appointmentments beyond a two-year period. The Committee were of opinion that this question should be considered shortly by the Public Health Committee of the B.M.A. The view was expressed that the local authority concerned would, in any case, be unable to obtain or to retain R.M.O.s at this scale of salaries.

7. CIVILIAN AND SERVICES PAY. (See PUBLIC HEALTH, May, p. 181, item 6 (i)).—The Committee took note of the announcement in the May issue of PUBLIC HEALTH, page 168, reporting the text of the circular sent by the British Medical Association to all local authorities which have not accepted in full the Minister's recommendation in regard to supplementing war service pay of whole-time public health medical officers.

8. TUBERCULOSIS PATIENTS AND THE MEAT RATION.—The Committee received a letter from the Secretary of the Standing Advisory Committee on Tuberculosis in reply to the resolution of the Tuberculosis Group that sanatorium patients and those under treatment at home should be allowed the same quantity of meat as before the war. The Standing Advisory Committee's letter stated that they had considered this question and the result of enquiries which had been made by a nutritional expert into the present diets at three well-known sanatoria showed that the meat ration was adequate and that patients did not lose either in weight or morale provided that they were given an additional quantity of fruit and vegetables. The Advisory Committee took the view that so long as there was an adequate supply of first-class protein such as can be obtained from milk, cheese, eggs, etc., sanatorium patients need not suffer if the supply of meat was restricted to the present ration laid down for the general population.

9. CONTROL OF SLAUGHTER-HOUSES.—With reference to the memorandum by the Sanitary Inspectors' Association, which had been approved by the Council at its meeting on May 5th, the Executive Secretary reported that he had subsequently sent to the Ministry of Health the following letter, which included observations by Sir William Savage.

Government Controlled Slaughter-houses.

SIR,—The attention of my Council has been drawn to the memorandum dated March 26th which the Sanitary Inspectors' Association has submitted to the Ministry of Health and the Ministry of Food.

The Society is in general agreement with the Association's memorandum and supports the representations made therein. The experience of a number of Medical Officers of Health is that the scheme of Government-controlled slaughter-houses shows a good many defects from a public health point of view. Matters which have been mentioned as unsatisfactory are the following :—

(1) The arrangements for the supply of animals and the distribution of the carcases is not always satisfactory, resulting in animals being slaughtered without an adequate resting period, while in some instances distribution needs do not allow for proper cooling of carcases.

In many instances the lairage accommodation is very poor and inadequate for the number of animals.

(2) Many of the premises used are totally inadequate to deal effectively with the large number of animals slaughtered. Particularly inadequate are the facilities for storage of carcases, and in many cases these are hung in the actual slaughtering room and kept there whilst slaughtering is in progress—a very unsatisfactory arrangement.

(3) The facilities for adequate inspection of the meat are not satisfactory. The crowded condition of the premises makes inspection very difficult, the large numbers slaughtered means that inspection has to be carried out late at night and is sometimes beyond the capacity of the local inspection staff to supervise. The requirements of Section 10 of the Public Health (Meat) Regulations 1924, that the carcase should be inspected with its organs is, in our experience, nearly always ignored. If organs are found diseased it is frequently impossible to identify these with the carcase to which they belong.

Facilities for sterilising infected knives, for the inspecting staff to wash hands, etc., are rarely provided except in public abattoirs.

(4) The arrangements made for the disposal of condemned food are usually that it is sent away to centrally selected depots to be treated. The only checks exercised are those of weight and it is doubtful if they are altogether adequate and sufficient to prevent illegal use of such material, possibly for human food.

We have come across instances where the meat inspectors are asked not to make the meat unsuitable by addition of disinfectant, etc., and if this safeguard is removed further attention should be paid to assuring that all condemned meat is adequately controlled.

Very little information on the scheme seems to have been given to the local authorities and their officers would welcome closer co-operation to improve the scheme on the public health side.

I am, Sir,

Your obedient Servant,

(signed) G. L. C. ELLISTON,

April 12th, 1940. *Executive Secretary.*

10. REGIONALISATION OF THE MINISTRY OF HEALTH STAFF.—The Committee considered some enquiries from the Maternity and Child Welfare Group as follows :—

(1) Is there a separate department of the Ministry in the charge of a senior medical officer devoted to maternity and child welfare work ?

(2) Is there a suitably experienced medical officer in each region specialising exclusively in M. & C.W. work ?

(3) Are the women medical officers of the Ministry who were specially appointed for this work still engaged exclusively in it ?

The Committee decided to make enquiries on these lines of the Ministry and to bear in mind the possibility of making further criticism of the regional organisation of the Ministry on the ground that it distributed the specialised knowledge available at headquarters and that

it slowed up the means of consultation between medical officers of health and the expert authorities at the Ministry.

11. WOMEN IN H.M. FORCES.—The Committee also received an enquiry from the Maternity and Child Welfare Group regarding the appointment of women medical officers in H.M. Forces, regarding the special need for care of the health of women serving in the Women's Auxiliary Services. The Executive Secretary was asked to inform the Group of action taken in these matters by Members of Parliament, by the Medical Women's Federation and by the Central Medical War Committee.

12. PEDICULOSIS AND SCABIES.—The Committee reconsidered, at the request of the Council, the memorandum submitted by Dr. Duncan Forbes which suggested compulsory treatment for members of families suspected of harbouring vermin and compulsory notification of cases detected by social workers, those in charge of nursery schools and institutions, district nurses, factory surgeons, etc.

The Committee decided to RECOMMEND the Council to urge upon the Ministry of Health the introduction of powers covering scabies as well as pediculosis for the local health departments to the following effect :—

> "If on reasonable grounds it is suspected that one or more members of a family harbour vermin or are suffering from scabies, then it shall be the duty of the medical officer of health to arrange for examination of all members of the family and, unless in the following four weeks they have taken effective steps to disinfest themselves or to secure treatment for scabies, to have all infested members of the family disinfested at the same time: legislation should include penalties for non-compliance with the action taken by the M.O.H."

The Committee did not consider the proposal for compulsory notification of these conditions to be practicable.

13. VENEREAL DISEASES.—The Committee took note of the instructions of the Council to give continuous consideration for the prevention and treatment of V.D., with special reference to war-time conditions. It was decided that the first requirement was to obtain evidence of any actual increase in new infections, and the Executive Secretary was instructed to acquire such information either from the Ministry or by direct enquiry of a selected number of county borough and county M.O.s H.

The Committee also considered the letter of March 27th from the British Social Hygiene Council which referred to the possibility of extended treatment for women and young girls suffering from gonorrhoea. It was decided to make enquiries on this particular aspect at the same time as the general enquiry and to find out how far development of new schemes for treatment might have been held up by reason of lack of financial assistance from the Central department.

14. JOINT WAR EMERGENCY COMMITTEE (OPTICAL PROFESSION).—The Committee considered the letter from the above Committee and the comments on the letter made by the Chairman of the Ophthalmic Group Committee of the B.M.A.

It was decided to RECOMMEND the Council to reply to the Joint Committee's memorandum that the Society could not see its way to recommend its members to institute any special standing for any class of A.R.P. casualty worker without definite instructions to do so from the Ministry of Health.

15. COST OF LIVING BONUS.—The Committee considered the position of the public health medical officers in regard to the cost of living bonus which had been recommended by the National Whitley Council. Letters from members of the Society indicated that the Ministry were refusing to sanction all such bonuses to medical officers and sanitary inspectors of county district councils, and there had also been some discrimination in regard to officers of county borough councils as compared with other officials.

The Committee decided to draw the attention of the British Medical Association to this question and to suggest that it should be the subject of early consideration by the Public Health Committee of the Association. It was thought that it was a matter which might properly be referred to the Advisory Committee on the Askwith Memorandum.

16. NUFFIELD PROVINCIAL HOSPITALS TRUST.—The Committee received an invitation from Sir E. Farquhar Buzzard, Chairman of the Medical Consultative Committee of the Trust, for the Society to appoint a representative to serve on it.

It was decided to RECOMMEND the Council to nominate Professor R. M. F. Picken.

17. PRESIDENCY OF THE SOCIETY FOR 1940-41.—The Executive Secretary reported that only one nomination had been received before the closing date, that of Dr. A. S. M. Macgregor, whose name had been put forward by the Welsh Branch, with the support of the East Midland Branch. The Committee felt that in present circumstances it might be advisable to ascertain from Dr. Macgregor whether he would prefer to have his nomination proceeded with or to leave his presidential year until the general situation was more settled, and to enquire informally of Dr. Wood whether he would be prepared to act for a second year as President.

18. STANDARDS OF NUTRITION.—The Chairman of the Committee had wished to raise consideration of this question which had recently been the subject of discussion in the correspondence columns of *The Medical Officer* (issue of March 9th and following weeks). The Committee felt that the meeting was not sufficiently representative to give this matter thorough discussion and it was decided to defer it for future consideration.

19. PUBLIC HEALTH NURSES IN WAR-TIME.—The Committee received a letter from the Public Health Section of the Royal College of Nursing reporting that the following resolution had been submitted to the Minister of Health :—

> "That the Government should in the interests of public health maintain the Public Health Services as far as possible during war-time, and that the fullest use should be made of the trained public health nurse. Her knowledge of the homes of the people and her daily contact with the mother and family as a whole make her services of the greatest value to the country."

20. JOINT TUBERCULOSIS COUNCIL.—The Committee considered a letter, dated April 25th, from Dr. George Jessel (Hon. Treasurer of the Joint Tuberculosis Council), asking that the Society should now pay the usual subscription contributed by the constituent bodies, *i.e.*, two guineas per annum. Dr. Jessel pointed out in his letter that until March, 1939, the Society were not liable for the usual subscription in view of the fact that its rooms were made available free of charge for meetings of the Joint Tuberculosis Council.

The Committee decided to RECOMMEND the Council to pay the annual subscription of two guineas to the Joint Tuberculosis Council.

21. DIPHTHERIA IMMUNISATION. — The Committee received the following resolution from the East Midland Branch :—

> "That the Ministry of Health be asked to extend the powers at present held by local sanitary authorities

regarding diphtheria immunisation to county councils."

The Committee decided to refer this question for consideration by the Association of County Medical Officers of Health.

22. PUBLIC HEALTH STAFFS IN WAR-TIME.—The Committee received the following resolution from the East Midland Branch :—

> "That representations be made to the Ministry of Health to ensure that sufficient Public Health Staff be retained in the Health Departments of local authorities in order that the necessary work may be efficiently performed, and in this connection it may be pointed out that A.R.P. work has thrown an additional burden on these staffs, and that if adequate staffs are not so retained the work of Health Departments will be very seriously handicapped and crippled."

The Committee decided to report this resolution to the Central Medical War Committee.

23. JOINT COUNCIL OF MIDWIFERY.—The Committee received a letter, dated April 29th, from the Chairman of the Joint Council of Midwifery, the Rt. Hon. the Earl of Athlone, stating that on account of war-time difficulties the Joint Council was to be dissolved forthwith, except that some outstanding work in connection with the nutrition of expectant mothers was to be completed. The letter summarised the work carried out by the Joint Council of Midwifery during the past six years. It was pointed out that the Midwives' Act, 1936, was based upon a report of the Joint Council, and that the investigation of abortion by an inter-departmental committee was instigated by the Joint Council. In connection with the research into the effects of vitamin supplements in the diets of expectant mothers upon the maternal and neonatal mortality rates, reference was made to the co-operation of medical officers of health and their staffs in many areas. The Joint Council expressed thanks for this co-operation.

24. PERSONAL INJURIES (CIVILIANS) SCHEME.—The Executive Secretary reported that the Institution of Municipal and County Engineers had now sent in a formal letter to the Minister of Home Securities requesting amendment of the scheme in regard to senior officials of local authorities engaged in Civil Defence work. A letter from the Society was also being drafted and a joint deputation was being requested.

25. DENTAL BOARD OF THE UNITED KINGDOM.—A letter from the Dental Officers' Group drew attention to the discontinuance of the educational work previously carried out by the Dental Board by lectures to schools; the Group attached value to these educational methods and asked the Society to take action for their recommencement. The Committee thought this was a proper question for reference to the Central Council for Health Education.

26. DENTAL OFFICERS' SALARIES—MALE AND FEMALE.—A letter from the Dental Officers' Group drew attention to a recent advertisement appearing in *The British Dental Journal* which had offered a lower salary to female applicants than to male for a temporary post under the Darlington Council.

The Committee instructed the Executive Secretary to inform the B.D.A. of the Society's view that there should be no sex differentiation in regard to salaries and to enquire what the future policy would be with reference to the acceptance of such advertisements.

27. POULTRY INSPECTION.—The Committee received a report from the Metropolitan Branch regarding recent discussions between the London M.O.s H. and the Ministry of Health as to war-time standard of poultry inspection. It was decided to refer this question for the observations of Sir William Savage before the Society undertook any approach to the Ministry.

28. STANDING ADVISORY COMMITTEE ON TUBERCULOSIS.—A recommendation was received from the Metropolitan Branch that London tuberculosis officers should have a direct representative on the above Committee. The Branch suggested that Dr. P. L. T. Bennett (T.O., Fulham) would be an appropriate representative.

The Committee decided to RECOMMEND the Council to ask the Standing Advisory Committee to accept a London T.O. representative and to put forward the name of Dr. Bennett.

29. FEES FOR MEDICAL PRACTITIONERS CALLED IN BY MIDWIVES.—The Committee considered whether an enquiry from Dr. J. A. Charles as to whether the Society had been consulted before the issue of Circular 1999 on the above subject. The Committee considered that this was a matter mainly of finance and therefore mainly of interest to associations of local authorities rather than the Society. It was understood that these associations had been consulted and had co-opted M.O.s H. in their deliberations.

30. AN ENQUIRY REGARDING LIFE-FELLOWSHIP.—The Hon. Treasurer sent a letter stating that Sir William Willcox had recently proffered his resignation and has asked whether he might be considered eligible for Life Fellowship. The Committee felt that Sir William was not sufficiently closely connected with public health work for the Hon. Fellowship. It was pointed out that Sir William had not yet qualified for Life Fellowship under Article 12. The Committee decided to inform Sir William of the fact that if he could see his way to continue membership for a further two years he would be eligible for fully-paid Life Fellowship.

31. ROYAL COLLEGE OF PHYSICIANS.—The Committee took note with interest of the resolution passed by the Royal College of Physicians in regard to diphtheria prophylaxis and safe milk which had been published in *The British Medical Journal*" of May 11th.

32.—WAR-TIME SUBSTITUTE FOR COD-LIVER OIL.—The Executive Secretary reported that he had obtained a copy of the monograph which was to be added to the British Pharmacopoeia setting out a standard for vitaminised oil which would be a solution of vitamins A and D, containing in 1 gramme 1,000 units of Vitamin A and 100 units of Vitamin D. The monograph also recommended prophylactic and therapeutic doses of this oil. It was decided to report this information to the Maternity and Child Welfare Group.

33. The Executive Secretary asked the Committee whether arrangements could be made to release him for Naval or Military Service.

The Committee expressed the view that it was essential that the Society's work, and especially the production of the journal, should be continued and requested the Executive Secretary not to consider applying for a commission until satisfactory arrangements could be made for carrying on the work of the central office and the journal.

The meeting then adjourned.

Material Held Over.—We regret that pressure on our strictly limited space has compelled the omission from this issue of reports of Welsh and Yorkshire Branches and Dental Officers' Group Meetings and of several book reviews, all of which will be printed in our next issue.

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Editorial

Dental Disease in the Island of Lewis.

For many years, two quite different dietetic theories of the causation and prevention of dental caries have attracted the attention of medical officers of health. The first was introduced about 1900 and is now sometimes referred to as the hygienic or detergent diet theory. Some ten years later it was taken up and vigorously supported by the late Dr. James Wheatley, and through his initiative, together with other members of the Society of Medical Officers of Health, a leaflet was drawn up embodying the practical application of the theory which was approved of by the Society, and in more recent years has been published in the form of a poster.

The other dietetic theory which attracted the attention of many medical men was extensively advertised by proprietary food and drug merchants, and "caught the imagination of the public" shortly after the word "vitamine" was introduced. This latter theory has has undergone certain changes and each of the four best known vitamins has been held to play an important rôle in the prevention of dental caries. In this country it was at first fat-soluble A, or some vitamin which could only be synthesised by plants, that was incriminated. Later, it was deficiency of vitamin D, which, however, could be formed from ergosterol in the animal body through the action of ultra violet light.

The Medical Research Council Special Report by Dr. J. D. King* obviously follows the fat-soluble vitamin theory, as he indicates his belief in the view that a developmental defect—hypoplasia—is specially associated with the prevalence of caries. It is not, however, the hypoplasia described and illustrated in dental text books. It is apparently the normal rippling and striation of the surface of the enamel which Dr. King claims to be a form of hypoplasia. This kind of hypoplasia, showing "minor irregularities of the enamel surface" is designated M-type hypoplasia, hardly visible to the naked eye, but which is detectable, after a little practice, by the probe. He appears to accept the idea that only teeth with a "smooth, shiny and creamy white surface" correctly describes the surface texture of perfectly formed enamel specially resistant to dental caries. On the other hand, the hygienic theory claims that this smooth, shiny and creamy white surface is simply the result of a certain amount of attrition resulting from efficient mastication of detergent foods. This latter theory "has a large following" and is widely supported by recent research and observations.

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* Dental Disease in the Island of Lewis. Medical Research Council Special Report Series, No. 241. H.M. Stationery Office. 1940. pp. 63. Price 1s. net.

Thus, the late Dr. Harry Campbell, in his book on "What is Wrong with British Diet?" maintains that the minor or M-type hypoplasias are not hypoplasias at all, but that they are caused by the mastication of food of a detergent nature. Similarly, E. W. Fish, in his latest pronouncement, contends that "caries varies in direct ratio with the degree of attrition," and that "clinical attempts to treat caries by nutritional methods have been useless."

In America, since 1935, Meyer Klatsky has done valuable research work on the prevention of caries by proper mastication, and in 1939, following the detergent diet theory, sums up one of his researches by saying, "Dental attrition is not a pathologic but rather a physiologic process, the result of normal masticatory function." Likewise, G. Friel and J. C. Middleton Shaw, together and separately, upheld the detergent diet theory. The latter maintained "that nearly every investigation dealing with dental caries in South Africa" supports this theory, and noted that "the most recent extensive investigation which deals with caries among Indians of the Cape Province, is no exception." Even Lady Mellanby would almost appear to be a superior of the detergent diet theory, for in her book on "Diet and the Teeth," she notes in a paragraph on "Arrested Caries in Children" that the "smoothing and polishing must result largely from mechanical action and will depend not only on the position of the cavity, but also upon the physical nature of the food with which it comes in contact—the harder the food the sooner will the exposed surface become uniform."

In Dr. King's investigation, following closely Lady Mellanby's, he says, "Examination of large numbers of deciduous and permanent teeth clearly shows that the standard of 'normality' of surface structure differs somewhat in the two dentitions; in other words, the permanent teeth are always relatively rougher in surface texture than the deciduous." Nevertheless, it is the deciduous teeth in all civilised countries at the present day which are most rapidly devastated by caries. He recognises this discrepancy himself, but makes no satisfactory explanation of it. He says, however, that "This is in agreement with former observations by M. Mellanby and her colleagues (1934), but does not necessarily imply that the permanent teeth are less well calcified. It is possible that . . ." etc.

At present, however, theories on dental caries are of little interest except where they show some relation to diet in war-time. Fortunately we have figures which show clearly the incidence of caries in children before and after the 1914-18 Great War. Dr. Wheatley's are no doubt best known to medical officers of health. He presented tables showing the state of the teeth of school children in pre-war years and compared them with the state of the teeth in 1919, and noted that the most striking fact brought out by this comparison was that "*the children free from caries at the age of 5 have increased* from 5 per cent. before the war to 44·4 per cent. after the war." Similar figures are given by Mr. Baird Grandison in the report of the School Medical Officer and Borough Dentist for Cambridge. In it he gives a diagram showing the percentage of decay in the temporary teeth of the five-year-old group of children from 1909 to 1938 inclusive, which shows a gradual decline from 1909 to 1917; then a rapid decline to 1922. From that time till 1925 there was a correspondingly rapid increase in the incidence of caries. Thereafter till 1938 there has been a slow increase. The most general explanation of the great fall in the incidence of caries was the increase in price and the rationing of sugar. Manufacturers were cut down by 50 per cent. for confectionery and jam. These restrictions were abandoned after the Armistice in 1918 and the amount reported last year as having been spent on sweets alone amounted to £50,000,000!

Infant Mortality in the English Speaking World

The issue of the summary of vital statistics for 1938 by the U.S. Bureau of Census* presents an opportunity to compare the infant mortality rates in America for the last pre-war year with those of this country and of some others of the British Commonwealth of Nations. The infant mortality rate for the whole U.S.A. was 51·0 per 1,000 live births; the neo-natal mortality rate was 29·6. For the same year these rates were respectively in England and Wales 52·7 and 28·3, and in Scotland 69·5 and 35·0. The following table shows the infant mortality rate in some of the American States in comparison with parts of the British Commonwealth:—

	Infant Mortality. Rate per 1,000 *live births*, 1938.
United States of America	51·0
" " (Whites only)	47·1
Connecticut	36·3
Massachusetts	39·9
New Jersey	39·5
New York	40·6
Arizona	98·8
New Mexico	108·7
North Carolina	68·6
South Carolina	80·3
England and Wales	52·7
East	44·3
South-East (including London) ...	46·6
South-West...	46·5
Midland	52·4
North	60·3
Wales	56·7
Scotland	69·5
Canada	63·0
South Africa (Europeans only) ...	52·0
Australia	38·0
New Zealand	36·0

It will be seen that the American rate, when purged of the effect of the heavy mortality among negro infants, is substantially lower than ours; that large States on the north-eastern seaboard, climatically and racially somewhat similar to our own country, have low rates; that the average American rate is adversely weighed by the high mortality in some of the southern States; and that Australia and New Zealand are in the same class as the best American States while Canada and South Africa

* U.S. Public Health Service. Public Health Reports. May 24th, 1940, **55**, 933.

are about on a par with Scotland and England respectively. When our own records are separately expressed for the several regions of England and for Wales and Scotland, the rate is found, as usual, to deteriorate as we move from the south and east to the west and north.

In recent years our infant mortality has been falling rapidly. Even in Scotland there was a welcome decline of nearly eleven points in the rate between 1937 and 1938. But we are far from catching up with peoples of our own or similar ancestry, living under conditions not very dissimilar from our own. We have been inclined to resign ourselves to a hard core of irreducible mortality in the early weeks of life. Yet even this part of the mortality has dropped by more than 25 per cent. during the present century in England and Wales and may be further lowered. The extent to which neo-natal mortality varies in different places may be shown as follows:—

	Neo-natal Mortality. Rate per 1,000 *live births*, 1938.
United States of America (Whites only)	28·3
England and Wales	28·3
South-East	23·2
East	27·2
South-West...	28·2
Midland	29·2
North	32·3
Wales	32·6
Scotland	35·0

The differences are substantial and indicate that there is scope for a material reduction of the rates in the higher ranges. This is further emphasised by the fact that in Adelaide, South Australia, the neo-natal mortality rate was 20 in 1936, while in Amsterdam, Holland, and Göteberg, Sweden, it was as low as 16 in 1937.* Indeed, in these towns the whole infant mortality rate is less than the neo-natal rate alone in Scotland, Wales or the North.

Whether the explanation of these discrepancies is to be sought in economic, sanitary, medical or educational circumstances, our unfavourable position is a reproach to a people who have regarded themselves as being in the van of public health progress for the last hundred years. It is evident that the greatest effect could be obtained by concentrating on those northern and western parts of our land which contribute most heavily to the infant mortality both in its neo-natal and later phases. In the immediate future our task may be to prevent deterioration as the result of the disorganisation of war-time and especially the increased employment of women in factory work.

Epidemic Jaundice

Although jaundice in epidemic form is not uncommon, there are few detailed records of such outbreaks. A full account by Molner and Meyer of a series of cases in Detroit is therefore of interest.† They traced 220 cases, of which 194 appeared to be definitely infective in type, probably of viral origin, all occurring between November, 1937, and June, 1938. The incidence appeared to be abnormal since the cases in the first half of 1938 exceeded those in the same period of 1939 by 80 per cent., although a keen watch for cases was maintained during the latter period. December, January, February and March were the months of maximum prevalence. Eighty-three per cent. of the cases occurred in the age-group 5-14 years. In addition to the usual manifestations of jaundice, fever, loss of weight, headache and drowsiness were noted in more than half of the cases. Early blood counts showed a tendency to leucopenia with relative lymphocytosis in most cases and the icterus index was usually over 15. The prodromal period averaged 6·7 days, being from 4 to 7 days in 57 per cent. of cases, while jaundice lasted for an average of 10 days, being between 6 and 14 days in 79 per cent. Multiple cases occurred in 40 families, but it is even more important and unusual to find that definite contact with another case could be established in 113 instances, or 58·3 per cent. The incubation period in these 113 was variable but usually long. Forty had an incubation period of about 2½ weeks, 16 about 3½ weeks and 19 in excess of 4 weeks. There was no evidence that food, water or contact with animals was of epidemiological importance except in three cases demonstrated to be suffering from Weil's disease. Incidentally it may be noted that in Detroit as in California there is evidence of direct transmission of leptospirosis from dogs to human beings, but the micro-organism is usually *Leptospira icterohaemorrhagiae* and not *Leptospira canicola* as appears to be commonly the cause in the southern state.

* Death in the First Month and in the First Year. C. McNeil. *Lancet* (1940) **1**, 912.

† Jaundice in Detroit. By J. G. Molner and K. F. Meyer. *Amer. J. Pub. Hlth.*, 1940, **30**, 509.

APPOINTMENTS IN DEFENCE SERVICES

Major A. Michael Critchley, R.A.M.C. (M.O.H., Bletchley and Buckingham U.D., A.M.O.H. Bucks C.C.), formerly D.A.D.H. Le Mans Base Sub-Area, and Major W. R. Martine, R.A.M.C. (Senior A.M.O.H., Birmingham C.B.), formerly D.A.D.H., 3rd Base Sub-Area B.E.F., have been appointed Instructors at an Army School of Hygiene.

CONVALESCENT HOMES FOR ARMY CASUALTIES

The Ministry of Health, in agreement with the War Office, has asked the War Organisation of the British Red Cross and the Order of St. John to provide and equip convalescent homes for non-commissioned officers and other ranks of the Army. The immediate aim is to provide 10,000 beds, each home accommodating between 50 and 100 beds.

Private houses will be adapted and equipped in various parts of England and Wales. A number of houses have already been offered by their owners. The work of opening and maintaining the convalescent homes will be carried out by the Joint County Committies of the Red Cross and St. John War Organisation.

Arrangements for convalescent hospitals for officers have been made with the War Organisation by the War Office.

DIPHTHERIA IMMUNISATION IN A COUNTY AREA

By W. B. STOTT, L.R.C.P. & S., D.P.H.,

Medical Officer of Health, Cuckfield Rural, Cuckfield Urban and Burgess Hill Urban Districts;

and H. LYNDHURST DUKE, O.B.E., M.D., SC.D., D.T.M.&H., (*Colonial Medical Service, retired*), *Deputy Medical Officer of Health, Cuckfield R. & U.Ds, and Burgess Hill U.D.*

An account is given below of a campaign inaugurated in 1935 for the immunisation against diphtheria of the child population of a county area in East Sussex. The area comprises: —

(1) The Cuckfield Rural District, population 24,440 with 22 elementary schools;

(2) The Cuckfield Urban District, population 13,600, with five elementary schools; and

(3) The Burgess Hill Urban District, population 6,850, with three elementary schools.

At the time of writing, the position with regard to immunisation in this area is that 91 per cent. of the children from one year to fourteen years of age, who attend or will attend the elementary schools, have received a course of three injections of T.A.F.

Although exact figures for the country as a whole are not available, the percentage of children immunised is low, London for instance having only about 5 per cent. immunised. It is generally stated that the reason why parents will not take advantage of the facilities available for immunisation is because they are apathetic, but our experience is that if the parents are fully informed of the advantages of the procedure, the great majority will accept and accept willingly.

A certain body of opinion holds that the voluntary system should be replaced by a compulsory system, but we do not share this view. Infant vaccination, for example, is compulsory but with a conscientious objector clause, and at the present time only about 30 per cent. of infants are being vaccinated.

We have used T.A.F. throughout, and although it has frequently been stated that it is not practicable to give more than one injection in a rural area, we have not found that the necessity of giving three injections is of any serious disadvantage.

The children were Schick-tested three months after the final injection and 98 per cent. were found to be negative, showing that T.A.F. is not by any means a feeble antigen, as has been stated in some quarters; moreover, the immunity appears to last, as Schick tests carried out recently on a considerable number of children inoculated three years ago showed that 93 per cent. were still negative.

Inception and Development

In 1935 a report was submitted to each of the three Councils, recommending that facilities should be made available for parents to obtain protection for their children against diphetheria. Previous to this the general practitioners had been asked whether they would be prepared to make a charge of 5s. for the course of three injections (at the time the British Medical Association had not fixed the fee now obtaining, of 2s. 6d. per injection) to parents whose children attended or would attend elementary schools, the Councils to provide the prophylactic free of charge. All the general practitioners agreed to the suggestion and the Councils also resolved to act on the recommendation. Although all the parents were informed through the schools, infant welfare centres and district nurses, only 80 children were immunised under this scheme.

In consequence of this poor response, early in 1936 all three Councils were recommended to pay to the general practitioners the 5s. fee for each child immunised. The C.R.D.C. agreed to the recommendation, but the other two Councils resolved to defer the matter, as no sum had been allowed in the estimates for that year. In 1937 the C.U.D.C. offered free facilities on similar lines, and the B.H.U.D.C. made a similar offer for children from one to six years of age only. In 1938 the latter Council extended their offer to children up to 14 years of age.

All parents with children attending elementary schools in the C.R.D. received a circular letter with an acceptance form attached, setting forth the advantage of the Council's offer, and three months later it was found that 37 per cent. of the school children had attended the doctors' surgeries and completed the course. As it seemed probable that many more parents would consent to their children being immunised if the treatment was carried out at the schools, the co-operation of the head teachers and general practitioners was obtained and the parents were informed accordingly and asked to complete an acceptance form. Following this, acceptances were received in respect of a further 40 per cent. of children, and these were immunised by the general practioners at the schools.

There remained, therefore, 23 per cent. of children not immunised and it was resolved that the parents of these children should be visited by the district nurses. As a result, six months from the commencement of the enterprise 90 per cent. of the school children in the C.R.D. had been inoculated. A campaign on similar lines was carried out in the C.U.D. in 1937, and at the end of that year 84 per cent. of elementary school children had been immunised. Efforts to reach the under-school-age group of children were at first confined to the C.R.D. Parents of these children were circularised through the infant welfare centres and women's institutes but it was not found possible at that time to arrange for a personal visit to each parent by the district nurse. The percentage of children in this age group immunised at the end of 1937 was about 25.

With the outbreak of war a considerable number of London children was evacuated to this area. It was therefore resolved to intensify the campaign, particularly among the one-to-five age group, comparatively few of whom had been immunised. The County Medical Officer of Health, whose co-operation throughout has been of the greatest assistance, kindly instructed the district nurses to visit all parents who had not accepted. Voluntary helpers were also recruited to help the nurses in this work. The parents had a choice of taking their children to the doctors' surgeries or to a special clinic arranged for them at the welfare centre or a nearby hall. Many parents, however, prefer to have their children immunised at home and these were visited by one of us accompanied by a uniformed nurse. This was found to be a most effective method of dealing with active and passive opposition, as it is often possible to win over the parent and inoculate the child at one and the same visit. Wet or washing days and the dinner hour are the most propitious occasions for these visits, and previous notification by post-card often helps a busy mother to make her plans.

In dealing with the school children, success depends greatly on the efforts of the teachers. At one school in 1936 the percentage of acceptances rose from 35 to 90 in one week, following an appeal to the head teacher to take a personal interest in the success of the scheme. The district nurse has a definite place in the scheme by visiting those parents who have not accepted. We have found that the best plan is for the doctor to carry out the injections at the school.

A great deal of the success of the campaign in this area has been due to the wholehearted co-operation and enthusiasm of the general practitioners who, until October, 1939, had carried out all the inoculations. Up to this time a large percentage of the school children had been immunised but only a small proportion of the "under five" group. The practical difficulty in dealing with this group is that the majority of mothers will not take their children to the doctors' surgeries and the general practitioners have no time to go round giving the injections in the homes. There is, therefore, no doubt that it simplifies a scheme of this kind if a doctor is available to travel the area and act as immunising officer and Schick-tester. With some parents, consent is conditional on their own doctor giving the injections and in any event his advice is sure to be asked. To obtain 80 per cent. acceptances or more in this group the immunising officer is, however almost indispensable, to round up defaulters and co-ordinate the progress of the campaign as a whole. Many parents will promise acquiescence and then do nothing, and the busy practitioner cannot possibly deal with such people. Now that the campaign has been launched, a leaflet is sent from the Public Health Department to each parent on the child's first birthday. This leaflet is one issued by the Central Council for Health Education, explaining the advantages of protecting the children against diphtheria and on the back page is a communication from the Medical Officer of Health informing the parent how the protection can be obtained.

Results of the Campaign

Particulars relating to the number of children immunised together with the percentage are given below: —

Cuckfield Rural District.

Number of children one to five years of age Group	793
Number immunised	680
Percentage	86
Number attending elementary schools	1,950
Number immunised	1,824
Percentage	93
Total percentage immunised	91

Cuckfield Urban District.

Number of children one to five years of age Group	509
Number immunised	456
Percentage	89
Number attending elementary schools	1,250
Number immunised	1,160
Percentage	93
Total percentage immunised	92

Burgess Hill Urban District.

Number of children one to five years of age Group	284
Number immunised	246
Percentage	87
Number attending elementary schools	862
Number immunised	789
Percentage	91
Total percentage immunised	90

It will thus be seen that throughout the three districts only 9 per cent. of refusals was obtained.

The Council's scheme does not apply to children attending private schools, parents of whom have to bear the cost themselves. A letter, however, was sent to each principal advocating the procedure and at the end of last term 75 per cent. of the children had been immunised.

Choice of Material

We have used exclusively T.A.F.: three 1 c.c. doses, the second in 14 days and the third three weeks later. The Schick test is carried out not less than three months after the last injection. As a result of certain limited control experiments on children in this area and a consideration of the literature on the subject it was decided to dispense with a pre-Schick test. All children who were Schick-positive after a full course of injections received at first one or two supplementary inoculations, according to the intensity of the Schick reaction. At the present time, all such children are given a full secondary course, irrespective of quality of their reaction to the test. There have been no serious reactions, indeed it is very rare for the child to experience even the slightest discomfort. There is, of course, a tendency for parents to attribute to the injection any symptom, including even the rash of an exanthem, that the child may exhibit within the ensuing week or so. But repeated inquiries have revealed only three cases where some tenderness and redness indicated a local reaction, and these signs disappeared in 48 hours.

We believe that in a campaign of this kind it is impossible to lay too much stress on the avoidance of inconvenience to the child. Although perhaps it does not matter so much in a large town, in a rural or small urban district it is most important to have no reactions or sore arms. News travels rapidly in a small community and one bad reaction in a village, such for example as those described by Lewis* with A.P.T. would deter many mothers from having their children inoculated.

*Lewis, J. Tudor (Dec. 16th, 1939), *Med. Offr.*, **62**, 235.

We have recently had some experience of A.P.T., one of us having used it to immunise the evacuated children in this area. With the younger children all went well; but among those of eight years and upwards local reactions were not uncommon, and there were several examples of severe local and general reactions with temperatures of 102 for several days. Neither the dosage (0·1—0·2 c.c.) nor the method of introduction (intra-muscular or subcutaneous) had any discernible influence on the initial reaction. Moreover, in several cases where a severe reaction had followed an initial intramuscular injection of 0·2 c.c. A.P.T., a subsequent injection of 1 c.c. T.A.F. a month later into the other arm produced an almost equally severe reaction. Nothing similar has occurred in our experience with T.A.F. when used alone. These incidents have led us to revert to T.A.F. for all children over eight years of age. They are recorded not in any spirit of criticism but in support of our adherence to T.A.F.

As far as possible any manifestation of alarm or distress by the child under treatment should be anticipated and forestalled. Some parents are upset by such demonstrations and the child may be prevented from completing its course. The method of introducing the needle is important, for a glimpse of the syringe sticking out of its shoulder will often turn smiles into tears. A sharp look-out must be kept for children who are labouring under strain or excitement. Pallor is a warning signal and so are a bracing of the muscles of limbs and face. Occasionally a child faints or is sick shortly after or even before an injection and the inevitability of this kind of thing sooner or later in a long series of inoculations emphasises the importance of avoiding, as far as possible, any reactions ascribable to the drug itself. A bottle of smelling salts is a very useful addition to the doctor's bag.

Apparatus and Method

The apparatus employed comprises an all-glass syringe of 3 c.c. capacity to which an Agla 214 needle is attached; a test tube to protect it; a metal spirit lamp; a small portable steriliser; and an iodine bottle with a brush in the stopper. The needle is passed through the flame after each injection and the stopper of the container is also flamed before each withdrawal of material. The syringe is boiled before each session, and after each injection is returned to the sterilised tube. The injection is, of course, given intramuscularly, in the deltoid region, into each arm in turn. After each injection the site is gently massaged with the finger and thumb. Sometimes the inoculum fails to disperse immediately and the massage is then continued until the accumulation is no longer palpable. The point of the needle should be freely movable in the muscle before the fluid is slowly introduced.

For the Schick test all-glass 1 c.c. syringes with 214 needles are used, the syringe being replaced after each test in a sterilised testtube. Spirit is used to sterilise the skin and the needle is flamed after each test.

Record Cards.

Each child has a card allotted to it on which are noted name, address, birthday, school, the dates of Schick tests, and of the primary and supplementary injections. On the back of the card are spaces for home visits and account of the parent's attitude and any other relevant details. For the under school age children the cards are kept by the district nurse until the child goes to school, when they are taken over by the teacher and duly filed and docketed.

Opposition

(a) From Members of the Local Authority.

(1) "That the cost is too great." When considered in relation to the benefits accruing to the community objection on this score carries no weight. An epidemic might well cost a Council several thousand pounds in a single year, not to mention the attendant suffering and distress. There is in addition the incentive of the possible elimination of diphtheria altogether from the district.

(2) "That it is not necessary in a rural area." It is now well recognised that children in rural areas are not exposed to the natural immunising processes which in a town environment lead to a considerable proportion of the children acquiring resistance against diphtheria. It is, therefore, all the more important to forestall the appearance of "carriers" by protecting the highly susceptible child population. In a reception area such a measure possesses a very special importance.

(b) From the Parents.

Here opposition may take many forms, ranging from crude superstition to quotations from scientific digests. One mother, the solitary supporter of a specially convened diphtheria clinic, observed as she surveyed the empty room "They won't come to-day; you see it's the thirteenth." Hostility is often traceable to some accident, real or imaginary, which local opinion has attributed to the injections. The two parents often disagree. Generally the father is the dissentient, often because he had "too much of that sort of thing" in the last war. A curiously obtuse but not uncommon argument is that in spite of all his injections he never had any illness! But there is often a genuine dread of exposing the child to the discomfort associated in the man's mind with inoculations against typhoid, plague, smallpox or some other disease, and this objection generally yields readily to explanation. Then there are the fatalists, who must be told that the Deity dispenses remedies as well as scourges, and helps those who help themselves. Lastly, there is, sad to relate, almost always a group of those who "just don't hold with it" and who are completely impervious to all arguments, although a case of diphtheria in their midst will sometimes shake even their confidence.

In setting forth the advantages of immunisation, experience has taught the futility of false claims. There is no absolute guarantee against infection and it is foolish to pretend that there is. Evidence to the contrary will soon expose the deception and much damage will be done to the campaign. Parents appreciate straight talking, and there is no need to spoil a splendid case by exaggeration. It is safe to claim that immunisation will protect the majority of children from contracting the disease and that if an immunised

child does get diphtheria the dreaded grave symptoms and after-effects will not develop. A word or two on the possible after-effects of diphtheria, heart impairment and paralysis, are often very useful. The absence of any disfigurement, temporary or permanent, after the injection, makes a strong appeal, and it is worth while deliberately to contrast this with the widely known local effects of smallpox vaccination. The extreme rarity of any reaction at all can also be stressed, in contrast to the discomfort that often follows *anti-typhoid inoculation*. A few simple facts about the mortality of diphtheria in young unprotected children—50 per cent. under two and 25 per cent. under four years of age—will impress parents who wish to postpone action until the child goes to school. It must be explained, also, that immunity takes some two months to develop fully and this fact is useful in combating the delusion, held also by certain members of Local Authorities, that immunisation is unnecessary until cases of diphtheria appear in the neighbourhood. The duration of protection is another point that requires careful handling. It should be made clear that both the degree and the permanence of the response differ in different children.

It is unwise to administer injections when a child is not in good health, for both general principles and experience indicate that success depends considerably on the co-operation of healthy tissues. On more than one occasion in our experience attempts at immunisation have failed in children with glandular tuberculosis.

Summary

(1) An account has been given of the initiation, development and results of a campaign against diphtheria in a County area.

(2) Certain difficulties both in organising and in carrying out the scheme are discussed.

(3) Reasons are given for the choice of the prophylactic (T.A.F.) used, such as absence of reaction and proved efficacy (only 2 per cent. Schick-positive three months after a course of three injections and 7 per cent. after three years).

(4) At the time of writing out of 5,648 children, one to fourteen years of age, 5,155 have accepted immunisation and have been inoculated, a percentage of 91 (87 per cent. one to five years and 93 per cent. school age children).

(5) Since 1935, when the campaign was first inaugurated approximately 6,000 children have been immunised under the Councils' scheme.

As we go to press, we have learnt with regret of the death of Dr. S. G. H. Moore, formerly Medical Officer of Health for the City of Huddersfield, at the age of 74. An obituary notice will appear in our next issue.

The C.B. (military) has been conferred on Surgeon-Rear-Admiral Sheldon Francis Dudley, O.B.E., M.D., F.R.C.P., R.N., Hon. Physician to the King, and a Fellow of the Society of Medical Officers of Health, in recognition of distinguished services during the war.

THE GARCHEY SYSTEM OF DOMESTIC REFUSE DISPOSAL*

By J. Johnstone Jervis, M.D., D.P.H.,
Medical Officer of Health, City of Leeds

The introduction of drains and sewers brought about the complete differentiation between excrement and domestic waste. The former, thanks to the engineers and chemists, has ceased to be a problem; not so the latter, which still defies solution in spite of such improvements in methods as the incinerator, the controlled tip and the salvage system. In wartime the dustbin has been elevated to an important place in the national economy; hidden among its unsavoury polymorphous contents lies one of the keys to victory. In peace the majority of things ordinarily found in the dustbin belong to the category of articles without replacement value; but in war paper, rags, bones and metals have a considerable monetary value. At any time waste is reprehensible and, if the people were educated to believe that, it would be possible to divide domestic refuse into two categories—saleable scrap and unsaleable residue. Of the existing systems of refuse disposal only the salvage system claims to prevent waste, but even by this only a fraction is salved of what might be. So it comes to this, that there should be a sorting out of refuse in the house itself, scrap being separated from residue. The latter can then be disposed of through an adaptation of the water-carriage system, which is just what the "Garchey" system is.

The Garchey system is not a competitor of existing systems, but an elaboration of them designed to meet the needs of flat-dwellers and those in large housing estates with a uniform lay-out. All sorts of expedients have been tried to overcome the difficulty of multi-floored buildings, *e.g.*, special bins with hoists, chutes, etc. However, bins are noisy and messy, and chutes are offensive and insanitary. In fact, the outstanding weakness of the flat system of housing is the difficulty of dealing with domestic refuse. To overcome this Monsieur L. Garchey, a French engineer, invented his system of removal by water and eventually had it installed in several large blocks of flats built by the Paris Housing Corporation. I inspected the installation in 1935 and was greatly impressed. The system seemed to work perfectly without offence and the tenants everywhere spoke of its efficiency. The disposal stations were unobstrusively placed and were neat and orderly. In one instance the heating generated by the burning of the residue was used to heat the water for a large swimming bath. Any doubts I may have had about the installation of a similar system at the Quarry Hill Estate in Leeds were set at rest. The system is simplicity itself and no more complicated than the one-pipe system of sewage disposal with which you are all familiar. The initial stage in the process is the kitchen sink, a white glazed receptacle, 24 in. by 18 in. by 10 in., differing from the ordinary sink in that (1) it has in addition to the small

* Abstract of a paper read to a joint meeting of the Royal Sanitary Institute and the Yorkshire Branch of the Society of Medical Officers of Health.

grid for the drainage of waste water a large opening 6 in. in diameter, closed with a cap of solid metal, of which the waste-water grid forms the centre; and (2) instead of a trap it sits on a metal receiver in shape something like an inverted pear, the core of which is the plunger which closes an outlet and renders it water-tight. The container is of cast iron with the interior glazed or enamelled to prevent rusting. At the top of the plunger is a movable column (which can be taken out and cleaned) which acts as a gauge determining the areas of the material allowed to pass into the container; in other works, a kind of selector. Overflow is prevented by the stem of the plunger being hollow, with perforations at the top through which surplus water drains away. The outlet is closed by the heavy end of the plunger, which is cone-shaped and has a rubber seating to render it water-tight. The housewife removes the metal cap or grid in the sink and deposits the refuse through the opening into the metal container. When the container is full she lifts the plunger and releases the contents, which are then washed through the outlet and over the trap into the gravitation pipe or chute. The trap is of the ordinary type with a water seal of 2 in. and a connection for an anti-syphon pipe on the distal arm. The gravitation pipe is of cast iron, 6 in. diameter, and runs from top to bottom of the building, just as a soil pipe does, without bend or angle. The top is open and projects beyond the roof so as to ensure ventilation. Opposite the inlet from each kitchen sink is an eye which can be removed for inspection in case of stoppage. In the Quarry Hill flats the gravitation pipe can be fitted into an angle inside the building; while out of sight, it is nevertheless readily accessible. The sectional area seems to be ample to receive the contents of as many as eight sinks.

The solid and liquid wastes from the sinks proceed through the gravitation pipes to a large underground collection chamber outside the building. These chambers are constructed of reinforced concrete and are both air-tight and water-tight; they have a connection both with the sewer and with the disposal station, and are controlled partly by natural, and partly by mechanical forces. Contents consist of liquid and solid matter, the latter being gross and heavy sinks to the bottom, while the former accumulates until it reaches the overflow to the sewer, along which it proceeds without further treatment. The water is merely a vehicle and is not intended to be a solvent. The remaining water and solid residue in the chamber is carried by suction to the receiving tanks at the disposal station through a strongly made metal pipe of 8 in. diameter. At the disposal station liquid and solid matter together are lifted by means of compressed air through plunger pipes which extend to the bottom of the tanks into a single pipe through which they are forced up into specially fed tanks and then dropped into two hydro extractors. There the surplus water is removed by centrifugal action and sent to the sewer, while the residue falls into incinerators of special design and is consumed, leaving nothing but clinker and ash. These are removed and tipped. The heat generated by the burning of the residue is used to heat water for the adjoining laundry.

When once a housewife grasps the principle of selecting rubbish and learns to operate and control the disposal at the sink end of the system breakdowns are few, but education is necessary to eliminate mistakes and ensure satisfactory results. Rubbish which is too big to pass over the gauge is collected separately and bins are periodically removed by the cleansing department.

The system is designed to deal with more than the average daily amount of refuse from a dwelling, which is assumed to be three gallons of liquid and solid. The capacity of the reception chambers has been fixed at five times this amount, which gives a margin big enough to allow of storage for some days. In Leeds the system serves 938 flats on the Quarry Hill Estate and will eventually serve 2,500.

As to cost, one may compare the Garchey system with the one real alternative, the chute system, over which it has advantages that cannot be expressed in £ s. d., *e.g.*, the elimination of noise and dust and the greater degree of tidiness when refuse is not exposed to the elements. A comparative statement of the costs of the two systems shows that the capital expenditure for the Garchey system is £25 8s. per dwelling, and for the chute system £14; the maintenance expenditure is £2 6s. 5d. per annum for the Garchey system, and £1 19s. 1d. for the chute system, which means that the difference between the running costs is about 1½d. per week.

The system is clean, wholesome, and if properly used, free from offence. With education and a certain amount of supervision the human element can be trained to play its part and use the system to the best advantage.

SOME ASPECTS OF NUTRITION*

By V. H. MOTTRAM, M.A.,
Professor of Physiology in the University of London.

The politicians of the world have apparently waked up to the importance of nutrition and the necessity of the "marriage of agriculture and nutrition." This interest in nutrition has been fostered by the League of Nations and many reports on the food situation from all parts of the world, totalitarian as well as democratic, have been submitted to the League. It has become apparent that no country really feeds its inhabitants satisfactorily, but some countries are better fed than others. The small democratic countries are, generally speaking, the best fed; next came the large industrial countries; and lowest on the scale are the oriental countries such as China, India and Japan. Children of oriental origin when translated to a country where the standard of living is high respond by increased stature and weight—a fair proof that their home diet is insufficient. That a new outlook has been adopted in this country is clear from the Ministry of Food's action in reducing the cost of milk to the pregnant and nursing mother and the child under five irrespective of class to 2d. a pint and allowing free milk to those cases where the family income is less than 40s. per week for two people+ 6s. for every child. This new outlook is welcome.

Most children do not get enough calcium when actively growing; it is known that the bones of the children of the hospital class are osteoporotic; a deprivation of calcium (see Friend—"The Public Schoolboy") increases by three times the liability to fracture of the bones. The simplest way of supplying calcium is by giving milk.

From a survey made of the diets of a large number of pregnant women, it has been demonstrated that very few in this country take enough calcium to cover their needs and those of the foetus. It was shown in Oslo by the Toveruds that an intake of 1·6 grammes of calcium is necessary to cover those needs. As 1 litre of milk (1 pint = 0·567 litre) contained 1·2 grammes of calcium, it is clear that a pregnant woman is likely to cover her needs for calcium only if she takes 1½ pints or more of milk per day. The only other good and convenient sources of calcium are cheese and the fat fish. Green vegetables are sometimes recommended but their content of calcium is low while that of wholemeal bread is almost negligible. Consequently the nutritionist welcomes the intention of the Government to increase the milk intake of pregnant and nursing women and of young children and hopes that their intention will be implemented.

In the artificial feeding of babies, a new food had been introduced which consists of equal parts of dried milk and dried soya bean powder. This food, according to Dr. Helen Mackay, who presumably suggested its composition to the manufacturers, is much cheaper than ordinary dried milk and has a better effect in combating nutritional anaemia in the bottle-fed baby. In all respects it is practically equivalent to a dried milk fortified with iron.

We have been driven in this country by logic to the desirability of feeding necessitous children. It is probable that we shall be driven to giving the necessitous child the foods at his school dinner which are most likely to be lacking in the home diet, *i.e.*, the "protective foods." It was from considerations such as these that the "Oslo breakfast" arose, which consisted of wholemeal bread, cheese, butter, milk and a raw carrot plus an orange or half an apple. The "Oslo breakfast" has been adopted experimentally in this country in Stepney and Glossop and called a "Health dinner." The results has been very satisfactory, one noticeable effect (apart from increased rate of growth and high spirits) being a cosmetic one: the children's skins have improved remarkably.

The method of Dr. Milligan, of Glossop, of introducing "protective foods" is to give "sandwiches of wholemeal bread and butter mixed with yeast powder and fillings selected from cheese, egg and meat, lettuce, watercress, mustard and cress and tomato." Milk is also given. These meals are convenient ways of introducing all the inorganic substances and the vitamins together with first-class proteins into the diet in an acceptable form. It is a question whether the conventional dinner of a joint and two vegetables plus a pudding for necessitous children should not be scrapped and a "health dinner" given in its place. It will be remembered that in an experiment on the "free choice" of foods by babies in the U.S.A., the results were highly successful if the choice *were limited to the protective foods*. The seprotective foods are dairy foods, greengroceries, fat fish, liver, and whole cereals.

Now the difficulty is to persuade the people to change their diet habits and adopt the "protective foods." Pamphlets, lectures and school education are not enough. The personal contact is essential. Such personal contact could be made by health visitors, maternity and child welfare workers, district nurses and even sanitary inspectors. I would suggest that every municipality of any size should have attached to its public health services a trained dietician whose task it should be not only to supervise the diets in hospitals, but to educate in dietetics those who come into contact with the people in their homes.

There remains the economic difficulty in providing a satisfactory diet. It is not much use teaching people what they should eat if they have not the means to buy it. There is an antagonism apparently between guns and butter. It is highly probable that the peoples of the world will never be rightly fed until they have democracy and peace.

NIGHT OVER EUROPE*

The mounting catastrophe in Europe and its effect on universities and laboratories in every country there—whether involved in the war or not—have necessitated modifications in the work of the Rockefeller Foundation. When the war broke out on September 3rd, 1939, the Foundation had 110 running appropriations in Europe, distributed in 22 different countries, and involving a total sum in excess of $4,000,000. A substantial part of these appropriations was for research in various scientific fields. Nearly $2,000,000 of the total was for work in Great Britain; approximately $750,000 was allocated to Switzerland; $330,000 each to France and Sweden; and the balance in smaller amounts ranging down to $3,500 in Finland.

In a number of instances work supported by these appropriations is being continued on a level that has been but little affected by the war. For example, Heilbron's research in organic chemistry to which the Foundation is contributing at Imperial College, London, is still going forward. Niels Bohr's work in biophysics at Copenhagen and Svedberg's studies with the supercentrifuge at Uppsala are also only indirectly disturbed. The Tavistock Clinic in London, where the Foundation is financing research in psychosomatic medicine is proceeding, thus far at least, without serious interruption. Similarly, work in the general field of neurology, under grants from the Foundation is being carried on at the Universities of Brussels, Leiden, Lund, Oslo and Oxford.

Moreover, in spite of many unfortunate exceptions, there seems to be at least some effort in influential circles in Europe to insulate important scientific research work from the shock of war and to allow the laboratory men to continue with their tasks. In this

*Abstract of a paper read to the Welsh Branch, Society of Medical Officers of Health, June 21st, 1940.

*Extract (pp. 10-17) from The Rockefeller Foundation Review for 1939. By Raymond B. Fosdick, President of the Foundation. 1940. New York.

respect, Europe is perhaps profiting by the tragic example of the last war when men like Henry G.-J. Moseley, the Physicist, von Prowazek, the parasitologist, S. B. McLaren, the mathematician, Karl Schwarzschild, the astronomer, and a great host of fresh new leaders in every field of science were killed at the front. Of the 240 enlisted students of the Ecole Normale Supérieure in Paris, an institution which supplies the French universities with professors, 120 were killed. Among the graduates of this school, 560 who were already professors in the universities were mobilised; 119 were killed. Of the students resident at the Ecole Centrale des Arts et Manufactures, the most important engineering school in France, 179 were killed, together with 362 of the graduates.

This memory is still fresh in scientific circles in England, France and elsewhere, and efforts are being made, with the help of governments, to prevent in this war, as far as possible, the recurrence of such ghastly sacrifice.

But an attempt to keep scientific workers at their tasks, laudable as its motive is, meets but a small portion of the problem. At best it can salvage for the future only those whose promise is already indicated. Nowhere is there occult imagination to detect in a humble patent examiner a future Einstein, or to see in a tanner's son a Louis Pasteur. Darwin at 20 showed no particular promise in his studies; but he had courage and spirit and would have made excellent material for the front-line trenches. No human precaution can protect a nation from the sacrifices which war levies upon future talent—the undiscovered scientists, the gifted minds, the intellectual and spiritual leaders upon whom each generation must build the hope and promise of the generation to come. The mortgage which war places upon the economic resources of a country is as nothing compared with the mortgage levied upon its future intellectual and cultural life.

In the war that is now being carried on in Europe the sacrifices and the processes of disintegration have already begun. We can see now something of the extent of the disaster. The University of Warsaw has ceased to exist. According to reliable reports, the entire Polish faculty of the University of Cracow is in a concentration camp. The Polish members of the faculty of the University of Vilna have been dismissed. Scarcely a year ago, the Moors, entrenched in the ruined University of Madrid, used the books from the University library as defences in their rifle pits. The University of Prague has been shut by the German Government. The University of Strasbourg has been torn from its site and planted in Clermont-Ferrand. For reasons of economy and because their students are in military service, more than half the universities of Germany are closed. The institutions comprising the University of London have been uprooted and scattered over a wide area in Southern England. The 20,000 student population of the University of Paris has shrunk to 5,000. In all countries, whether combatant or non-combatant, the undiscriminating necessities of military mobilisation have decimated faculties and student bodies alike. In many instances the ablest men on a faculty are being drafted for various types of war work. In other instances, on both sides of the fighting lines, laboratories hitherto devoted to the extension of knowledge, both in medicine and in the natural sciences, are being geared into the war machine. As a prominent governmental official on the Continent recently said: "Science can now have but one object: to help win the war."

Perhaps the most frightening aspect of modern war is the intellectual black-out which it creates. One does not have to subscribe to H. G. Wells's grim prophecy that "mankind, which began in a cave and behind a windbreak, will end in the diseased-soaked ruins of a slum"; but certainly the night in Europe cannot be long continued without the sacrifice of cultural values on so vast a scale that the chance of an enlightened and gracious life, not alone for this generation in Europe, but for the children and grandchildren of this generation, will be irretrievably lost.

Divided We Fall

One occasionally hears the statement that the trend of intellectual leadership is westward across the Atlantic. In proof of the assertion specific fields are mentioned, such as neuro-surgery, astronomy, dentistry and perhaps orthopaedics, in which America has won pre-eminent standing. But this argument overlooks the many fields in which leadership, certainly until the war began, was still in Europe and the many others in which genius and stimulation are as potent on one side of the ocean as on the other. In physiology, for example, it would be difficult to determine whether the leadership lies in Europe or in the United States. The same is true of anatomy and pathology. In fields like pharmacology, tropical medicine, ophthalmology, legal medicine, social medicine and dermatology—to mention only a few—leadership is unquestionably still in Europe, or was in 1939. In mathematics, the English are indisputably pre-eminent in analytic number theory; the Russians are making important contributions in topology and probability, the French in algebra. America cannot match the group of European scientists in the important fields of enzyme chemistry and the organic chemistry of natural products. Nowhere else in the world can one duplicate or even approach the co-ordinated and co-operating Scandinavian group which is focusing so many precise techniques of chemistry and physics on problems of biology.

If one is tempted to question the vitality of science in Europe, it is interesting to note that the most dramatic scientific development of the year 1939 originated there, *i.e.*, the splitting of the atom of the heavy element uranium and its transmutation into barium and other light elements. This realisation of the old dream of the alchemists was based upon results obtained in 1934 by the Italian physicist Fermi; but the disintegration products of uranium were first directly observed in 1939 by Hahn and Strassmann of Berlin.

America needs to be humble about this question of intellectual leadership. In spite of the anxiety and insecurity abroad during these recent years, of the six Nobel prizes awarded in science in 1939, five went to Europe and one to the United States. In countless

ways we are dependent upon Europe for stimulation and leadership in relation to many segments of our intellectual and cultural activity.

If because of war-exhaustion or chaos the universities and laboratories of Europe should be forced to suspend their fundamental activities for even half a decade, the consequences to the intellectual life of America would be immediate and disastrous. For scientific growth is almost invariably the result of cross-fertilisation between laboratories and groups in widely separated parts of the world. Only rarely does one man or one group of men recite with clear, loud tones a whole important chapter, or even a whole important paragraph, in the epic of science. Much more often the start comes from some isolated and perhaps timid voice, making an inspired suggestion, raising a stimulating question. This first whisper echoes about the world of science, the reverberation from each laboratory purifying and strengthening the message, until presently the voice of science is decisive and authoritative. Thus, in the case of the breakdown of uranium during the past year, the early tentative questionings came from Rome; they were caught up at Berlin, were eagerly heard at Paris and Copenhagen, and then spanned the Atlantic and were seized upon here so enthusiastically that literally within hours, rather than within days, the critical experiments had been checked and extended at Columbia University, at the Carnegie Institution of Washington and in Lawrence's laboratory at the University of California.

Similarly, the amazing development and application of sulphanilamide—that beneficent gift to mankind—has been the result of a collaboration in which flags and boundary lines have been non-existent. The first hint of it was discovered in Germany, oddly enough in connection with the commercial dye industry, and the drug was given the name prontosil. With this hint as a basis, in 1935 a German scientist—Dr. Gerhard Domagk—published the results of his experiments with mice under carefully controlled laboratory conditions, showing the extraordinary effect of prontosil on streptococcus. The Pasteur Institute in Paris then picked the matter up, and subjecting prontosil to organic analysis discovered that its activity was localised in one distinctive part of its molecular structure. This potent factor in prontosil, separated from the rest of the molecule, is what we now know as sulphanilamide. At this point Queen Charlotte's Hospital in London, with a grant from The Rockefeller Foundation, tried the drug on women suffering from streptococcal infection associated with puerperal or childbirth fever, immediately reducing the death rate from such infections by 25 per cent. The Johns Hopkins School of Medicine was the next institution to carry forward the experiments, and in the last three years research on this drug has been developed, with brilliant results, in laboratories and hospitals on both sides of the Atlantic.

Achievement in science, more often than not, is the result of the sustained thinking of many minds in many countries driving toward a common goal. The creative spirit of man cannot successfully be localised or nationalised. Ideas are starved when they are fenced in behind frontiers. The fundamental unity of modern civilisation is the unity of its intellectual life, and that life cannot without disaster be broken up into separate parts. If, as a result of the present cataclysm on the other side of the Atlantic; Europe freezes into an Arctic night, we shall not easily keep the fires lit in the universities and laboratories of America.

BOOK REVIEWS

Acute Infectious Diseases. (3rd Edition.) By J. D. Rolleston and G. W. Ronaldson. London. Heinemann, 1940. pp. 477. Price 17s. 6d. net.

The third edition of this book, first published in 1925, has now appeared and it will be noted that the authorship has been extended to include Dr. G. W. Ronaldson, medical superintendent of the South-Eastern Hospital, London. The work has been revised throughout and alterations have been made in the chapters on diphtheria, cerebro-spinal fever, typhoid fever, and the acute exanthemata. Dr. Ronaldson has added new chapters on erysipelas and isolation methods, the latter being eminently practical and sensible. On the whole we feel that the appeal of this book will be for the experienced clinician, who, finding some interesting clinical curiosity, will be likely to find a Roland for his Oliver within its pages. This does not mean that the essential ground work of the subject has been inadequately depicted, but it does mean that in various sections there appears to be a lack of perspective, and overlaying of essentials by worthless detail. As an example of the former compare the 21 lines on page 23 describing diphtheria of the umbilicus with the 17 on page 25 devoted to general considerations in respect of diphtheria carriers. The writer of this review has been on the staff of a large fever hospital for 15 years, admitting on an average 700 cases of diphtheria per annum, but has never seen a case of umbilical diphtheria, and while no criticism is offered of the treatment of the subject of carriers it is suggested that the book would gain by apportioning less space to the more rare condition. It would appear also that on occasion the authors have been led astray by their erudition, and it is permissible to ask if it is worth while in a text book of this size to mention the injection of diphtheria antitoxin as a method of preventing orchitis in mumps. The authors do not recommend it and the reference might well have remained in obscurity. Those with much experience of intubation are not likely to agree that nasal feeding is frequently required, and the statement on page 398 that smallpox lesions are oval in shape is not in agreement with the usual teaching. In connection with the latter disease also no mention is made of the modifications of administrative procedure now agreed upon as adequate by the central health authority for dealing with outbreaks of variola minor. Although we have thought it proper to make these criticisms it should be clearly understood that this book, as might be expected, has substantial merits and in the future will undoubtedly receive the support extended to it in the past, especially from the mature clinician. It ought to find a place on the reference shelves of every fever hospital.

Insect Pests. By WM. CLUNIE HARVEY, M.D., D.P.H., M.R.SAN.I., and HARRY HILL, M.R.SAN.I., A.M.I.S.E. 1940. London: H. K. Lewis. pp. 292 + x + Ill. xxiii. Price 10s. 6d. net.

In recent years methods of disinfestation have improved greatly, possibly because public opinion has demanded it, possibly because of wider research by trained scientific workers—entomologists and chemists—possibly because the results of these researches have become available for those in charge of disinfestation work. Public health officers, desirous of using this modern knowledge will find much of it in this book presented in a matter-of-fact, practical way—the detail being particularly good. The book deals not only with the familiar insects—bed-bug, flea and louse—attacked by health departments from time immemorial, but also with others which used to be left to householders, or restaurant keepers or the like to deal with, *e.g.*, the cricket, the cockroach, and the ant. Naturally enough, because knowledge of their life history and habits is not so wide, methods of dealing with the latter are not discussed in such full detail but suitable remedies are indicated in each case and it is well known that experience in dealing with one type of insect is often most useful in dealing with another.

The principles underlying the modern practice of disinfestation are defined and there is a particularly valuable chapter on building construction or rather misconstruction, in which attention is drawn to the role played by multiplicity of dead spaces, the use of unsuitable materials, faulty methods of assembly and so on. Other aspects of the bed-bug control are discussed, useful hints on educative methods being given, and the importance of adequate training for the staff engaged on the work being stressed.

The public health worker will find in the book itself sufficient information to enable him to acquire an adequate and up-to-date working knowledge of the subject, not only in dealing with many insect problems in and around houses but also in food store-houses and in ships. Indeed, it is not too much to say that the book is a very necessary addition to the book shelves of every health department which undertakes disinfestation work.

The Hell of Ill-Health. By M. BIRCHER-BENNER, M.D. London: John Miles. 1940. p. 128. Price 6s. net.

This book contains the text of three lectures delivered to the Food Education Society by a distinguished Swiss physician who has devoted much of his life to reflection upon the reasons why people become ill, and to clinical experiments on the natural means of cure. The first lecture deals with the "laws of health" which the author has promulgated, and which he believes nearly all of us break constantly. The second and third lectures describe respectively the punishment which Nature inflicts upon us for violation of her laws, and the regimen which Dr. Bircher-Benner has adopted to effect his cures.

Although there is much in this volume which may sound strange to British ears, there is no doubt that the author is justified in stressing the importance of his laws. All thinking physicians will admit that there is often a "twilight" period before the individual descends into the night of diagnosable disease, and that it is in this "twilight" period that cure can most easily be effected. The danger is that we *may* be claiming a cure of a condition which never existed. In the second lecture the author gives information—sometimes too scanty—of his cures, and it must be said that many are illuminating. His case is certainly weakened by his insistence on the raw vegetable method as a panacea for practically all the ills the flesh is heir to. Faulty diet may accompany cancer of the breast, but is not *ipso facto* a cause.

From the preventive aspect it is probable that the celebrated author could help us much in the elimination of many of our minor scourges, and the book is therefore well worth reading. The translation from the German leaves something to be desired, and the use of a term like "influenza-encephalitis (Parkinson's disease)" is apt to mislead a popular audience. A more judicious use of capital letters would have looked better to English eyes, and better references to the plates, with the excision of references to those plates which are not actually reproduced in the book, would have been advisable.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

BLABY & LUTTERWORTH U.Ds: M.O.H. (for duration of war), Dr. C. Killick Millard (formerly M.O.H., Leicester C.B.). Salary £250 p.a., plus £100 for travelling and other expenses. Since his retirement, Dr. Millard has devoted himself to the work of the Voluntary Euthanasia Legislation Society, which he founded.

BLACKPOOL C.B.: A.M.O.H., Dr. J. S. Westwater (Senior A.M.O.H., Wolverhampton C.B.). Salary £750 p.a., rising by three annual increments of £50 and one of £37 10s. to £937 10s.

BOARD OF EDUCATION: M.O., Dr. Peter Henderson (M.O.H., Todmorden M.B.).

BRIGHTON C.B.: Clinical T.O. and A.M.O.H., Dr. G. H. C. Walmsley (A.C.M.O.H., Staffs C.C.). Salary £800, rising by biennial increments of £50 to £1,000 p.a.

CANNOCK U.D.: A.M.O.H., Dr. Patricia S. Warren (A.M.O.H. and A.S.M.O., Oldbury M.B.).

CONGLETON M.B.: M.O.H., Dr. Denis McCarthy (M.O.H., Isle of Sheppey, Queenborough M.B. and Sheerness U.D.). Salary £900 p.a.

EDMONTON U.D.: A.M.O.H. and A.S.M.O., Dr. Catherine A. Coggin.

FINSBURY MET. B.: Dep. M.O.H., Dr. A. B. Stewart.

HAMMERSMITH MET. B.: A.M.O.H., Dr. Margaret E. Anderson. Salary £500, rising to £700.

HARWICH M.B.: M.O.H., Dr. J. Battersby. Salary £800.

LIVERPOOL C.B.: A.S.M.O., Dr. Lucy H. E. Walker.

MIDDLESEX C.C.: A.C.M.O.H., Dr. T. O. Garland (A.C.M.O.H., Northants C.C.). Salary £800, rising to £1,000 p.a.

PUDSEY M.B.: M.O.H., Dr. H. L. Settle (A.M.O.H. & A.S.M.O., Leigh M.B.).

RAMSGATE M.B.: M.O.H. and S.M.O., Dr. J. V. Walker (Dep. M.O.H., Ramsgate). Salary £900 p.a., rising by £100 to £1,100.

SOUTH SHIELDS C.B.: Dep. M.O.H., Dr. D. O. Macdonald.

The Society of Medical Officers of Health

COUNCIL MEETING

A meeting of the Council was held at Tavistock House, Tavistock Square, W.C.1, on Friday, July 19th, 1940, at 2 p.m.

The President (Dr. F. T. H. Wood) was in the Chair and there were also present Drs. J. S. Anderson, Cyril Banks, H. Stanley Banks, Vynne Borland, G. F. Buchan, H. Catto, James Fenton, Sir Francis Fremantle, Dr. C. Herington, Sir Wilson Jameson, Drs. G. Jessel, A. W. Johns, E. H. T. Nash, Prof. R. M. F. Picken, Drs. T. N. V. Potts, R. Sutherland, Mr. A. Gordon Taylor, Drs. E. W. Caryl Thomas, Ernest Ward and H. C. Maurice Williams.

Apologies for absence were received from Drs. J. A. Charles, James Ferguson, J. J. Jervis, R. H. H. Jolly, Thos. Orr, A. T. W. Powell, T. P. Puddicombe, J. E. Spence, H. G. Trayer and H. Gibbons Ward.

The minutes of the last meeting held on Friday, April 5th (printed in PUBLIC HEALTH, May, 1940, pages 179-187) were confirmed and signed by the President. There were no matters arising therefrom apart from those dealt with in the General Purposes Committee report.

REPORT OF THE GENERAL PURPOSES COMMITTEE.—Dr. Cyril Banks presented the report published in PUBLIC HEALTH for July, 1940, pages 227-230. The following matters arose in connection therewith:—

CIRCULAR 1840.—It was reported that in certain areas the Town Clerk had asked the medical officer of health to accept appointment as Milk Officer. After discussion the Council passed the following resolution:—

> That the Society think it undesirable that a Medical Officer of Health should be appointed as Administrative Officer under the Milk Scheme of the Ministry of Food.

CONTROL OF SLAUGHTERHOUSES.—At the request of Sir Francis Fremantle it was decided to forward the Society's letter to the Ministry of Health, including observations by Sir Wm. Savage, for the consideration of the Parliamentary Medical Committee.

WOMEN IN H.M. FORCES.—It was reported that a senior woman medical officer had been appointed with the relative seniority of a Major, in the Eastern Command, and it was hoped that senior appointments would be made in other Commands in the near future. No senior appointments had yet been made for the Royal Navy or the Royal Air Force.

PEDICULOSIS AND SCABIES.—It was agreed that a letter should be addressed to the Ministry of Health recommending that Local Authorities should be given the additional powers necessary to deal effectively with families harbouring vermin and suffering from scabies.

VENEREAL DISEASES.—Having received a confidential communication from the Ministry of Health in reply to an enquiry regarding the incidence of venereal disease, it was agreed that the General Purposes Committee should continue to keep this matter under review during the war period.

COST OF LIVING BONUS.—A letter was reported from the Sanitary Inspectors' Association asking the support of the Society for representation to the respective bodies of Local Authorities regarding the denial of Cost of Living Bonus to Medical Officers of Health and Sanitary Inspectors in receipt of salaries exceeding £260 per annum. There was agreement that the Association should first approach the National Association of Local Government Officers in this matter, in reference to the advisability of a joint deputation or other action.

PERSONAL INJURIES (CIVILIANS) SCHEME.—The following letter was reported from the Ministry of Health:—

> "I am directed by the Minister of Health to refer to your letter of May 20th, addressed to the Minister of Home Security, which has been forwarded to this Department, regarding the position of members of your Society under the Personal Injuries (Civilians) Scheme, 1939.
>
> I am to explain that the provisions of the Scheme are in general based upon the recommendations of a Committee appointed before the outbreak of war to consider the question of compensation for civilian war casualties. In accordance with these recommendations, the Scheme was designed as a flat-rate scheme of compensation for injuries sustained by civil defence volunteers in the course of their duties as such and by 'gainfully occupied persons' as a result of war action, and it was not contemplated by the Government that the rates of compensation under the Scheme should be varied in accordance with the risk entailed to civilians or the economic status of particular classes of persons.
>
> The rates of compensation are, broadly speaking, calculated by reference to the standard rate of compensation applicable to a private soldier in the Army, and, while it was realised that in many cases these rates would not make up the full economic loss sustained, they were held to represent a reasonably generous contribution from the public funds. Furthermore, I am to point out that medical officers and other local government officials who are eligible for compensation under superannuation schemes, are in this respect in a more favourable position than many other sections of the community.
>
> After giving careful thought to the matter, the Minister regrets that he is unable to recommend that preferential treatment under the Scheme should be afforded to medical officers and other officials engaged in the civil defence work of local authorities."

It was felt that the provisions of the scheme, as expounded in the letter, gave no reasonable measure of protection to medical officers and other officials engaged in civil defence duties, and that the correspondence be forwarded to the Parliamentary Medical Committee for their consideration.

AN ENQUIRY REGARDING LIFE-FELLOWSHIP.—This matter was referred back to the General Purposes Committee with a request to report whether in special cases the Articles of Association would permit the

election as a fully-paid Life Member of a Fellow who has subscribed for less than 25 years.

POULTRY INSPECTION.—The Council decided that a letter should be addressed to the Ministry of Health on the war-time standard of poultry inspection, based on the report of the Metropolitan Branch and the comments of Sir Wm. Savage thereon.

STANDING ADVISORY COMMITTEE ON TUBERCULOSIS.—In reference to a recommendation that this Advisory Committee be asked to accept an additional member representing London tuberculosis officers, the Council decided that special representation could not be expected of any single section of the Society. But it was agreed to notify the Advisory Committee that the Society would welcome the opportunity of nominating a third representative if invited to do so.

The report of the General Purposes Committee was then adopted with the amendments indicated above.

DRIED MILK SCHEME OF THE MINISTRY OF FOOD.—The President reported that as a matter of urgency he had asked Professor Picken, Drs. Cyril Banks, G. F. Buchan and James Fenton to receive with him that morning a deputation from the Food Manufacturers' Federation in reference to the dried milk provision in the new Milk Scheme of the Ministry of Food. The deputation, which included representatives of the Glaxo Laboratories, Trufood Ltd., Cow & Gate, Ltd., and Ambrosia Ltd. expressed the desire of the Federation to co-operate with the Public Health Service in surmounting the difficulties which must be expected in connection with the scheme. They were especially concerned by the suppression of the methods of distribution by which the manufacturers had ensured the efficient delivery of their products to welfare centres, etc. The decision to adopt a uniform packet of 20 oz. of plain dried milk bearing the label of the Ministry of Food, with no reference to the producing company, had already delayed the operation of the scheme, as announced in Circular 2089 (July 11th, 1940) from the Ministry of Health. Complaints were already being made because medical officers would no longer know which particular brand of dried milk was being supplied to their centres. The Federation, however, was able to give an assurance that apart from the scheme, additional supplies of dried milk for children over 12 months, and all the modified brands produced by the manufacturers, would still be available for local authorities and others. These supplementary supplies would be distributed from stores accumulated in various parts of the country so as to avoid any complete interruption of service by enemy action. The cost of such extra supplies which received no Government subsidies must necessarily be higher, but any prohibitive increase need not be expected.

After a full discussion of these and other points it was agreed to hold a further conference if serious difficulties were experienced in the working of the service.

WOMEN HEALTH OFFICERS IN EVACUATION AREAS.—A letter was received from the Women Public Health Officers' Association drawing attention to a letter dated June 29th addressed by the Ministry of Health to the Town Clerks of Local Authorities where compulsory evacuation has, or may, become a military necessity. The Ministry's letter indicated that the Town Clerk will be charged with the duty of selecting those of the Authority's staff who must remain for the maintenance of essential services, and continues:

> As regards those of the staff who are to be evacuated, it will be for the Council to determine the arrangements to be made with them. In so far as the Council no longer require the services of particular employees (possibly, *e.g.*, in some place outside the evacuated area) the Council should consider whether they should terminate the contract of employment or grant leave of absence without pay. In the former case, they will probably desire to make some monetary provision to meet immediate necessities, and, in the circumstances, the Minister considers that such payments (not exceeding the sums which would be made payable under the first alternative may reasonably be made, pending acceptance of another appointment as suggested in the following paragraph).
>
> So far as members of the Council's staff may be evacuated to the reception areas designated for the accommodation of the civil population it may be found that the Authorities of those areas are obliged to augment their staffs to cope with extra work created by the influx of refugees. The attention of those Authorities has been drawn to the desirability of taking advantage for this purpose of the experience and qualifications of staff from the evacuating Authorities who come to their areas. Evacuated members of your Council's staff should, therefore, be advised to get into touch, as soon as possible after reaching a reception area, with the Local Authority of that area.

The Association comments on the above directions:

> The suggestion contained in the Ministry's letter that officers evacuated with the general population should ascertain *after arrival in the reception areas* whether their services are to be retained by the Local Authority in the reception area, appears to us a most unsatisfactory one as far as our members are concerned. The need for additional health visitors, school nurses and midwives in the reception areas is self-evident, and it appears to us that there should be some definite scheme for transferring these officers from the evacuation to the reception areas when the need arises. Probably this could be effected most easily by the evacuating Local Authority seconding their services to the Local Authority in the reception are, responsible for administering the Maternity and Child Welfare Act, but however it is effected, we consider that their existing conditions of service and superannuation rights should be safeguarded.
>
> We are approaching the Minister of Health on this matter, and should greatly appreciate any support which the Society of Medical Officers of Health can give.

The Council agreed that the Association had some reason to ask that the position of their members should be safeguarded in the circumstances stated. It was decided to offer the Association any assistance that the Society could give in the submission of their case.

WAR CASUALTIES AND CREMATION.—A letter was received from the Cremation Society drawing attention to an Order in Council dated July 2nd, 1940, which amplifies Defence Regulation No. 30, to facilitate the cremation of war victims. The Cremation Society points out that the force of the new Order is to dispense with the need for medical certificates in cases of death registered as being due to war operations. "Thus, the Regulations governing the cremation of civilian war victims are brought into line with those which concern burial, and the public may be assured thereby that not only will no obstacle be placed in the way of an applicant for the cremation of a war victim, but that the procedure in such a case will be considerable simplified."

RESPIRATORS FOR INVALIDS.—A letter was forwarded by Dr. G. F. Buchan from the health department of the Borough of Willesden, as follows:—

> Recently three invalids who stated that they could not use an ordinary civilian respirator on account of chest trouble, were seen by a Medical Officer of this Authority. In one case it was considered that provision of a general service respirator might be satisfactory as this man's difficulty was mainly attributed to psychological reasons. In the other two cases it was considered that none of the ordinary types of respirator would be satisfactory and that possibly a respirator on the same principle as a baby's helmet might neet the case. None of these cases can afford to make private arrangements in this matter.
>
> The three cases were fully reported to the Ministry of Home Security with a request that they should deal with them, and a reply was received dated July 1st, that "it is not considered to be appropriate to deal with individual cases at present. The cases have been noted and a further communication will be sent if it is possible to do anything as an exceptional measure."
>
> This Authority considers this reply most unsatisfactory, and I shall be obliged if you will inform me of anything that has been done in respect of similar cases of which you may be aware."

Several members mentioned attempts to improvise respirators for use in such cases, and it was decided to refer the matter to the Medical Research Council.

CHILD CARE RESERVE.—The National Council for Maternity and Child Welfare reported details of the Course of Instruction to be provided where possible by the Local Education Authority in co-operation with the Local Health Authority for recruits wishing to become members of the Child Care Reserve. These reservists will be required in connection with the "Provision of Day Nurseries for Munition Workers" referred to in the letter from the Ministry of Health of June 18th, 1940, and in similar activities. It is believed that there are reserves of valuable helpers (including middle-aged married women already accustomed to dealing with children) who will respond to a call for volunteers for this and similar purposes.

It was originally intended that courses of instruction should only be organised in the neighbourhood of day nurseries for munition workers, but in response to many applications the scheme is being adopted in other areas where Child Care Reservists would be useful in A.R.P. shelters and for the care of evacuated children. The National Council therefore desired to send particulars of the scheme to Medical Officers of Health if the Society approved. It was agreed that no objection should be offered to this proposal.

NOMINATION OF PRESIDENT FOR 1940-41.—Several Branches having nominated Dr. A. S. M. Macgregor for election as President of the Society for the Session 1940-41, the General Purposes Committee had enquired if he was able and willing to accept the office. In a letter to the Executive Secretary, Dr. Macgregor wrote:—

> I need not say that I am very much obliged to the General Purposes Committee and yourself for giving me an opportunity of expressing my views.
>
> Apart altogether from my own interest in the matter, the interest of the Society itself is the important aspect, and my own feeling would be very strongly that if Dr. Wood would be willing to carry on the Presidency for a second year, as a war-time measure, this would be the best solution. So far as I personally am concerned, the distance from London is a drawback, and in any case my A.R.P. and casualty hospital commitments are extremely heavy and might quite easily preclude my giving the attention to the Presidency that the post might require. Consequently, I feel that if Dr. Wood is agreeable, the Society would benefit and I myself would be greatly indebted to him, the more so as I am recovering from a longish illness.

In view of the above letter Dr. Wood consented to accept nomination for a second year of office.

VICE-PRESIDENTS AND HON. TREASURER.—By a unanimous vote the Council re-elected Drs. E. H. T. Nash, James Fenton and Ernest Ward to serve as Vice-Presidents, and Dr. G. F. Buchan as Hon. Treasurer for the session 1940-41.

LIFE MEMBERSHIP UNDER ARTICLE 12.—Having paid annual subscriptions for periods of not less than 25 years, the following Fellows, now retired, were recommended for election as Life Members on the nomination of their respective Branches:—

Home Counties Branch.—Dr. Duncan Forbes, Dr. E. A. Freear Wilkes, Dr. H. Hyslop Thomson.

North-Western Branch.—Dr. E. W. Rees-Jones.

Yorkshire Branch.—Dr. Alexander Anderson.

These names, with previous nominees, would be submitted to the Ordinary Meeting for election.

REPRESENTATION OF THE SOCIETY.—Dr. G. F. Buchan and Dr. James Ferguson were re-elected to represent the Society on the Public Health Service Committee of the British Medical Association for 1940-41.

Dr. Thos. Orr was re-elected to the National Milk Publicity Council for 1940-41.

Dr. James Fenton and Dr. Catherine Morris Jones were re-elected to the National Baby Week Council for 1940-41.

CORRESPONDENCE.—A letter in reference to the release of Medical Officers for War Service from the staff of the Leicestershire county health department, and another from Dr. W. K. Dunscombe on the pooling of health staffs were considered and referred for reply by Officers of the Society.

STAFFING ARRANGEMENTS DURING ABSENCE OF EXECUTIVE SECRETARY.—The Hon. Treasurer reported that after consultation with the President of the Society, the Chairman of the General Purposes Committee and the Chairman of the Journal Committee, the following arrangements were recommended for the carrying out of the work of the Society during the absence on service of the Executive Secretary: —

(1) That the Executive Secretary, Mr. G. L. C. Elliston, be allowed leave of absence while on service.

(2) That the difference between the salary of the Executive Secretary and his pay and allowances while on service be paid to him by the Society.

(3) That his general duties as Secretary be undertaken by the Consultant Secretary, Captain G. S. Elliston, M.C., M.A., M.P., at a remuneration of £100 per annum with an additional allowance of £100 for expenses.

(4) That the duties of the Executive Secretary in respect of the Journal be carried out by Dr. Clegg, of the *British Medical Journal*, as may be arranged by Professor Picken, the Chairman of the Society's Journal Committee, at a fee of £12 12s. per issue of the Society's Journal.

These arrangements will result in an additional expenditure to the Soeiety of £100 per annum so long as the Executive Secretary remains in his present rank in the Navy and the Journal continues to be issued monthly.

The Council adopted these recommendations as submitted by the Hon. Treasurer.

EMERGENCY COMMITTEE.—In view of the pressing local responsibilities of members of Council, and of possible difficulties of travel, it was decided to appoint a small committee with power to act in matters of urgency not involving the general policies of the Society. The Committee was constituted as follows: The President, Dr. Cyril Banks (Chairman of General Purposes Committee), Dr. G. F. Buchan (Hon. Treasurer) and Prof. R. M. F. Picken (Chairman of Journal Committee).

The Council then adjourned.

ORDINARY MEETING

An Ordinary Meeting was held at Tavistock House, Tavistock Square, on Friday, July 19th, 1940, at 3.30 p.m.

The President (Dr. F. T. H. Wood) who was in the Chair, informed the meeting that the Council of the Society had that afternoon, as a war-time measure, nominated him to fill the office of President for a second year. He said that he appreciated this honour and expressed his willingness to continue in office for the session 1940-41. The nomination was unanimously accepted by those present and Dr. Wood was duly re-elected.

The meeting then proceeded to consider the election under Article 12, as fully-paid Life Fellows of the Society, of the following nominees who had been recommended for this status by the Council and their respective Branches: Drs. Alexander Anderson, M. B. Arnold, G. Arbuckle Brown, Duncan Forbes, John Guy, P. W. Kent, G. Quin Lennane, J. Livingstone Loudon, James Mair, A. A. Mussen, E. W. Rees-Jones, H. Hyslop Thomson, H. E. Watkins, E. A. Freear Wilkes, G. Pratt Yule, Messrs. Fredk. Breese and George Thomson.

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

As Fellows.—Bennion, Edgar Rhodes, M.B., B.S. (LOND.), D.P.H.; Bentley, F. J., M.D. (DURH.), F.R.C.P., D.P.H.; Clark, William Burns, M.B., CH.B. (ST. ANDR.), D.P.H.; Clayton, Thomas Morrison, M.B., B.S. (DURH.), B.HY., D.P.H.; Dunlop, James, M.A., M.B., CH.B. (GLASG.); Franklin, James Curtis, M.B., B.S. (LOND.), M.R.C.S., L.R.C.P., D.P.H.; Hobson, William, B.SC., M.D. (LEEDS), D.P.H.; Jones-Davies, Thomas Ellis, M.A. (CANTAB), M.R.C.P. (LOND.), D.P.H.; Mackechnie, Donald Maclachlan, M.B. (GLASG.), D.P.H.; Martin, Alec Edmund, M.D. (MANCH.), D.P.H.; Ross, John Marshall, M.B., CH.B. (ABERD.), D.P.H., D.R.C.O.G.; Settle, Herbert Leslie, M.SC., M.B., CH.B. (MANCH.), D.P.H.; Townend, Mary, M.B., CH.B. (LEEDS), D.P.H.; Woolf, Rowena, M.B., B.S. (LOND.), D.P.H.

As Associate.—Levinson, Samuel, L.D.S., R.C.S.

The meeting then adjourned.

BRANCH & GROUP MEETINGS

HOME COUNTIES BRANCH.

President: Dr. E. W. Caryl Thomas (M.O.H., Harrow U.D.C.).
Hon. Secretary: Dr. Cecil Herington (M.O.H., Dagenham M.B.).

A meeting of the Home Counties Branch was held at Tavistock House South, Tavistock Square, London, W.C.1, on Friday, July 12th, 1940, at 3.30 p.m. There were present the President and 15 members.

It was unanimously agreed that the following members should be recommended for life-membership of the Society: Dr. H. Hyslop Thomson, County Medical Officer of Health, Herts.; Dr. E. A. Freear Wilkes, late M.O.H., Barnes.

Election of Officers and Representatives of the Branch for Session 1940-41.—The following were unanimously re-elected :—

President—Dr. E. W. Caryl Thomas.
Hon. Treasurer—Dr. K. E. Tapper.
Hon. Secretary—Dr. C. E. E. Herington.

Representatives on Council of Society—Drs. Herington, Powell and Thomas.

Representatives on T.B. Group Committee—Drs. Bruce, Dobson and Renwick.

The following were unanimously elected :—

Representatives on Kent Branch Council of B.M.A.—Drs. Brocklehurst and Bramley.

Medico-Legal Problems in Public Health Administration was read by Dr. Robert Forbes, Secretary of the Medical Defence Union. Dr. Forbes is a member of the Council at Harrow and was at one time Chairman of that body in addition to being Chairman of its Public Health Committee. Dr. Forbes gave many illustrations of pitfalls and difficulties encountered by Medical Officers appointed by municipalities. He showed that although less vulnerable from the legal standpoint than their

colleagues in general practice, they were nevertheless on occasions placed in difficult situations and were subject to legal actions which could rarely be foreseen. Classical cases which had actually occurred were recounted, many of these being known not only by the profession but also the general public.

Many of those present cited instances of difficulties which had occurred in their areas and questions were put to Dr. Forbes which he fully explained. High appreciation of Dr. Forbes' address was expressed in the vote of thanks moved by Dr. C. Leonard Williams and supported by several other members.

WELSH BRANCH.

President: Dr. J. Greenwood Wilson (M.O.H., Cardiff C.B.).
Hon. Secretary: Dr. H. W. Catto (M.O.H., Newport C.B.).

A meeting of the Branch held at the Institute of Preventive Medicine, The Parade, Cardiff, on May 24th, 1940.

It was resolved that the National Savings Certificate at present held by the Branch in the name of Dr. D. J. Thomas be transferred to Dr. H. W. Catto, as the new Treasurer, and that this resolution be sent to the Controller, Savings Certificate Branch, General Post Office. The Honorary Secretary read a letter from Mr. Elliston asking for information concerning the extent to which the Branch had invested in War Savings Certificates, Defence Bonds, etc., in recent months. It was resolved that this information be supplied.

The Honorary Secretary announced that the next meeting would be held on June 21st, at 5.30 p.m., when a paper would be read by Professor Mottram on "Some Aspects of Nutrition."

The meeting then listened to an outstanding paper by Dr. V. D. Allison of the Emergency Public Health Service, Ministry of Health, on "The Paths of Spread of Acute Streptococcal Infection," which was published on page 221 of our last issue.

A meeting of the Branch was held at the Institute of Preventive Medicine, The Parade, Cardiff, on Friday, June 21st, 1940.

The minutes of the meeting held on May 24th were read, approved and signed by the President. Arising out of the minutes, the Honorary Secretary reported that he had forwarded Form N.S. 518, in connection with the transfer of the War Savings Certificate, to the Controller, Savings Certificate Branch, in London, but that up to date, he had not heard from him.

The Honorary Secretary read a reminder from Mr. Elliston that the Elections of Branch Officers and Representative on the Council for the ensuing session should be notified to him by August 7th. The Branch decided that the present officers should continue in office for the next session in view of the grave international situation provided that such a resolution did not conflict with the Rules of the Society. The President and Secretary were instructed to ascertain this.

The President then referred to the offer of services made by the Health and Cleanliness Council and urged members who desired to avail themselves of the means of propaganda supplied such as films, posters, etc., to communicate with Miss Nora March.

The question of the establishment of Day Nurseries and Crèches during the war was brought up, several members expressing their views; it was finally decided that the matter should remain in abeyance until such time as the need arose.

The Honorary Secretary reported that the Sessional Meeting of the Royal Sanitary Institute which was to have been held at Aberystwyth on June 29th, 1940, had been cancelled.

Accounts for small disbursements amounting to £1 1s. 5d. were passed and initialled by the President

The meeting then head a most interesting paper by Prof. V. H. Mottram, of the University of London, on "Some Aspects of Nutrition." Many members joined in the subsequent discussion and a hearty vote of thanks to Prof. Mottram was carried. An abstract of the paper appears on pages 238 and 239 of this issue.

YORKSHIRE BRANCH

President: Dr. James Sharpe.
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

An Ordinary Meeting of the Branch was held in the Civic Hall, Leeds, on Saturday, April 27th, 1940, at 1.45 p.m. The President occupied the Chair and was supported by fifteen members.

The minutes of the last meeting were read, approved and signed.

Letters were submitted from the Executive Secretary of the Society of Medical Officers of Health. (*a*) In which he stated that Dr. Alexander Anderson, formerly Medical Officer of Mealth of Wortley R.D. had been a member of the Society since 1901 and was, therefore, eligible for fully paid life membership if the Branch wished to recommend him for that status. It was unanimously agreed that such a recommendation should be made.

(*b*) To the effect that it was necessary for the Branch to appoint a representative on the Central Council of the Society in place of Dr. J. Mair. The Branch appointed Dr. R. Sutherland, the Honorary Secretary and Treasurer as its Council representative.

On the proposal of Dr. G. H. Pearce, the Branch decided that in future the names of members present at meetings of the Branch and of those present at meetings of the Council, should be published in the minutes.

The President congratulated Dr. W. F. T. McMath upon his appointment as medical officer of health of the Borough of Barnes. In reply, Dr. McMath expressed the pleasure his association with the Yorkshire Branch had brought him.

The members present then took part in a Sessional Meeting of the Royal Sanitary Institute in co-operation with the Branch and with the North-eastern Centre of the Sanitary Inspectors' Association.

Interesting and instructive conducted visits were paid to (*a*) Shaftesbury House, a new Municipal Hostel for working men and women, and (*b*) the Quarry Hill Flats, one of the largest blocks of flats in the country, in whieh the refuse is disposed of by the Garchey system. The members were entertained to tea after these visits by the Leeds Housing Committee.

Some of the members had previously taken part in the morning session and had enjoyed discussions on the Garchey system of Refuse Disposal, opened by Professor J. Johnstone Jervis, and on Modern Flat Building, opened by Mr. R. A. H. Livett, A.R.I.B.A., the Housing Director, City of Leeds. (A summary of Dr. Jervis's remarks is published in this issue.)

A meeting of the Council of the Branch preceded the Ordinary Meeting.

An ordinary meeting of the Branch was held at the Civic Hall, Leeds, on Friday, May 31st, 1940, at 8 p.m. The President was in the Chair and was supported by 18 members.

Officers for 1940-41.—The meeting then proceeded to the election of office bearers for the session 1940-41. The Secretary read a letter from Dr. J. F. Galloway in which he asked to be allowed to withdraw his candidature for the Presidency of the Branch in favour of the other and more senior candidate, Dr. N. Gebbie. The President consequently declared Dr. N. Gebbie, medical officer of health of Hull, elected President for the session 1940-41. Dr. James Sharpe was automatically elected Vice-President and Dr. P. R. McNaught was elected unopposed as the other Vice-President. Dr. R. Sutherland was re-elected Hon. Secretary and Treasurer unopposed. After a ballot the President declared the following members of the Branch elected members of the Council: Drs. J. J. Buchan, H. M. Gall, J. F. Galloway, J. M. Gibson, G. H. Pearce, J. C. Pickup, T. N. V. Potts, G. C. F. Roe and G. Russell.

Drs. J. J. Buchan, J. F. Galloway, G. H. Pearce and T. N. V. Potts were elected representatives of the Branch on the B.M.A. Branch Council.

The President welcomed the presence of Dr. McIntosh, of the Ministry of Health, and congratulated Dr. Frain upon his appointment to the office of M.O.H., Batley.

Mass Radiography.

The President then introduced Dr. Tattersall, Chief Clinical Tuberculosis Officer of the City of Leeds, who gave an address upon "Mass Radiography in the Detection of Early Phthisis." Dr. Tattersall began by directing attention to the fact that, although the pulmonary tuberculosis death rate fell 40 per cent. between 1915 and 1935, in the same period of time the case mortality rate was reduced only from 60 per cent. to 55 per cent. He considered that this was very significant, even after full allowance was made for the marked improvement in standards of notification and diagnosis. Only 25 per cent. to 30 per cent. of cases could give a true close contact history, and consequently 70 per cent. have been infected from some unknown source. The advanced state of disease when diagnosis is made remains a striking feature. This was due to the fact that a cough does not appear as a rule until the disease is fairly advanced, and patients do not usually consult their doctors until a cough appears, because they can so readily ascribe the other symptoms to less alarming causes. Admittedly, some cases are missed by the doctors, but these are comparatively few. The fortunate people are those with early haemoptysis or pleurisy. It follows, therefore, that the present system is bound to fail to a varying degree, built up as it is on the assumption that patients go to doctors early, and upon the search for contacts. Furthermore, the old clinical method of diagnosis by palpation, percussion, and auscultation, is of little value in the diagnosis of cases in the early stages when cure is possible—even when the diagnosis is evident by X-ray examination. The success that has been achieved in reducing the mortality rate is therefore due to better prevention rather than to better cure, although there are striking exceptions, as, for example, certain pneumothorax cases. Realising that the best hope for the future is improved and earlier diagnosis, some big firms now have a preliminary examination of all entrants, but only a few employ radiological examinations. This is a serious fault, because, as Dr. Tattersall succinctly put it, early tuberculosis is seen and not heard. That radiography is undoubtedly the best method of early diagnosis has been shown by investigations on the French railways and in New York, in which radiological diagnosis of tuberculosis has been made in a percentage of persons in whom tuberculosis had not been suspected following careful clinical examination.

After reviewing the older methods of radiological examination such as the full X-ray examination, the use of films only, or of screening only, Dr. Tattersall suggested that the new method of miniature radiography had great potentialities. He described the method briefly as consisting of photographing the X-ray screen image with a small camera with a superb lens and a special film, and then enlarging the picture by projection on to another screen. In the United States as many as 400 patients per hour had been examined by these means, and experts claim that with a first-class plant it is possible to pick out abnormals as well as with full-sized films, and that at the markedly smaller cost of approximately 1d. per picture, excluding the initial cost of the apparatus.

It was Dr. Tattersall's considered opinion that this new method has great value, and that its general application would bring us much nearer to solving the tuberculosis problem by making earlier diagnosis possible, and consequently improving the chances of cure and ensuring earlier segregation of infective persons, and, therefore, lessened spread of infection.

The President and Drs. Frain, Galloway, McIntosh and Payne all expressed their appreciation of Dr. Tattersall's excellent address, and made a contribution to the discussion. Dr. McNaught suggested that the new scheme might be described as TB. without tears. In reply, Dr. Tattersall stressed the fact that all pleurisies should be regarded as tubercular in origin unless the contrary has been proved. He suggested also that even comparatively small centres should have their own X-ray plant, because they will find it cheaper in the long run than paying for radiological investigations elsewhere.

On the motion of the President a very hearty vote of thanks to Dr. Tattersall for his interesting address was carried unanimously.

The meeting of the Branch was preceded by a meeting of the Council.

The Annual Meeting of the Branch was held at the Civic Hall, Leeds, on Friday, June 28th, at 8 p.m. The

President was in the Chair and was supported by eight members.

Drs. J. M. Gibson and R. Sutherland were elected the representatives of the Branch on the Council of the Society during the Session 1940-41. Drs. P. R. McNaught and N. S. Tattersall were elected representatives of the Branch on the Tuberculosis Group Committee. The President reported that the Council of the Branch had re-elected Drs. J. F. Galloway and T. N. V. Potts auditors for the forthcoming session.

It was resolved that the name of Dr. R. Sutherland should be substituted for that of Dr. J. Mair as joint trustee with Dr. J. J. Jervis of the funds of the Branch invested with the Halifax Building Society.

It was resolved that the Honorary Treasurer's Annual Statement of Accounts be adopted subject to audit.

The President then threw the meeting open to general discussion of war-time problems affecting Medical Officers of Health. After free discussion on the subject of new smoke regulations it was resolved that the Secretary be instructed to write the Secretary of the Society stating that the Branch is concerned with the public health implications of the new public smoke regulations and asks that the Society as a whole make investigations to decide whether or not the strategic advantages outweigh the public disadvantages.

The Branch next considered Circular 2053 relating to the New Milk Scheme and its possible repercussions on Maternity and Child Welfare Service. There was a free discussion and it was unanimously resolved that the Secretary be instructed to write to the Society stating that while the members of the Branch welcome the new scheme on nutritional grounds they request the Society to take action to ensure that the administration of the new scheme be modified (*a*) to require that the supplies be approved by the M.O.H. and (*b*) to preserve, and if possible, extend the medical supervision of the Maternity and Child Welfare Services over the beneficiaries.

The meeting of the Branch was preceded by a meeting of the Council.

COUNTY BOROUGH M.O.H. GROUP.

President: Dr. R. H. Parry (M.O.H., S.M.O. and Port M.O., Bristol)

Hon. Secretary: Dr. Gordon Lilico (M.O.H. Derby C.B.).

A meeting of the County Borough Group was held on May 30th and 31st, 1940, at Bristol.

It was very unfortunate that the internal affairs of the country reached a crisis and thus prevented a number of medical officers from attending the very fine show which was prepared by Dr. Parry.

In the absence of the Honorary Secretary, Dr. Greenwood Wilson (M.O.H., Cardiff) acted as such, and the following is a description of some of the exhibits which were selected by Dr. Parry.

(1) *Army Blood Transfusion Unit.*—This is a fine system organised to work with simplicity and rapidity. Five women doctors with the rank of Lieutenant undertake the work under the command of two Majors and a Colonel. The Colonel is Dr. Whitby, the well-known London consultant pathologist. The donors lie on couches in a row, a nurse uses a blood pressure band and pump to occlude the veins of the arm, the doctor injects a small quantity of anaesthetic over the vein in the cubital fossa and then inserts a wide-bore hollow needle with cutting point which, in turn, connects by a rubber tube to a glass one and thence by more rubber tubing to a standard glass bottle containing the required quantity of citrate and standing in a wire container, which, in turn, is fixed to a gramophone apparatus, so that it constantly rotates to ensure thorough mixing of the blood with the citrate in order to prevent clotting. After giving the blood (one pint) the donor rests on a stretcher under a blanket and has a hot drink. The organisation can be set up in halls, etc., at short notice. At headquarters there are hutted laboratories with arrangements (*inter alia*) for separating plasma from blood on a large scale. The plasma is used a good deal, being almost as efficacious as the blood and being able to be used in any sort of case, irrespective of the blood grouping. The blood or plasma is given to the patient from standard bottles, similar to the one which received the blood, but in the tubing that runs to the patient's vein there is a glass break containing a filter which is made of gas mantle material. The hutted laboratories will soon be vacated for handsome new laboratories now nearing completion at a cost of £15,000. After the war they will probably be handed over to the Bristol Corporation and become the centre of modern municipal pathological services for this hospital.

(2) *Ham Green Hospital. Tuberculosis.*—Pleasing open-air cubicle wards on the pavilion style with posterior corridors and clerestorey windows giving indirect lighting from behind the patient's bed as well as improving the ventilation.

(3) *Ham Green Hospital. Infectious Diseases Pavilion.*—Pleasing cubicle wards similar to the tuberculosis pavilion. Each row of cubicles is based on a central administrative unit (ward kitchen, etc.). There are the posterior corridor clerestorey windows and an open verandah, and each cubicle has its own colour scheme applied to walls, lockers, kidney bowls, bedpans, etc. It is thought that the colour scheme enables probationers to make sure of not mixing up the things that are used for one patient in one cubicle with those that are used for his neighbour in another cubicle. The lockers have three shelves, the lower shelf being ventilated for use as a receptacle for bedpans, etc.; the shelves for patient's belongings include a locked drawer on the top shelf.

(4) *Maternity Unit at Southmead Municipal Hospital.*—There are three pavilions, two containing 44 beds each and one containing 12 isolation beds. All beds are on the cubicle system and each of the two ordinary pavilions is built on a style of two wings each of 22 beds, springing out from a central administrative portion, which includes labour wards. Each wing has a cross-piece containing six beds divided into two lots of three, leaving in each wing 16 single cubicle beds of one or two in each cubicle. In the administrative block the system is: (1) Receiving Room, (2) Room for Bath and W.C., (3) Labour Ward. There are four Labour Wards, with a sluice room between each two, and there is, in addition, a theatre. Over each labour bed is a battery of four Anglepoise lamps made of stainless steel. There is a sterilising room to the theatre, which is a modern theatre, fully equipped, designed and furnished for major operations, but it

deals only with clean cases. The isolation block of 12 beds has its own theatre for dirty cases. These cubicle maternity wards are open-air with posterior corridors, and the medical superintendent attaches much importance to open-air treatment with a pleasant view on to green grass, basing his ideas on the Aesculapian system of therapy. Coming back to details, he does not believe in the combined bed-pan washer and steriliser, but has installed mechanical bed-pan washers, the bed-pans being subsequently sterilised in the ordinary steriliser. He has china bed-pans, but had it not been for the war, would have had bed-pans made of an alloy, known as aluchrome. These are now unobtainable, but it is preferred to wait for them rather than to go in for the stainless steel bed-pans in the meantime. For prevention of puerperal infection, the medical superintendent attaches special importance to the boiling of labour bed mackintoshes after each time of use. They are boiled in a mackintosh steriliser, supplied by Messrs. A. L. Hawkins & Co., Ltd., of 15, New Cavendish Street, Harley Street, London, S.W.1. Each maternity pavilion administrative block has also a clinical laboratory. The heating is by steam panel in ceiling. There is a special gas and oxygen apparatus, said to be very easy to use even by the most inexperienced anaesthetist. There is, of course, a babies nursery in each maternity pavilion. Babies are run from the mothers to the nursery in mobile cots, each of them containing a battery of four cots, which are canvas and detachable from the wheeled frame. These mobile cots, even when loaded, run with astonishing ease and silence. Pink or blue ribbon is placed on the coverlet according to sex. In the nursery, which has the finish of an operating theatre, or rather, opening off it is a smaller room which is the bathroom. There are baths at convenient height more like wash-basins in pairs back to back. Water is produced by a foot pedal and the longer the foot remains on the pedal the hotter the water becomes. It starts as cold and gets warmer as the foot is kept on the pedal. The weighing table is useful, having a sunken portion for the scales, so that the pans of this appear at the level of the rest of the table, which is of wood. A wooden flap is removed to expose the scales. This is convenient in practice. The medical superintendent is a firm believer in the bed-table and locker and has no use for the combined bed-table-cum-locker. All the maternity beds have spring mattresses—"Bingham." The isolation maternity block of 12 beds has no open-air verandah, but each ward is, of course, a single-bedded one and can be opened up with sliding windows.

(5) *Out-Patient Department with Health Centre.*—Southmead Municipal Hospital has in its grounds, in process of building, a new health centre (maternity and child welfare and school medical) in combination with a hospital out-patient department. Thus the preventive and curative sides of medicine will gain in practice and in "idealogy" from such close proximity under working conditions.

(6) *Smallpox. A Modern Cubicle Smallpox Block.*—The staff on-and-off duty-unit was interesting. They come in one side, leaving their clothes in wire-mesh lockers, then into another room which contains the bathroom, and out into a third room which contains more lockers with their uniforms ready to put on. The reverse procedure is followed when they are going off duty. The second point at the smallpox hospital is the fly-proof ventilator, a tribute to the theory of fly convection of smallpox. On the other hand, in defiance of the Ministry, this block is only 200 yards from the main hospital, so that here there is not much tribute to the theory of aerial convection of smallpox.

(7) *The Central Clinic.*—A system of modern suburban clinics was started, but the principle of centralising all specialist services is embodied in a large central clinic. In Bristol not much importance is attached to the objection of distance against central clinic facilities. It is believed that if the service is first-class, carried out in first-class surroundings and with first-class equipment, people will not mind how far they have to travel. In the central clinic there is maternity and child welfare, school medical service and tuberculosis. The tuberculosis unit has a separate entrance to please the Ministry of Health, but in practice the tuberculosis patients go in the main entrance along with the others. The people in Bristol do not mind this, and help in this direction is afforded by the fact that general practitioners are encouraged to refer as many patients as they please to the central clinic for X-ray of the chest. Nothing is said to the patient about tuberculosis, merely that he has to go to the central clinic for X-ray. If the radiologist and tuberculosis officer who read these plates see evidence of tuberculosis, then they ask the doctor to refer the patient specifically to them as a tuberculosis case, but otherwise a patient need never know that there was ever even a suspicion of it. The X-ray equipment is completely up-to-date. The central clinic acts as a purveyor of maternity and child welfare and school medical services for the district in which it stands and also as a provider of specialist services, *e.g.,* tuberculosis, X-ray, orthopaedics and ultra-violet light, for the whole town. The ultra-violet light unit and arrangements are particularly good. On the top floor is spacious accommodation for staff, including lecture rooms for the Health Visitors' Course, and on the middle floor ample accommodation for clerks, who have thus been enabled to move from crowded conditions in the Central Health Department and are conveniently placed right on top of their work. The record system is a good one. A special feature of the staffing of Bristol health clinics or health centres is the young girl clinic assistant. These clinic assistants are appointed at the age of 16 years. Girls with the School-leaving Certificate take the post for two years at a salary of £45 for the first and £55 for the second year. Girls without the Certificate start at £35 for the first year and take a three-year course (salary £35—£45—£55), the reason for this being that they have to be released during their duty hours to take an educational course in preparation for the nurses' preliminary examination. As regards candidates for the posts, the elementary and secondary schools are circularised as to the girls who have definite intention of entering hospital as probationer nurses and from these suitable applicants are selected as vacancies occur. These girls thus have opportunity of usefully employing their time between leaving school and entering hospital.

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Editorial

A Study of Evacuation

It would be difficult to over-estimate the debt due to the Fabian Society for issuing its report on the problems arising from evacuation while they are still fresh in all our minds.* Certainly we have already read much about evacuation, especially in the way of informative and hortatory official memoranda. But the series of studies and commentaries edited by Mr. Padley and Mrs. Cole get to the true inwardness of the matter without in the least descending to the sensationalism which characterised many of the newspaper columns and even Parliamentary debates on the subject when it was still news. The book is divided into four parts, the first describing the scheme in its inception and evolution, the second dealing with its effects on local administration and the social services, the third exploring some of the special problems and the fourth recounting the experiences of some typical areas. The plan, involving as it does the collaboration of 18 contributors, inevitably leads to a good deal of repetition, but the complete freedom of each contributor to express his own opinion has the great advantage of giving a fair and balanced review of the whole subject. Dr. Bowley's discussion of the psychological aspects of the break-up of family life is of more than ephemeral interest.

When evacuation was planned it was believed that bombing of open towns would herald the outbreak of war and that large-scale air-raids would quickly exhaust themselves. The main object, then, was to get the women and children rapidly away to less dangerous areas and keep them there during that period. Organisation of transport and the securing of billets were the prime requisites. The provision of services for the transferred population was approached from this short-term point of view. The social problems arising from the fusion of town and country populations could be left to solve themselves in the presumed atmosphere of give and take of the acute emergency. The expectation was a reasonable one, although it was not fulfilled. When the war entered the Maginot Line phase, evacuation took on a different complexion. The arrangements made were not well adapted to the long period of waiting which was to follow and the Government, unable or reluctant to envisage the true situation, temporised and left the evacuating and receiving authorities to find their own makeshift remedies for the numerous difficulties with which they were quickly

*Evacuation Survey. R. Padley and Mary Cole (1940). London: George Routledge & Sons, Ltd. 10s. 6d.

beset. Evacuation had been far less complete than it was expected to be, the rapid return of evacuees to their home towns intensified the problem, and it was not clear how the suspended services in evacuation areas could be resumed without still further encouraging the undesirable reflux. Of about 3,000,000 who might have been transferred about 1,400,000 went. These comprised in round numbers 750,000 unaccompanied school children, 500,000 mothers and their young children, 12,000 expectant mothers and 77,000 others. By January, 1940, the numbers who had come home were 315,000 unaccompanied school children (43 per cent.), 223,000 accompanied children (86 per cent.) and 146,000 mothers (88 per cent.).

It would be unreasonable to expect a government harassed by diverse preparations for impending war to have foreseen and provided for all the domestic and social consequences of this unprecedented upheaval, but two outstanding criticisms made in this report seem to be fair. Firstly, the Ministry of Health, obsessed by the need to find billets for a hypothetically large number of persons, delegated its functions to district councils because they were housing authorities, and allowed the need for rapid evacuation to take precedence of intelligent distribution. The transport organisation dumped evacuees where is was convenient for it to do so, regardless of the expectations of either the evacuating or receiving authorities, with the result that billeting officers had to place mothers with their young children in homes which had agreed to take unaccompanied school children, and children belonging to one school were often spread over wide areas where it was very difficult to organise their collective education and supervision. Billeting officers had often no qualification even for the selection of billets—the knowledge and experience of houses and families possessed by health visitors and sanitary inspectors was usually ignored. The billeting officers usually lacked the background fitting them to handle the difficult personal problems which arose between billetors and billetees. The psychological issues had never been faced. In the second place the evacuating and receiving education authorities were not given a sufficient say in the preparatory arrangements, although the disposal of the largest group of evacuees closely affected them. The new scheme of February, 1940,† is free from many of the defects in detail of the original.

It is difficult to avoid the conclusion that this situation was partly due to the increasing inadequacy of the existing arrangements for governing our domestic affairs to deal with modern needs. The Civil Service has not been accommodated in methods and personnel to undertake new functions which have been poured in upon it. Although it has had to make new contacts with local affairs in recent years it has failed to take measures to recruit to its establishment senior officers with long experience and executive responsibility in local government. Perhaps because of its consciousness of the uncertainty of its touch, it has been weak in exercising such power as it has to smooth out the anomalies which characterise our system of local government. But the defects go deeper than this. It has become increasingly clear that the Local Government Act of 1929 hardly touched the fringe of our patchwork quilt of local administration. Many of the troubles of evacuation were due to the rigidity, jealousy and lack of perspective of mutally interested local authorities. Unfortunately experiences of this kind are not new to members of the public health service. They have led to definite recommendations on more than one occasion by the Society of Medical Officers of Health for improvement in the machinery of local government, and even in these times of stress it may be permissible to take stock of the position and to hope that the subject will not be forgotten in the post-war reconstruction.

†*Public Health* (March, 1940), **53**, 117.

Typhoid from Oysters—The Incubation Period

An account of a unique epidemic of typhoid traced to oysters comes from Louisiana, U.S.A.* The oysters were gathered from natural beds in a remote bay in the Gulf of Mexico and stored there in shallow water until enough had been collected to form a boat-load. The unlicensed vendor, who proved to be a faecal carrier, lived in the boat in close proximity to the gathering and storing ground during the four or five days required for his consignment to accumulate. There was no other source of pollution and it is believed that the oysters were infected by his contamination of these waters. Subsequently the oysters were sold in the shell to three separate communities on February 1st, 2nd and 3rd, 1939, and each of these was heavily attacked by typhoid. Cases began to be reported on February 18th. Altogether 94 cases were ultimately recognised among 326 persons who might have eaten the suspected food. In fact only 29 persons who had actually consumed these oysters uncooked are known to have escaped infection, of whom 6 had previously had typhoid and 2 had been inoculated within a year. Of the 94 cases, 85 had eaten raw oysters, 7 are believed to have been secondary, while the channel of infection of two was indeterminate. The fact that the sale of oysters to each community took place on only one day, and that raw shell-fish were likely to be consumed immediately in a hot climate, offered an exceptionally good opportunity for establishing the incubation period. It varied from 3 to 27 days, the average being 10·7 days. Most of the cases sickened within 4 to 14 days, and the commonest length of incubation period was 9 days (13 cases), followed by 6 days (11 cases). It may be noted that the case with onset within 3 days died and that 6 of the 8 patients who died had incubation periods of 3 to 9 days. This is in keeping with the view which has long been held that massive infection (or prolonged exposure) shortens the incubation period, as well as increasing the virulence of attack.† This epidemic was not complicated by any concurrent infection of acute intestinal upset of short duration.

* A Typhoid Fever Epidemic caused by Carrier "Bootlegging" Oysters. H. N. Old and S. L. Gill. *Amer. J. Pub. Hlth.* (1940), **30**, 633.

† The Period of Infection in Epidemic Disease. W. Squire. Transactions of the Epidemiological Society, London. 1869-73. Vol. III, Part II, 406.

The treatment of the carrier is of interest. Sulphanilamide sufficient to maintain a blood level of 10·8 mg. and 15·3 mg. per 100 c.c. for one- and two-week intervals respectively failed to clear up his stools. His gall bladder was therefore extirpated on April 17th, 1939. The bile yielded a pure culture of *Eberthella typhosa*. His faeces were positive until June 2nd and then remained negative until last examined on August 7th. He was to remain under observation but no further report was available when this paper was read on October 17th, 1939.

Medical Care in American Agricultural Areas

The Social Security legislation of the United States has opened up a number of questions of medical organisation which have brought the medical profession to reconsider the intensely individualistic outlook it has clung to in the past. One of these problems has been forced upon its notice by the Farm Security Administration of the Department of Agriculture. Five years ago three million farm families were on the brink of disaster as the result of the depression. Until the Farm Security Administration adopted a system of loans to enable the farmers to continue planting their crops, poor relief was the only means of living for about a fourth of the farm population. The new enlightened practice had not always the desired effect of rehabilitation, and investigation revealed that about half the failures were due to "bad health." The scheme was, therefore, in some jeopardy until a plan could be devised for getting medical aid to the farmers. How this was done has been described by Dr. R. C. Williams of the Farm Security Administration.* It was not thought desirable to organise a special service for the purpose; indeed this would have been difficult, as the indigent farmers were scattered throughout the whole country and their proportion of the total population in the different rural areas varied. Moreover, the aim of the administration was not to provide a service or even specifically to subsidise it, although the incapacity of a family to secure its own medical care might influence the magnitude of the loan granted to it. The policy followed was to encourage co-operative arrangements for this purpose similar to those fostered for the communal purchase of ploughs, livestock for breeding, canning equipment, etc. Borrowers were therefore encouraged by the Department's local supervisors to pool part of their loans as a form of medical insurance, and the State and county medical associations were asked to induce their members to accept payment for services from the pool at modified rates. Although the scheme started only in 1937 already 26 State medical associations have agreed to plans of this kind, as the result of negotiations conducted between them and the Farm Security Administration. The benefits vary from area to area, ranging from ordinary medical care within the scope of general practice, to comprehensive schemes including drugs, hospital treatment, confinements and even dental attention. The annual contributions per family differ correspondingly, but they usually lie between $15 and $30 a year. A typical schemes involves $18 for man and wife and $1 for each child up to eight years of age, with a maximum of $26 per family. A certain amount of the pool is set aside for hospital or other emergency care and the rest is distributed among the practitioner claimants in proportion to the attendance given. A local medical committee scrutinises the claims in order to avoid abuse either by the participant or by a medical practitioner. It would seem that this is a further step in the gradual acceptance of the principle of health insurance by the medical profession of the United States. It remains to be seen whether experience will lead them to the capitation system of payment of instead of remuneration for work done which they favour at present.

* *Amer. J. Pub. Hlth.* (July, 1940) **30**. 725.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the health departments of various local authorities.

BASINGSTOKE M.B.: M.O.H., Dr. Mark Avent (in addition to his other appointments).

BLACKPOOL C.B.: Dep. M.O.H., Dr. V. N. Leyshon (A.M.O.H., Dewsbury C.B.) Salary £750, rising by three annual increments to £937.

BLACKPOOL C.B.: A.S.M.O., Dr. Marjorie Wilson (A.S.M.O., Birmingham C.B.).

CORNWALL C.C.: A.S.M.O., Dr. Muriel Joscelyne. Salary £500, rising by £25 yearly to £700.

DURHAM C.C.: A.M.O.s H., Dr. L. Rosamond Benham (A.M.O.H., Darlington C.B.) and Dr. Gladys M. Cox (A.M.O.H., Greenwich Met. B.).

GLASGOW UNIVERSITY: Prof. of Public Health, Dr. J. M. Mackintosh (Chief M.O., Dept. of Health for Scotland). Salary £1,500 p.a.

LEEDS C.B.: Dep. M.O.H., Dr. F. R. Dennison (Sen. A.M.O.H. & T.O., Portsmouth C.B.).

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NEWARK M.B. AND NEWARK AND SOUTHWELL R.D.s: Dr. G. G. Buchanan (A.C.M.O.H., Notts C.C.).

NOTTINGHAM C.B., NEWSTEAD SANATORIUM: Med. Supt., Dr. G. O. A. Briggs.

RETFORD M.B. AND RETFORD AND WORKSOP R.D.s: M.O.H., Dr. D. Clarke (Dep. M.O.H., Swindon M.B.).

SOUTHWOLD M.B.: Acting M.O.H., Dr. J. D. Borham.

TONBRIDGE AND SOUTHBOROUGH U.D.s AND TONBRIDGE R.D.: M.O.H., Dr. W. G. Swann (A.M.O.H. & A.S.M.O., Heston and Isleworth M.B.).

WOKING M.B.: A.M.O.H. (A.R.P.), Lieut.-Col. N. D. Walker, O.B.E.

HARVARD UNIVERSITY and the American Red Cross will shortly be sending to Great Britain a complete medical unit to study the preventive and clinical problems associated with infectious diseases under war conditions. The unit, which will consist of a hospital and laboratory, will be staffed by Harvard doctors and American Red Cross nurses. The hospital will be organised and financed by the American Red Cross. The unit will be incorporated in the civil emergency hospital organisation of the Ministry of Health and will be directed by Professor J. E. Gordon, of Harvard University. The Minister of Health has expressed his high appreciation of this generous contribution to the war-time medical and scientific equipment of this country.

AIR-BORNE INFECTION AND ITS PREVENTION

By ROBERT CRUICKSHANK, M.D. (ABERD.), M.R.C.P., D.P.H.,
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It is almost 30 years since Gaiger in discussing the spread of respiratory infections divided the routes of transmission into (1) direct spread by spray or droplet; (2) indirect spread by mediate means included in the general term fomites, and (3) aerial spread by air-currents to a distance greater than droplets could be projected. His differentiation of droplet and air-borne infection has unfortunately not been generally recognised, and it is a common current doctrine in fever hospitals that respiratory infections are spread either by direct projection of the *materies morbi* from infected person, whether clinical case or carrier, to the susceptible individual, or indirectly by infected fomites, hands of nursing staff and the like. It has always proved difficult on this view to explain the spread of measles and chicken-pox which occurs even under strict bed-isolation conditions, and as long ago as 1916 F. H. Thomson, after 2½ years' experience with a "barrier" ward concluded that measles, chicken-pox and possibly pertussis were truly air-borne. It would perhaps be generally admitted to-day that the viruses of the first two infections may be air-borne but controversy would certainly arise over the possible aerial spread of such infections as scarlet fever, diphtheria and pertussis.

In recent years, the aerial spread of certain infections, particularly those caused by haemolytic *streptococci* which can now be more specifically identified, has become susceptible of proof as a result of both field and experimental studies. In this country, Brown and Allison (1937) have shown that in wards housing patients with scarlet-fever the air contains many haemolytic *streptococci* of the same types as are found in the patients' throats, E. White (1936) has found that the air and dust of cubicles in which patients with streptococcal puerperal sepsis are being nursed contain streptococci of the same serological type as the infecting strain, and R. Cruickshank and colleagues (1935, 1939, 1940) have adduced bacteriological and epidemiological evidence in favour of the aerial spread of the haemolytic *streptococcus* in secondary infection of burns, in outbreaks of puerperal sepsis, and in streptococcal infection among patients recovering from diphtheria and influenza. It is many years since Dunkin and Laidlaw (1926) stated in regard to the spread of distemper in dogs "We are convinced that aerial spread can and does occur in closed buildings and we have now abandoned experimental work with dogs in confined spaces, and work in the open air." The means by which bacterial pollution of the air occurs is mainly two-fold (*a*) from infected dust as is proven by the increased numbers of streptococci in the air after bedmaking, dusting and sweeping as compared with the "quiet" hours of the night, and (*b*) from expired droplets which are so small, or quickly become so by evaporation, that they remain suspended in the air like particles of smoke. For the evidence in support of this latter statement we are largely indebted to Wells and his colleagues (see Wells and Wells, 1936) who found that droplets of 0·1 mm. diameter or less become, by the time they fall the height of a man, so small that instead of being deposited on the ground they remain suspended in the air as "droplet-nuclei." To demonstrate the presence of these tiny bacterial particles Wells devised an air-centrifuge by means of which the number of bacteria in a measured volume of air can be readily estimated.

If, then, bacteria in the air be admitted—and the proof goes back to the classical researches of Pasteur and Lister—it would be expected that the degree of bacterial pollution would depend mainly on two factors—the density of population in a confined space and the rate of air-replacement. That this is so has been demonstrated by American observers using the Wells air-centrifuge to sample the air from such varied sources as open spaces, hospitals, schools, theatres, mills, railway carriages and subway cars. For example, Buchbinder *et al.* (1938), using *Streptococcus viridans*—a common inhabitant of the throat—as the index of air-pollution, just as *B. coli* is used as an index of water-pollution, found that classrooms of modern design and good ventilation had fewer of these organisms per cubic foot of air than older and poorly ventilated rooms, while occupied assembly halls and classrooms had more streptococci than unoccupied rooms. Wells had shown earlier that certain respiratory pathogens (*pneumococcus, streptococcus*) were much more resistant in air than intestinal bacteria.

However, it is not enough to prove that bacteria are viable in air and dust unless it can also be shown that such viable pathogens retain their power to infect, for it may be expected that slow and partial drying will considerably affect the vitality and virulence of bacteria. There is experimental evidence that under these conditions bacteria do retain virulence as well as viability, but reliable proof must come principally from epidemiological studies. Reference has already been made to the air-borne spread of certain virus and streptococcal infections, and another example is the tuberculous infection of guinea-pigs placed in the exhaust tunnels of sanatoria. Wells, Wells and Mudd (1939) have lately collected a large volume of epidemiological evidence on different infections, which points out the importance of aerial infection as a means of spread of these diseases. Another factor concerned in the occurrence of air-borne infection, apart from the local or general susceptibility of the host, is the infecting dose of the pathogen; *e.g.* one case of chicken-pox may infect a dozen susceptible children in the same ward, whereas the aerial spread of streptococcal infection may require a much greater concentration of the infecting pathogen. This is a factor which is doubtless related to Dudley's "velocity of infection."

The Prevention of Air-Borne Infection

With the knowledge of some of the factors concerned in air-borne infection, certain measures for its prevention can be taken. Perhaps the most important of these are avoidance of over-crowding, adequate ventilation and the suppression of dust. Present-day fever hospital practice recognises the dangers of overcrowding and poor ventilation but less attention has been given to the dust factor. In addition to ward-design to avoid nooks and crannies where dust and dirt may gather, a more frequent use of soap and water (not popular in these days of polished floors and other surfaces), damp dusting and sweeping, vacuum-cleaning (difficult and noisy on wooden floors), the use of an absorbent substance like crude liquid paraffin on floors (Van den Ende *et al.*, 1940) and quilts instead of blankets are measures which would help to prevent the accumulation of dust and its dispersal in the air of the ward. In spite of these precautions conditions may still arise where the prevention of air-borne infection becomes very difficult, *e.g.*, in scarlet fever wards or under the black-out restrictions of war-time. Therefore, the use of artificial methods for cleansing the air may become necessary, and it is fortunate that research workers in different centres are at present keenly interested in this problem. Ultra-violet light has been particularly recommended, and is now being used, in America for preventing cross-infection in children's wards by maintaining a "ceiling"—and sometimes also perpendicular curtains—of the ultra-violet light in which air-borne bacteria are killed. On the surgical side, Hart and others have used the direct rays on operation sites to prevent infection of the wound from bacteria in the air, and claim a big reduction in such infections.

In this country, germicidal sprays, introduced and named "aerosols" by Trillat, have already been shown by experimental and field tests to have an amazing capacity for killing bacteria in air. Pulvertaft and colleagues (1939a, 1939b) have shown how the aerosol can kill bacteria and moulds in high concentration in the air, and have outlined its spheres of usefulness in public health and in industry. Cruickshank and Muir (1940) found the aerosol effective in cleansing the air of a ward polluted with haemolytic streptococci and thus indirectly helping to eliminate the infecting streptococcus from the noses and throats of the occupants. A recent comprehensive study by Twort *et al.* (1940) has helped to define the conditions under which certain antiseptics become effective aerosols. The antiseptic in some solvent is forcibly sprayed as a very fine mist into the air by a machine which must be capable of so atomising the liquid that the individual particles have a diameter of 1μ or less; the bactericidal action is presumably due to collision and adsorption between organism and aerosol. In contrast to germicidal *vapours, e.g.*, formaldehyde, which, to be effective, must be in a concentration that is injurious and unbearable to living tissues, with aerosols the incredibly small ratio of 1 volume of the liquid germicide to 10-500 million volumes of air is sufficient to sterilise a bacteria-laden atmosphere. The essential qualities of an aerosol are that it must be non-irritant to mucous membranes, non-toxic even after prolonged exposure, invisible and inodorous, non-corrosive and non-inflammable, persistent in air, inexpensive and, of course, rapidly bactericidal. The antiseptics which so far have proved to be the most efficient aerosols are resorcinol, hexylresorcinol and sodium hypochlorite. Efficiency as aerosol has no relation to the Rideal-Walker co-efficient of the antiseptic but does depend to some extent on the nature of the solvent, of which glycerine and ethylene- and propylene-glycol are the best.

Given a substance which fulfils the requirements outlined above *plus* an adaptable and quietly running machine to atomise the germicide in its most effective form, aerosols may have a varied sphere of usefulness—in theatres and picture-houses, in wards with a high incidence of streptococcal infections such as scarlet fever, war-wounds, burns, and ear, nose and throat infections; perhaps also in operating theatres and labour rooms. Meanwhile the rival claims of ultra-violet light must not be forgotten. With these new conceptions and methods, is it too much to hope that we may be on the threshold of an attack upon the incidence of respiratory infections similar to that which the water-carriage system for sewage ushered in for the intestinal diseases?

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A SERIES OF CASES OF CEREBRO-SPINAL FEVER

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A series of 48 cases of cerebrospinal fever were treated at the above hospital this spring with a mortality of 4·2 per cent. (two deaths).

The war emergency has made a complete investigation of all home conditions, etc., impracticable, but 50 per cent. of the homes or barracks were visited.

Etiology

Deficient ventilation with overcrowding was an almost, but not entirely, constant factor. Blackout arrangements left up all night often effectively sealed the room, air bricks and other ventilators usually being blocked.*

The factors responsible might be estimated as follows:

Deficient ventilation, 70 per cent.
Blackout largely responsible, 60 per cent.
Overcrowding in bedroom, 50 per cent.

The epidemic occurred chiefly during and after the cold weather; 40 per cent. of the children affected slept

* Cubic space and window measurements, etc., were taken.

in the parents' room either as a permanency or temporarily owing to the cold; 50 per cent. of *small* children affected had shared parents' bed. In no single case was the overcrowding necessary. Extra bedrooms were available but were not used. The value of separate rooms for children from infancy is a matter that deserves official publicity. The present moment is perhaps not ideal for such a campaign, owing to the fear of air raids.

History of prior illness occurred in about a quarter of the cases.

Mode of Infection

The cases came from a wide area of South Somerset—chiefly from the urban districts—but it was impossible to trace any direct contact between any of the cases except in two instances, one of which was doubtful. The cases were dotted all over the map. This is the usual finding, and one comes to the conclusion that cerebrospinal fever (or meningitis) is not in itself an infectious disease but rather a rare complication of a widespread, otherwise harmless, nasopharyngeal infection. Pneumonia comes in an exactly similar category. Only rarely does one "catch" pneumonia from a pneumonia patient. The difference might be regarded as a variation in the mathematical ratio of patient to carrier; very high in the case of diseases such as smallpox, intermediate in diphtheria, and low in cerebrospinal fever and pneumonia. These facts clearly affect the preventive treatment. In epidemic times carriers are found in large numbers with no evidence for suspicion; a very "Fifth Column" but even more difficult to eradicate, for in a few days these carriers may be free and an entirely new batch of freshly infected carriers abroad. Moreover, some groups of meningococci are comparatively harmless. The laboratory typing to establish a virulent group takes time and labour. Isolation of carriers is, therefore, practicable only in the most exceptional circumstances.

Isolation of contacts is probably wise in certain cases, *e.g.*, school children or comparatively closed communities.

Isolation of patients is sound procedure, partly because they probably harbour a virulent strain of the meningococcus but chiefly because they need immediate hospital treatment. The main preventive attack should evidently be directed to the education of the public in matters such as ventilation, avoidance of overcrowding, and proper care of the nose and throat. The presence on the market of so many irritating nasal applications credited with cold-curing capacities makes one wonder how many irritable defenceless noses there must be waiting to welcome the meningococcus. Chlorination if strong enough to be effective, of swimming bath water may have a similar harmful effect on the nose. The delicate nasal mucous membrane has a harsh time in this age of antisepsis which is admitting so slowly the sounder principle of simple cleanliness.

Diagnosis

Sixty-two cases were notified as cerebrospinal fever. The diagnosis was confirmed in 48 of these. The revised diagnosis in the other cases were :—

Two tubercular meningitis—2 deaths.
One purulent pneumococcal meningitis—Recovery.
Two pneumonia with meningismus—1 death.
One chronic alcoholic confusional dementia—transferred to asylum.

Recovery :—

Two "influenza" with lethargic symptoms.
One disseminated sclerosis with rubella and major hysteria.
One severe rubella.
One purpura.
One diphtheria.
One quinsy.
One enteritis.

The usual diagnostic features were observed in the confirmed cases, namely :—severe headache, delirium or coma; vomiting and constipation (occasional incontinence); photophobia; pyrexia—with relatively slow pulse; rash, herpes; foetor; neck stiffness and Kernig's sign, etc.

Some of the patients appeared stunned by the severe headache. The majority presented a typical appearance, lying on the side with knees drawn up, in a coma which became irritable delirium when they were disturbed. The milder cases were rational but mental disturbance was evident in every case.

Rash was a variable sign; 68 per cent. had a petechial rash, in some cases extensive, in others inconspicuous, possibly only a dozen small spots a few millimetres across with an indefinite distribution; 4 per cent. of the cases had well marked purpuric rashes, 24 per cent. had no rash and 8 per cent. had rashes of a variable erythematous character. Contrary to the usual findings, the extent and nature of the rash in this series of cases seemed to have little connection with the severity of the disease. Two cases with extensive haemorrhagic rashes were not unconscious or severe cases. Two cases with no sign of a rash were deeply unconscious, fulminating cases.

Foetor was a very constant sign.

Cerebrospinal Fluid

Lumbar puncture gave the following results :—

Turbid fluid under increased pressure, 88 per cent.
Clear fluid under increased pressure, 10 per cent.
Clear fluid under normal pressure, 2 per cent.

This last case was oddly enough a severe one. He was quite unconscious though in his first day of disease. Lumbar puncture repeated next day gave an opalescent fluid (still not under pressure) from which meningococci were cultured. He made a rapid recovery.

All the patients with clear fluid were moderately severe clinical cases in the first day of disease except one mild second day case. This was the only really mild case in the series, but she had a well-marked rash.

Dr. MacGaffey kindly worked out the colloidal gold curves for most of the cases. His observations will be found at the end of this article.

Treatment

After the first few cases the following general lines of treatment were followed :—

(1) Absolute rest with fresh air.
(2) Ample fluids and avoidance of constipation.
(3) Relief of intracranial pressure.
(4) Serum.
(5) Sulphapyridine.

Continuous, careful, detailed, painstaking and skilled nursing is an obvious necessity for these unconscious or semi-conscious patients. Many of these patients would have died but for the vigilance of the matron and nursing staff. The following routine treatment was carried out :—

(1) Admission to hospital and immediate lumbar puncture under general anaesthesia. Local anaesthesia is exhausting and painful. The slight risk of a general anaesthetic is, in the writer's opinion, well run. The nervous system is already on the point of exhaustion and needs tender treatment. Fluids can be given whilst under the anaesthetic, either by stomach tube or intravenously. This is an exhausting procedure for an irritable delirious patient without an anesthetic. Children often slept peacefully for several hours after the anaesthetic, and post-anaesthetic vomiting hardly ever occurred. Chloroform induction followed by ether was used as a rule. In one case Evipan was satisfactorily employed.

(2) Lumbar puncture was performed and cerebrospinal fluid was withdrawn (30 to 60 c.c.) until the pressure was normal. 10 c.c. of antimeningococcal serum or meningococcal antitoxin was gently introduced intrathecally followed by 20 c.c. serum intramuscularly. More serum was given next day if necessary.

(3) M. & B. 693 was the sulphapyridine preparation used. Conscious adults were given an initial dose of tablets (2 grammes) followed by 1½ grammes four-hourly for two or three days. The dose was then rapidly reduced and discontinued after six to nine days according to progress. In the majority of cases 2 grammes of the soluble sodium salt was given intramuscularly instead of the initial 2 grammes of tablets. This preparation must be injected deeply and well diffused, otherwise a slough may result. Children were given smaller but comparatively large doses.

(4) Morphia was given liberally to adults and chloral to children when necessary.

(5) Oxygen was given during the anaesthetic and for a short while afterwards.

(6) *Diet.*—Very frequent glucose drinks in fruit juice or milk and water were given in small amounts to avoid vomiting, but fluids were definitely pressed. Semi-solid foods, custards, junkets, ices were often given early, especially if vomiting was troublesome. Eggs in various forms were frequently given and no ill effect was observed while on heavy doses of sulphapyridine. Unconscious patients were given intravenous glucose saline by the *vacolitre* method.

(7) Despite blackout conditions and vigilant air raid wardens much fresh air was obtained. Ultra-violet light was avoided.

(8) Constipation was a difficult symptom. Liquid paraffin, magnesia or syrup of figs were given as a routine, and an enema every other day if necessary.

There appears to be a difference of opinion regarding the advisability of serum treatment. This was proved of definite value before the God of Chemotherapy was worshipped to the exclusion of all other gods. Sulphapyridine is a bactericidal agent. Serum is largely a detoxicating agent, invaluable in protecting the delicate, nervous tissues from the toxins of millions of germs already born. Sulphapyridine might conceivably hasten death in a critical case by more rapid destruction of meningococci with the liberation of their endotoxins. Death is, after all, due to this toxaemia. The writer believes that salvation is more likely to be achieved by sacrifices on the altars of both serum and sulphapyridine.

Lumbar puncture was seldom repeated (6 per cent.). Sulphapyridine seems to have rendered the old method of frequent lumbar puncture quite unnecessary. Clinical necessity is the only justification for a procedure so upsetting even in expert hands for these irritable patients.

Complications and Sequelae

Vomiting.—An alkaline carminative bismuth mixture was given, and if necessary the sulphapyridine was given by injection for a short while, but was never discontinued.

Sinovitis.—In 12 per cent. practically painless effusions into knees, elbows, wrists or ankle joints occurred. Three joints were affected in two of the cases. Rapid complete recovery of affected joints was invariably secured by simple rest with splints or sandbags.

Retention of Urine with Overflow, 4 per cent.—These patients also did not complain of pain, the condition was watched for and regular catheterisation soon resulted in complete cure.

Deafness, 2 per cent.—There was one case of deafness and this only partial. An ordinary voice could be well heard at times.

Prognosis

The average stay in hospital was 20 days, patients being discharged after walking for a few days. Negative nasopharyngeal swabs were obtained in military cases only. The majority appeared quite well on discharge, and several of the children seen after six or eight weeks were stated to be in exceptionally good health. Two of the older patients complained of lassitude, and about 10 per cent. complained of persistent slight headache. Two infants had slight squints but it seems probable that these were present before the attack of meningitis. The young patients usually recovered more rapidly and completely than those over 40. The two deaths were :—

(1) A marasmic infant of two months admitted moribund.

(2) A man aged 41 with extensive tuberculous fibrosis of both lungs. This patient and the two tubercular meningitis cases vomited copious "coffee ground" material before death. The writer is unaware it heavy doses of sulphapyridine are contra-indicated in tuberculous cases. There seemed no alternative treatment. Tuberculosis was suspected but not confirmed until after death in the two tubercular meningitis cases. This patient was known to be tuberculous. The rapid onset and purulent nature of the case decided the diagnosis of meningococcal meningitis, though no meningococci were found in the cereorospinal fluid. Unfortunately investigations for tubercle bacilli were not carried out.

Conclusion

In so far as this series of cases may be taken as representative and if a reasonably early diagnosis is made, it would appear that modern treatment is capable of arresting this disease before exudate is able to cause mechanical obstruction to the flow of cerebrospinal

fluid and before permanent toxic effects are produced. The fulminating cases leave remarkably little time for indecision, but their dramatic recovery is a cheering sight.

COLLOIDAL GOLD CURVES

By CRICHTON MACGAFFEY, B.SC., M.B., CH.B.

The colloidal gold test is found to be an accurate guide in this series in the great majority of cases. In four instances, however, it did not show meningitis where it was present. Three of these four cases were first-day cases with clear fluid. The other pathological findings, namely, the number of cells, protein and globulin were also in the normal range.

The fourth case was one of pneumococcal meningitis, and here the colloidal gold was inferior to the other pathological findings: there were 32 cells, all polymorphs, the protein was 80, globulin negative.

THE TASK OF SOCIAL HYGIENE IN WAR-TIME AND AFTER*

The circumstances of to-day make us realise that from the first both constructive and destructive impulses are present in the human mind and that there appear to be epochs when the destructive one simply runs amok. Of course this impulse is rationalised and it is claimed that the old state of affairs was so bad that it had to be destroyed before anything better could take its place. I do not believe that applies to a complex civilisation, but then I believe in evolution and not in revolution. When Germanic tribes and hordes from the Russian steppes overwhelmed the classic civilisation as they are menacing this, centuries of dark ages intervened before modern civilsation gradually emerged. Now misuse of scientific invention has enormously increased the powers of destruction; in three weeks Germany can devastate as much of her neighbour's land as she managed to do to her own through the whole of the Thirty Years' War. And I am not speaking merely of material destruction, however vast and extensive. We are perhaps getting a little tired of hearing the repetition of Napoleon's aphorism that in war the moral factor is to the material as three to one. Leaving aside the fact that Napoleon died before tanks were invented, I turn to the much graver question; what of the moral factors displayed in so many quarters in presumably liberty-loving lands? Has not that been the real tragedy of this war; incredible bravery faced with incredible treachery? "In the Beginning was the Word" and the sin of the 20th century has been the breaking of the word in human relationships, which derives its sanction from the supreme λογος. The situation was strikingly analysed by Dr. H. G. Baynes in his book "The Mythology" of the Soul" which was published a few months before these tragic happenings. I may paraphrase his views as follows:—

To-day there is a schizophrenic doubt developing at the very root of our way of life, concerning the value and meaning of the whole civilising experiment. It is impossible to live in the modern world without being affected, as by a contagion, with a condition of the collective psyche not unlike the state of severance and dissociation found in the schizophrenic individual. Acute transitional phases in history have always offered occasion for the biased fanatical personality to assume leadership, just because the collective psyche of the time demands these very qualities. The relative popularity of systematised schizophrenic material, such as James Joyce's *Ulysses*, and a considerable bulk of surrealist painting and poetry points to the existence of a large number of individuals who discover themselves best in a pathological looking-glass. Symptoms presenting an unmistakable analogy to schizophrenic pathology are widespread, arising from narrow, one-sided ideologies that must for ever seek to annihilate the other half of mankind, for collective fanaticism cannot live without scapegoats.

All the absolute collective values which ruled the world up to 1914 have undergone a wholesale landslide; standards which to our forefathers were absolutely binding have been doubted and reduced by the all-pervading principle of relativity. Nations as well as individuals adopt an almost cynical opportunism towards long-standing obligations; people have become hardened to the most shameless persecutions, betrayals and predatory invasions in the name of the deified modern State. Yer underneath the constantly shifting surface of this moral avalanche there is a profound longing for deliverance and for some undeniable realisation of truth. The cataclysm of 1914 marked the end of an epoc hand the beginning of a vast spiritual migration. Christendom received a terrible lesion, as though a sudden and violent storm had sundered man from his ancient roots, leaving him at the mercy of irrational collective forces. These changes are too near to us for accurate understanding."

History teaches us that empires formed by rapid conquest are seldom durable—witness those of Alexander and of Napoleon. Nevertheless when they disintegrate into fragments they do not leave the world where it was before. Looking back we can see now that from the French Revolution to the Battle of Waterloo the whole of Europe was in the melting pot. Now a melting pot may be anything from a witches' cauldron to a refiner's fire and the century that emerged from that melting pot of the Napeolonic wars achieved much in a changed world. We can also see now that ever since 1914 Europe has again been in the melting pot and that the interval between the two wars was only an armistice. The impetus of that great revolution cannot continue indefinitely. In time men will be satiated by this orgy of destruction, and the constructive impulse will again assert itself—what kind of new world will emerge? No one can say, and we must turn to the consideration of the constructive policies of this Council, in the hope that we may have some contribution to make to it. You will note that I said policies, in the plural, for as I see it we should have both a short-term policy for the duration of the

*Abstract of the Presidential Address delivered by Sir Walter Langdon-Brown, M.A., M.D., F.R.C.P., at the Annual General Meeting of the British Social Hygiene Council, July 8th, 1940. The full address will be published in *Health and Empire*, October issue.

war, and a long-term educational policy for the future. Not that the two are separate, for it would be a platitude to remark that our future and that of civilisation depends on the issue of the war.

The greatest enemy to be overcome is fear. For years insidious propaganda has skilfully instilled fear like a creeping poison until, as we have seen, nation after nation has just waited its turn like a rabbit paralysed by terror at the stealthy approach of the stoat that will presently seize it by the throat. It may well be that this could never have happened if, at the very moment when nationalism seemed at its very height, there had not been a subconscious feeling that nationalism itself will prove to have been decaying at the roots. But this I will say, everyone is suggestible, and every doctor knows that an unfavourable suggestion has a deeper effect than a favourable one. If one medical man has unfortunately given a patient the idea that he has a weak heart, ten denials by more competent men will not remove that impression. It is worth while then to enquire into the genesis of fear. It is the survival, and sometimes the perversion of a defensive mechanism of great antiquity and real value; alertness in the presence of danger, by which the whole organism is keyed up, ready for action. It is activated through the sympathetic nervous system which prepares the body for fight or flight. But if action be prevented the same mechanism produces fright. Then, as Crile puts it, we become like motor cars with the clutch thrown out; petrol is consumed, and the whole car may tremble from the violent action of the engine, but the car does not move. This is the scientific explanation of the fact that the best corrective of fear is action. Pessimism and fear are chiefly prevalent among those who are doing nothing or at any rate not contributing to the war effort. During the last war elderly gentlemen used to don G.R. brassards and march out on Sundays to dig trenches on Surrey hills; perfectly useless effort as far as the State was concerned, but highly salutary in its effect on themselves. Now the people we are desirous of helping are for the most part engaged on war work, but they cannot work for 24 hours in the day. They must have reasonable and pleasant recreation if they are to remain efficient in their jobs. That is why we are so insistent on the importance of providing the opportunities for this for both sexes, and favourable conditions for both sexes to meet. The old adage about Satan finding work for idle hands still holds. So while in no way relinquishing our task of combating venereal disease, we realise that there is a positive as well as a negative aspect of this, and that suitable occupation and health recreation are the best counterblasts to the dangers we are out to combat. Moreover we shall also be striking at the roots whence fear springs. In parenthesis, is it not true that one of the real defects of modern life is the incapacity experienced by so many to use their leisure reasonably?

I would like to speak of some underlying principles and to stress one or two important events in our work. One of the first things done was to decentralise the work in certain respects, dividing the country up into the same areas as those arranged for national defence and to devote attention particularly to certain areas in which there appeared to be special needs. Then we have taken active steps to do what we could to enquire into and to improve the conditions under which the women's auxiliary forces are working. The matter of port welfare has also received much attention; here the problems normally existing in peacetimes have been intensified, particularly by the extensive employment of ports which usually have not much to do. Then a special leaflet of information (by no means confined to V.D.) has been prepared, and translated into French, Flemish and Dutch, 2,000 copies of each translation being printed for the guidance of foreign troops now in this country. A small committee to deal with war-time problems has also been set up. Naturally recent developments in the international situation have necessitated an abrupt re-orientation of much of our work.

To quote from the editorial article in a forthcoming issue of *Health and Empire*:—

The tide of war has swept some of our problems aside and we are now faced with the prospect of huge military garrisons in this country probably amounting to millions, and of the constant and increasing call-up of more classes for training.

As the article goes on to point out, there is in addition a mobilised industrial army in need of our help. It is clear that the future welfare of the nation will be profoundly affected by the migration of populations and the dislocation of countless young men and women from their home surroundings. In all these ways there are great demands upon us to meet a national problem with quite inadequate financial resources. In spite of these limitations many thousands of Service men have been addressed in camps, halls and elsewhere; so far as facilities have been reluctantly given Service women have also been dealt with. Appropriate literature and films have also been made extensive use of. It will be realised from all this how extensively what I have called our short-term policy overlaps with our long-term policy. The essence of the former has been admirably summed up by our Secretary-General in these words, "Because personal responsibility is abnegated for the important purpose of defence, the supreme importance of maintaining personal responsibility for personal actions in social relationships must be full recognised."

As to our long-term policy, I presume that everyone here would agree that the root cause of the present disastrous state of Europe is a widespread loss of the sense of values. Apart from the re-establishment of religious values, which seems at present far to seek, this can only be done by education. And here, too, there is urgent necessity for taking stock. Professor Wood Jones addressing the University of Melbourne in 1937 said in the course of an appeal for life as intellectual adventure:—

If, after a critical survey of our methods, we come to the concluson that we are failing in this matter, I fancy we must admit that we, among a vast company, are possibly making contributions to the madness of a mad world, by turning out men replete with technical

knowledge, but hopelessly ignorant of the ethical and humanitarian implications of the science of living. We are dealing now with a thing vastly more important than the loss of aesthetic values and the mere vulgarisation of all those instruments of culture that physical science is providing for us. The principle involved in our latest perplexity is that of turning against humanity the very forces that might be used for human good. . . . Meanwhile, we are producing familiarity with a host of mechanical, commercial and technical subjects without concerning ourselves if there is an accompanying sensibility to their implications or an ethical appreciation of their application.

Professor Jung recently remarked somewhat cynically, "Fortunately in her kindness and patience Nature has never put the fatal question as to the meaning of their lives into the mouths of most people." Far too few are trained to use their brains for their own enjoyment. And to quote a third professor, Professor Strecker of Pennsylvania, "There are not enough vistas which encourage thoughtfulness. First the capacity to think, then a few quiet places in which to think, and finally some worth-while things to think about—this would constitute the prescription of mental hygiene." Instead of this totalitarian governments have proceeded on diametrically opposite lines, pollut- in the wells of education at their source, and offering slogans in place of the search for truth. Such methods condition the minds of the multitude for war, and war is the more dangerous to cultural values since it can be the most effectively organised and the most destructive of all mass movements.

It may be that my personal experience causes me to rate the value of biology as a subject for education too highly. But I do not really think so and I am encouraged in my view by that of others well qualified to judge. I shall never forget the quickening of mental interest and the wider view of life which biology gave me. I am therefore prepared to believe that it would have a similar effect on others. As I have said before if pride of place had not been given to physics and chemistry in the scientific curriculum, rather than to biology, human beings would have been more interested in the study of life than in destroying it. One can see quite clearly how this attitude of mind arose; physics and chemistry could obviously lead to discoveries that added to man's physical comfort, and their study was therefore to be encouraged. We have now learned that they can add still more to our discomfort and dangers. Biology, on the other hand, in addition to being in itself a fascinating subject, not only interprets Nature's methods of ensuring the renewal of life on the earth, but prepares the mind to be led on to link such facts with some of the highest spiritual values. And that is the object of our educational policy. To sum up the situation in the words of that thoughtful leading article to which I have already referred: —

"There are few demands which mean so much to the present and future welfare of the nation as this—the cry of the younger generation for that knowledge on which self-control can be built and calmness of mind and ability to concentrate on the greater tasks can be established."

HOSPITALS' REGIONALISATION SCHEME

A largely attended conference—representative of Voluntary Hospitals, Local Authorities and medical organisations, was held at the Royal Infirmary, Cardiff, on July 26th, when proposals for the regionalisation of hospital services in South Wales were under consideration and the objects of the Nuffield Provincial Hospitals' Trust were explained.

Sir William Jenkins, M.P., presided. He recalled the circumstances which had led to the appointment of the "Sankey" Commission of Enquiry into Voluntary Hospitals. The absence of co-ordination in hospital services was a real weakness and had resulted in many deficiencies in some areas and overlapping of services in others. The "Sankey" Commission had reported in favour of a scheme for the regionalisation of Voluntary Hospital services. The British Voluntary Hospitals' Association had thereupon appointed a Provisional Central Council for the purpose of implementing these proposals. That Council had done useful work but had been handicapped by lack of funds required to organise the scheme. Lord Nuffield, with characteristic foresight and munificence, had now initiated a fund which was designed to assist the promotion of Regional and Divisional Hospital Councils throughout the Provinces, Scotland, Wales and Northern Ireland. It was fundamental to this scheme that there should be co-operation between Voluntary Hospitals and local public health authorities. Considerable progress had been made and it was hoped that the steps already taken in South Wales would lead to the early formation of a Regional Hospitals' Council for that area. The British Hospitals' Association and the British Medical Association were co-operating with the Trust in the development of the Provincial Regionalisation Scheme. Sir William concluded with an earnest appeal for co-operation in the co-ordination of the hospital services provided by Local Authorities and voluntary effort with the object of ensuring the most effective service for the community requiring hospital treatment.

Sir Farquhar Buzzard said that, in his opinion, it was essential that the re-planning of hospital services should not be delayed. The changes which the war would produce in economic and social conditions would, he thought, be reflected in a largely increased demand for bed accommodation and hospital treatment. The Nuffield Trustees had appointed a Medical Advisory Committee, under his chairmanship, which would co-operate with the Regionalisation Committee of the Trust, in surveying the position of hospital services in the Provinces, Wales, Scotland and Northern Ireland, with special reference to the medical and treatment aspects of the problem. The Medical Advisory Committee was representative of research, specialist, general medical and public health services. The Trust had already received requests from a number of Voluntary Hospitals for an investigation into their existing service arrangements with the object of securing more co-ordination and the increased efficiency of the hospital services in their respective areas. The Nuffield Trustees were desirous that the Regionalisation Schemes they had been appointed to promote should be fully representative of all interests—Municipal, Voluntary, and Medical—concerned in the provision of hospital services. It was not the policy of the Trust to deal with applications for financial aid otherwise than through approved Regional and Divisional Hospital Councils. The progress already made indicated that all the interests concerned were desirous of co-operating for the purpose of developing a hospitals system which would provide an efficient and co-ordinated service. In all these schemes for the improvement of hospital services the requirements of the patient should be the first consideration.

Alderman W. Hyde stated that the munificent benefaction of Lord Nuffield was intended to be the nucleus of a fund which would provide for Provincial Hospitals' assistance on lines similar to those which the King's Fund made available to the hospitals in the London area. The Trustees were considering suggestions as to methods of augmenting the capital of the Trust and had already entered into negotiations with other bodies which would, it was hoped, result in an arrangement whereby additional funds for hospital services would be allocated through Regional Hospital Councils. In several areas Local Authorities had already accepted the principle of making contributions to Voluntary Hospitals through these Councils. Alderman Hyde emphasised the fact that the Trustees would not, ordinarily, be able to deal with applications for grants received direct from individual hospitals. These applications would be remitted through Regional Councils which would consider the effect of proposed hospital extensions upon the services in the area concerned and advise the Trustees accordingly. The activities of the Trust and the Regionalisation Scheme would not affect the internal autonomy of individual hospitals but were intended to promote close co-operation between all the hospitals in a region in order that the patients could be dealt with expeditiously with all available services at their disposal. The scheme for regionalisation of hospital services was a real contribution to national planning. The fact that it was being undertaken during the war was an indication that those who were concerned with the provision of hospital services were alive to the necessity for adapting these services to rapidly changing social conditions.

In the discussion which followed these addresses, reference was made to the fact that proposals for the establishment of three Divisional Hospital Councils for South Wales had already reached an advanced stage. A Provisional Committee was appointed for the purpose of preparing a scheme for the establishment of a Regional Hospitals Council for South Wales with which Divisional Councils would be associated.

Meetings of the Society's General Purposes Committee and Council.—The General Purposes Committee is to meet on September 6th and the Council on the 20th. Matters for submission to the Council should reach the Acting Executive Secretary not later than Thursday, September 12th.

THE SCHOOL MEDICAL AND DENTAL SERVICES IN WAR-TIME

The Board of Education on August 21st issued Circular 1523 under the above title as follows:—

1. The staff of the School Medical and Dental Services has already been reduced to some extent by the transfer of a number of medical and dental officers to the Fighting Services. Doctors and dentists have been removed from the list of reserved occupations, and Local Education Authorities should therefore be prepared for the withdrawal, whether immediately or in the future, of a further number of these officers. In some areas this may necessitate a temporary curtailment of the work of the School Medical and Dental Services.

2. The transfer of officers to the Fighting Services will deplete the staffs of some areas more than others. In the case of a small area the loss of one medical or dental officer may, if he is not replaced, involve the almost complete cessation of school medical or dental work, while in a neighbouring area the available personnel may suffice to maintain the service without appreciable curtailment. If, in the former area, replacement is found to be impracticable, the two authorities should consider the possibility of arranging a temporary pooling of their staffs. Even in the case of the larger authorities also, a temporary pooling of the staffs of neighbouring areas is recommended as a means of helping to overcome their difficulties.

3. The needs of reception areas which have recently received evacuated children will require special attention, as it is important that the school health services provided for these children should not be less complete than those provided for local children. In such areas the replacement of men called up for service with the Forces may be essential, and in some cases an increase of staff is likely to be needed. Some reception authorities may be able to obtain staff from the evacuation areas.

Medical Inspection and Treatment.

4. The aim of all authorities should be to maintain a complete service if possible, every effort being made to fill vacancies in the staff. The Central Medical War Committee, B.M.A. House, Tavistock Square, London, W.C.1, may be able to supply names of doctors available for school medical appointments. If replacement proves impossible, the scope of the work must be restricted but, as there will be greater depletion of staff in some areas than in others, it is not desirable that the Board should suggest a scheme of curtailment to be applied uniformly in all areas. They feel, however, that in every area endeavours should be made to ensure at least that the following arrangements are made:—

(i) Every child should receive a full medical examination as soon as practicable after admission to school. In view of the difficulty of detecting visual defects at this age it may be necessary to postpone vision testing until a later age, *e.g.*, 7 or 8 years.

(ii) Every school should be frequently visited—if possible at least once a term—by a medical officer for the purpose of carrying out a rapid survey of all children in the school. At these visits particular attention should be paid to ailing children and children specially presented by school nurses, teachers, attendance officers or parents. This rapid survey of all the children should have regard, *inter alia*, to the nutrition of the children and to the

selection of children who appear to be in need of supplementary nourishment. In view of the great importance of maintaining the nutrition of children in war-time, this is a branch of the work of the School Medical Service which should be maintained and, so as far as practicable, extended (*see* paragraph 3 of Circular 1520).

(iii) There should be no relaxation in the work of detecting and preventing uncleanliness.

(iv) All children requiring observation or treatment should be followed up and existing treatment facilities should be maintained.

5. Every authority should review the duties of the fully-qualified school nurses whom it employs to determine whether their special training is utilised to the best advantage during the present emergency. Some of the duties upon which they are employed in peace-time can be performed with little less efficiency by less highly trained personnel under instruction and supervision. For example, much of the work in connection with uncleanliness and pediculosis can thus be done, and the authority should now take steps to ensure that appropriate training is given to the necessary additional personnel.

The employment of school nurses on clerical work should be avoided as far as possible. The general employment of dental attendants, which the Board have recommended for many years and again in Circular 1485, would release many school nurses for other duties.

Dental Inspection and Treatment.

6. Authorities are urged to do their utmost to replace dental officers transferred to the Forces and so maintain the efficiency of the School Dental Service. Reference has already been made in paragraphs 2 and 3 to the possibility of obtaining assistance from neighbouring authorities and from authorities of evacuation areas, but the principal source of supply would appear to be the "pool" of dentists who have enrolled with the Dental War Committee, 13, Hill Street, Berkeley Square, London, W.1. If replacement is impossible and it becomes necessary temporarily to curtail the service, it should be recalled that few areas have had in the past a staff sufficient to provide dental treatment for all children requiring it. Restriction of the scope of school dental schemes has, therefore, often been dealt with in the Annual Reports of the Board's Chief Medical Officer, but it has been found that many school dental officers have never had brought to their notice the advice given in the dental chapters of "The Health of the School Child." Their attention should be drawn to the section entitled "Economy and Administration in Dental Schemes" which appears on pages 55 *et seq.* of "The Health of the School Child" for 1932, and it is also important that the contents of the whole of this Circular, and not merely paragraphs 6 to 13, should be communicated to them. This will naturally be done by the Senior Dental Officer, if one has been appointed by the authority, but if there is no Senior Dental Officer, it is recommended that the school dentists should be called together to consider this Circular and to work out a uniform policy for the area. In order that the services of the authority's dental staff may be utilised to the best advantage, the following recommendations are made.

7. *Inspection.*

Detailed inspection and charting should not be carried out during inspection sessions in the schools.

8. *Selection of children for conservative treatment.*

(*a*) After allowing for the time required for inspection and non-conservative treatment, the dental officer should calculate the number of children whom he can treat *thoroughly* by conservative methods in a year.

(*b*) He should then estimate, on the basis of the prevailing or expected acceptance rate, how many children should be offered conservative treatment to secure acceptances equal to the number estimated in (*a*) above.

(*c*) He should inspect *all* the schools allotted to him at intervals of *not more* than a year. All children who require the non-conservative treatment described in paragraph 12 should be given an opportunity of obtaining it, but offers of conservative treatment should be restricted to the number of children calculated in (*b*) above.

9. The children of parents who have already shown their appreciation of conservative treatment are the most likely to continue treatment during school age and after leaving school and, therefore, every effort should be made to treat them by conservative methods. The treatment of children whose parents have failed to take regular advantage of past opportunities should, as a rule, be limited to extractions. Where, however, there is evidence of a genuine change for the better in the parents' attitude, this rule may be relaxed provided that no child who has attended regularly for dental treatment is ever deprived of any opportunity for treatment in order to allow time for conservative treatment of children whose teeth have been neglected in the past.

10. If there is evidence of persistent neglect of oral hygiene on the part of the child, teeth which are technically saveable should not as a rule be filled. The conservative treatment of such teeth will usually prove ineffective. Any conservative operation with a considerable risk of failure should be avoided by school dental officers, and consequently few temporary teeth should be regarded by them as suitable for filling.

11. When selecting children for offers of conservative treatment dental officers in reception areas would some times find it helpful if they had particulars of the child's dental record. Authorities of evacuation areas should therefore endeavour, if so requested by the authorities for the reception areas, to supply this information in respect of individual children.

12. *Treatment by extractions.*

Every endeavour should be made to maintain existing facilities for extraction of teeth as a means of removing sepsis, relieving pain and preventing or correcting irregularities of the teeth.

13. *Economy of time.*

During their working sessions dental officers should not have to do clerical or other work which could be done by auxiliary personnel. It is therefore important that assistance should be provided for each dental officer (see paragraph 5 of this Circular and paragraph 9 of the "Conditions of a satisfactory School Dental Scheme," page 165, "The Health of the School Child" for 1933).

In the past, school dental officers have in some areas received the full school holidays, including Saturday mornings. Whilst recognising the specially exacting nature of school dental work, an appreciable increase in the number of working sessions per annum should now be expected from the dental staff where they have hitherto received all or a great part of the school holidays.

In county areas the length of the session is sometimes limited by factors outside the dental officer's control, but the time devoted to actual inspection or treatment should ordinarily not be less than two and a half hours. The normal mid-day interval may, therefore, have to be reduced, particularly during the winter months. Experience has shown that treatment sessions of more than three hours' duration are undesirable in any type of area.

Book Reviews

Notter and Firth's Hygiene. 10th Edition, revised by L. C. Adam, M.B., B.S., and E. J. Boome, M.B., Ch.B., M.R.C.P., D.P.H., T.D. London: Longmans, Green & Co. 1940. pp. x + 518. Price 12s. 6d. net.

In the book world an old friend in a new guise is always interesting, especially if the new addition appears after a lapse of nearly twenty years. Most of us were familiar with Notter and Firth's small book—which on reading did not appear to be so "small" as the popular title implied. The publishers have now reset the text, and it is produced in a manner in keeping with its scope and the excellence of the new illustrations.

The reviewer has compared this edition with its predecessor, practically page for page and paragraph for paragraph. It should be said that the most extensive alterations and additions have been made in the chapters dealing with maternal and infant welfare and school hygiene. This section was rather poor in the last edition, and the new matter gives a good description of the procedure in practice in the London area. New chapters have been added on the welfare of the blind; on teeth and oral hygiene, and on speech defects. The editors' wide experience make them well qualified to deal with these subjects. The chapter on sanitary law has been re-written, and in the process it has been reduced from 100 to 40 pages. From a rapid perusal of this chapter it would appear that the law—including of course the recent consolidating acts—is dealt with in a concise and straightforward manner, and that sufficient detail is presented to give a clear picture. There are also considerable alterations in the section on food. The notes on pasteurisation might have been extended to advantage. It is noted that "roasting" is not a correct description of the modern method of preparing meat for the table, and by implication one wonders whether we should not now talk of "the baked beef of Old England." In the remainder of the book additions and alterations are not numerous. We regret the passing of the description of the system of artificial ventilation so long used in the House of Commons. Perhaps the editors feel that the stock joke has had its day. There is a paragraph on rayon, and the Garchey system is described.

The careful reader will probably consider whether the book fulfils or exceeds its function. The preface to the first edition—now omitted—made it clear that the book was for non-professional and professional readers. In the ninth edition the authors said that the chapter on sanitary law was intended for "the head of a household"—words which are also omitted from the new chapter in the tenth edition. If the scope of the book is limited one could have wished that the editors had made drastic cuts in the 40 odd pages—practically unaltered from the previous edition—which deal in considerable detail with the chemical and bacteriological examination of water. The chapter on infectious diseases is considerably improved, though it is in places rather unbalanced. For example, the report of the L.C.C. committee on the diagnosis of diphtheria is quoted at length and almost *verbatim*, yet there does not appear to be any mention in the book of immunisation against that disease. While the chapter on vital statistics has been cut and altered, some of the weak points of the old chapter have not been removed. Incidentally, the "standard deviation" of a sample is nowadays usually represented by S, and not by σ, which refers to the infinite population.

Despite these criticisms, the editors have done their work well, and the book is now an improved production which should regain its former popularity.

The Virus: Life's Enemy. By Kenneth M. Smith, F.R.S. Cambridge University Press. 1940. pp. viii + 176. 7s. 6d. net.

In the past many distinguished scientists have written popular books on their particular subjects. Some of these books have passed into the limbo of forgotten things, and others have become classics. Appeal to successive generations is a severe test of excellence, and the man who would venture to predict such success in the future may be inconsiderate of his reputation.

Such reflections are not entirely inconsistent in a review of this book. There is no doubt that the author has succeeded admirably in the task to which he has put his hand, and one is tempted to observe that few of the scientists of the past could have had as their subject a branch of biology so diffuse and difficult, and yet so rich in practical rewards. The medical reader is inclined to regard the viruses as a species of ultra-minute bacteria, subject to the same biological laws which regulate the existence of their big brothers. Though one school does hold that certain viruses are highly specialised parasitic organisms, the balance of opinion is in favour of the theory that they are essentially nucleo-proteins. But Aristotle's boundary line between the animate and inanimate is very fine, and variations on the main theme represent them as being autocatalytic proteins, "loose" genes, transmissible alterations of metabolism, production of chromosomes, and transmissible toxins.

The interested reader will find in this book a clear picture of the present-day knowledge of the nature of viruses; of their transmission by contact, by water, wind and insects; of the methods—highly complex—used in their culture; and and of the diseases caused by them in man, in animals and in plants. Only a specialist could have covered this wide field intelligently in a small book, and the publishers are to be congratulated on their choice of the author, who has given such a readable summary of this difficult subject.

OBITUARY

Samson George Moore, M.D., M.R.C.P., D.P.H.

The regretted death of Dr. S. G. Moore on July 15th, which we briefly announced in our last issue, takes away another of the pioneer members of the public health service who inaugurated many of the practices universally accepted to-day. Dr. Moore was born in 1866 at Liverpool and took his M.B. of Victoria University, Manchester, in 1890 and his M.D. in 1905. He acquired the D.P.H. in 1895 and

was Assistant Port Medical Officer at Liverpool until in 1901 he was appointed Medical Officer of Health of Huddersfield, where he remained for the rest of his career.

His outstanding work was in the field of maternity and child welfare. He urged his council to obtain a local Act making the notification of births obligatory, which they did in 1905, one year before the general optional Act for the whole country was passed. His other original measure was the system by which his assistant medical officers visited mothers and children in their own homes. Another of his schemes, the voluntary notification of pregnancy was widely accepted by Huddersfield mothers. Dr. Moore showed that in the period 1916-28 the women who notified their pregnancies suffered a maternal mortality of only two per 1,000 against one of six per 1,000 amongst the other women of the town.

Dr. Moore joined the Society in 1896 and resigned in 1930, when he retired from practice. He was elected M.R.C.P. in 1929, and was a Milroy lecturer in 1916 and Chadwick lecturer in 1923.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

MATERNITY AND CHILD WELFARE GROUP

ARRANGEMENTS FOR FUTURE MEETINGS

At a meeting of the Executive Committee of the Maternity and Child Welfare Group on August 20th, it was decided that, in view of the present difficulties, the usual formal meetings with speakers should be abandoned for the present. Instead, monthly meetings will be held on the **second Friday of each month** in the evening, but these will take the form of an à la carte supper at a restaurant in central London at which items of current interest in maternity and child welfare will be discussed, but no arrangements will be made for a definite agenda nor for speakers. Meetings will probably be preceded by a short business committee meeting as necessary.

Will members please note that the first of such meetings will be on Friday, September 13th, 1940, at 7 p.m., in the Russ Bar, Russell Hotel, Russell Square, W.C.1. Subsequent meetings will be notified each month in PUBLIC HEALTH but notices will not be circulated individually to each member of the Group.

K. M. HURST,
Hon. Secretary.

Town Hall,
Upper Street, London, N.1.

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NORTHERN BRANCH.

President : Dr. A. E. Raine (Dep. M.O.H., Durham C.C.).
Hon. Secretary : Dr. J. A. Charles (M.O.H., Newcastle-on-Tyne C.B.).

The Annual Summer Meeting of the Branch was held at the Royal County Hotel, Durham, on Saturday, July 27th, 1940. The President was in the chair and was supported by nineteen other members. The minutes of the meeting held on May 17th, 1940, were read, confirmed and signed.

Correspondence.—(*a*) The Honorary Treasurer informed the meeting that ten guineas of the Branch Funds had been invested in War Savings Certificates.

(*b*) *Tuberculosis Group of the Society.*—Dr. W. H. Dickinson was unanimously re-elected as the representative of the Northern Branch on the Tuberculosis Group of the Society.

Election of Officers for the Session 1940-41.—The Chairman proposed, and it was unanimously agreed that Dr. James Grant, Medical Officer of Health, Gateshead, be nominated President of the Branch for the session 1940-41.

On the motion of the President, seconded by Dr. Dickinson, it was unanimously agreed that Dr. George Hurrell, Tuberculosis Officer, Newcastle-upon-Tyne, be Vice-President for the session 1940-41.

Dr. J. A. Charles was unanimously re-elected as Honorary Secretary and Treasurer for next session, and on the motion of Dr. Dawson, a special vote of thanks was accorded to Dr. Charles for his services.

Dr. J. A. Charles was re-elected as the Branch Representative on the Council of the Society.

Liaison with the British Medical Association, 1940-41.—(1) Drs. W. H. Dickinson and James Grant were re-elected as the direct Public Health Representatives on the Council of the North of England Branch of the British Medical Association.

(2) Drs. Madge Hopper and E. F. Dawson-Walker were elected as the Branch Representatives on the Executive Committee of the Newcastle-upon-Tyne Division of the British Medical Association.

It was decided to invite the North of England Branch of the British Medical Association to elect a general practitioner representative to serve on the Northern Branch Council of the Society. The Hon. Secretary was instructed to express to the North of England Branch of the Association the warm appreciation of the services of Dr. James Hudson during the past session, and to state that his re-appointment would be welcome.

Income Tax—" Relief Claims.—A member raised the question regarding claiming relief from income tax on the annual subscriptions paid to medical societies.

It was agreed that the Honorary Secretary write to Headquarters for information on the matter.

Cost of Living Bonus.—The above was discussed, and as the application of the bonus by Local Authorities in the Northern Branch Area appeared to vary considerably, the Honorary Secretary was instructed to ask the Executive Secretary whether he had any information as to how the bonus had been applied by Local Authorities in other areas.

APPOINTMENTS IN DEFENCE SERVICES

CAITHNESS, J. F. (A.M.O.H., Norwich M.B.), Lieut. R.A.M.C.

MACKAY, JANET H. (A.M.O., M. & C.W., Durham C.C.), Lieut. R.A.M.C.

1300