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Editorial

The Future Hospital Service

The Minister of Health's recent statement of the Government's intentions was welcome as giving an official blessing to the efforts of all the bodies which are at present devoting much time and thought to this very important subject. Few, if any, will quarrel with his broad policy as outlined in the following sentences:—

"It is the objective of the Government as soon as may be after the war to ensure that by means of a comprehensive hospital service appropriate treatment shall be available to every person in need of it. It is accordingly proposed to lay on the major local authorities the duty of securing, in close co-operation with the voluntary agencies engaged in the same field, the provision of such a service by placing on a more regular footing the partnership between the local authorities and voluntary hospitals on which the present hospital services depend. The Government recognise that to achieve the best results and to avoid a wasteful multiplication of accommodation and equipment it will be necessary to design such a service by reference to areas substantially larger than those of individual local authorities."

The Minister paid tribute to the work already accomplished and envisaged by the Nuffield Provincial Hospitals Trust and intimated that he proposed to institute a survey of the hospital service in London and its surrounding areas. The Minister's statement had on the whole a "good press," people of good will realising that the intention was to get the best service for the people irrespective of which cherished shibboleths or vested interests had to be sacrificed. Subsequent debate in the House showed that the majority of speakers approved the broad principles, although there were the usual sweeping generalisations from advocates of both schools of thought whose intolerance was equalled by their obvious ignorance of fundamental facts.

While some exception has been taken to the duty of securing an adequate service being placed on the larger local authorities, we cannot see that any reasonable alternative offers. Those who are anxious about the future of the voluntary hospitals may, however, feel perturbed at the thought that Exchequer money for any new development will came through the local authority channel. We must pre-suppose honesty of purpose and singleness of aim in the composition of these authorities: we must admit that they for the most part have the machinery by which survey, classification, and adaptation can be carried out. Such of them as prove to be actuated by unworthy motives or who are backward will in the present temper of the Ministry and of the people be summarily dealt with.

A recent P.E.P. broadsheet—and we should like to pay tribute to the uniform excellence of these issues—summarises the position well: —

"War-time developments are provoking an extraordinary amount of discussion among doctors, nurses, and all who work in the field of health as to the purpose, scope, and organisation of the medical services. A large number of groups to discuss post-war reforms have come into being, the most important of which is the Medical Planning Commission, composed of doctors, representing all the major medical organisations and set up on the initiative of the British Medical Association. So far opinion is generally united on only one point: that post-war hospital and specialist services must be controlled and planned on a regional basis. But how the hospital regions are to be defined, what type of regional hospital authority is needed, in what way voluntary and public hospitals are to fit into a regional scheme, are undecided issues. . . . Yet the building of a unified national hospital service, combining the best features of both public and voluntary hospitals at their best, is almost certainly not going to be achieved by co-ordination alone, without changes in the powers and duties of present hospital authorities, voluntary and public alike, and without changes in the ownership of individual hospitals. In the long run it will certainly involve the creation in each region of one authority, not merely to bring about collaboration between existing hospital authorities, but to exercise a great part of their powers of planning hospital services. Whether such an authority should be the agent of a central government department, or a quasi-autonomous body on the B.B.C. model, or an elected regional council which would take over many powers from smaller local authorities, are matters which at present are hotly debated."

The Minister used the term "comprehensive" while P.E.P. appeals for a "unified" hospital service; so long as we can achieve the former the latter, with its implication of a single centrally-controlled service, can wait. Evolutionary rather than revolutionary development has always been characteristic of our race, and if we can so rationalise our hospital service that completely satisfactory facilities for the sick, with a square deal for the medical and other staff involved, will be provided, it is not urgently necessary to worry overmuch as to who owns or manages the components. If experience shows that the vested interests and dog-in-the-manger attitude of either the voluntary or the municipal factions prejudice the service then will be the time, perhaps, for compulsion.

Some straight speaking now may clear the air and dissolve some of the prejudices of the "municipal" and "voluntary" extremists. To begin with there is, as P.E.P. states, no voluntary or municipal hospital system: —

"Britain entered the present war with over there thousand hospitals but with no hospital system. There were not even two hospital systems one voluntary the other public. For the thousand and more voluntary hospitals were self-governing institutions jealous of their independent status, and only loosely associated with each other. And Britain's two thousand public hospitals were administered by hundreds of separate local authorities under the remote supervision of the Ministry of Health and the Department of Health for Scotland."

And what does "voluntary" mean as applied to hospitals? It does not connote free treatment: a larger sum per head is paid by the patients in the London voluntary than by those in the L.C.C. hospitals. It does not mean that any sick person can get admission: unless his condition is an "emergency" or of clinical interest the patient has to go to a municipal hospital, which has a statutory obligation to admit, or go on the waiting list. Voluntary does not mean that the consulting staff give their services from purely altruistic motives, although, as in other walks of life, many give ungrudging service in greater measure than their conditions of employment stipulate; everyone knows that without a hospital appointment success in private consultant work is almost impossible. The hospital committees and collectors do for the most part give their services voluntarily, but there is no good hurking the fact that they do this for a variety of motives fulfilment of the urge towards philanthropy, local kudos, the prospect of "acquiring merit" and something more tangible in the shape of an appointment or an honour. And it must be remembered that the members of committees of municipal hospitals and local authorities are in exactly the same boat, and do their work without financial recompense but with an eye on a place in the local sun. Again, the term "voluntary hospital" does not connote an institution of the type of, say, Guy's or Edinburgh Royal. The teaching hospitals are in a class by themselves, but there are many extremely unsatisfactory voluntary hospitals. Similarly, there are the widest divergencies between municipal establishments. Some authorities have been keen and progressive and others deplorably backward. As a result, there are hospitals of all grades between the unappropriated infirmary and, say, North Middlesex, all generically classed as municipal hospitals, the one selected as an example depending on the bias of the commentator. The claim has been made by leading municipal representatives that the "man-in-the-street" is anti-voluntary and pro-municipal. There never was a greater mistake. With all respect to the magnificent achievements of the L.C.C. since 1929, the Londoner, apart from the politically minded exception, is more aware of and more interested in the old-established voluntary than in the recently developed municipal hospital. The same obtains throughout the country. For instance, a fairly small Northern County Borough which has a popular and efficient modern municipal hospital has just collected for its local voluntary hospital a sum equal to the product of a fourpenny rate in answer to an appeal from the Mayor, who is an enthusiastic supporter of the Council's own hospital. It is clear that the differences between the two separate types of hospital are not so great as the prejudiced on either side would make out. All concerned must get down to bed-rock, review their preconceptions, and discount emotional bias: then will the possibility of a unified as well as a comprehensive hospital system not be so remote.

The Minister, appreciating that the position in London and its surrounding area is not analogous to that in the rest of the country, and that the Nuffield Trust does not operate there, announced that he intended to institute a survey which would form a basis

for future plans. Action taken in London may make or mar the scheme for the whole country; the position is admittedly difficult. The L.C.C. and several, but not all, of the Home County Councils have since 1929 completely revolutionised the poor-law hospitals which they took over, and are gradually welding them into a service which provides facilities for the public better than would have been thought possible in the time. They are far from perfect yet: the best method of medical staffing, classification, the best type of administrative control, the extent to which politics should or does affect policy, are some of the matters on which much careful thought is being expended. And London has in addition to many other good voluntary hospitals twelve famous teaching hospitals of long and honourable tradition and large vested interests. They hold a high place in the hearts of the public earned by years of first-class educational, research, and curative work; they have, moreover, very strong influence in the highest quarters. Is it possible for some sort of merger to be made? Compulsion brought to bear on either body would not in our opinion produce the result that all are aiming at. Granted that this aim is the provision of a satisfactory hospital service, linked up, we hope, with the personal health services of the Boroughs and eventually domiciliary medicine, is it too much to hope that mutual willingness to co-operate, divorced from all thought of selfishness or of personal or party aggrandisement, should produce a plan which would serve as an example for the world? "There is no limit to the good one can do if one doesn't care who gets the credit" is a trite saying but one that is relevant to the whole matter.

The Minister has not yet announced the constitution of his surveying committee but has promised that they will be "competent persons." Theirs will be a colossal and invidious job. Is it too much to ask that they should be selected for their personal qualities, knowledge, and experience and not for their real or supposed allegiance to any scheme or system? They must be, so far as possible, unprejudiced, free to advise without fear or favour, and answerable only to those who select them—that is, the Minister and his immediate advisers. Granted that these conditions are fulfilled, we are convinced that they will find all authorities, all hospitals, and all well-intentioned individuals eager to help them towards a successful issue of their arduous task.

The Scabies Problem

There is no need in this journal to emphasise the importance of scabies at the present moment. There can hardly be a public health authority anywhere in the country that is not seriously concerned with the prevention and cure of this pest. The reception areas find that among their evacuees there are a considerable number of cases, which in their turn infect the local inhabitants; while in the evacuation areas, especially those which have suffered severely and in which a large proportion of the population have spent their nights in shelters, the disease, always present although kept more or less in check, there has been a very large increase in the numbers affected. There is no doubt that the problem in the evacuation areas is more difficult than in the reception districts. Probably medical inspection of the evacuees would do much to keep scabies from seriously infecting those in the reception areas, and at the outbreak of war this measure was carried out fairly thoroughly with beneficial results. But when in the autumn of 1940 air attack became really serious there was little attempt made to carry out medical inspection of the evacuated population, and many rural districts became seriously infected with scabies. In the evacuation areas the problem has been still more troublesome. The crowding together of large numbers of individuals without proper facilities for personal cleanliness has provided the most favourable possible conditions for the propagation of the disease, with the inevitable results. Then, again, there is a third aspect of the problem—namely, the prevalence of scabies in the Army itself. In a sense this might have been anticipated, for scabies has always been a pest of armies in the field. In the armies of the French after the revolution it was almost universal, and the great Napoleon himself is believed to have been a victim; while during the war of 1914-18 a very high proportion of admissions to hospital in France were for scabies and pediculosis. But the circumstances of the last war are not parallel with those of the present: the British Army so far has been able to live in buildings and billets provided with facilities for personal cleanliness often of a standard surpassing that to which the soldier has been accustomed in peacetime, and he has escaped the dirt and discomforts of trench warfare.

Naturally the problem of a disease which has claimed probably a million cases during the last two years, and has caused an incalculable loss of working hours, has been studied by many investigators. Our present knowledge of the parasitology of scabies will be found well summarised in an article in the *British Medical Journal* of September 20th, 1941, by Professor Buxton, who has embodied in it much of the work of J. W. Munro carried out during the last war. In the October number of PUBLIC HEALTH was an interesting contribution from Dr. C. W. Dixon, who indicated some of the erroneous hypotheses still current about the disease and made suggestions for improving our control over it. Contrary to the usual opinion, his view is that the soldier usually contracts scabies from the civilian and not vice versa. Numerous articles have been written on the treatment of the disease by medical men struggling with masses of patients, mostly advocating some new from of treatment. Many of these seem to have been inspired by the seductive voice of the chemical manufacturer's representative. It is probable that much more depends on the skill with which the remedy is applied and on the knowledge of the disease possessed by the therapist than on the particular preparation employed.

From the welter of publications on this problem it is now possible to deduce certain principles which may be regarded as established. First, it appears that scabies is essentially a disease spread by personal contact; sometimes it is of venereal origin, more often not. Young children are often the first members of a family to be attacked, catching the infection in the common rough-and-tumble of playful youngsters.

There is reason to doubt the importance of the disinfection of bed-clothes and even of underclothing in preventing the spread of infection. The acarus is only able to live for so short a time apart from its host that reinfection from blankets and articles of apparel is considered an improbable cause of the return cases which are such a bugbear to medical officers. Far more likely is a reinfection from cases which have escaped notice. During the 1914-18 war MacCormac, who saw a vast number of cases in France, emphasised the importance of disinfection of blankets, etc., and the army authorities still insist strongly on this practice. As far as scabies is concerned Kenneth Mellanby* believes this to be unnecessary. He is, however, not dogmatic on this point and further work is needed to confirm the valuable results his research has achieved. But since scabies is frequently associated with pediculosis, especially in the case of armies in the field, and also with other diseases, one cannot advise the discontinuance of this salutary practice. Under the conditions of civil life personal cleanliness appears to be an adequate safeguard, and among the most important preventive measures education in hygiene and the strengthening of the desire to be clean as a long-term policy cannot be too much emphasised. To illustrate this doctrine may be mentioned the rarity with which nurses, whose hygienic standards are of course very high, become infected, and Dr. Dixon points out how various army units vary in their percentage of scabies cases according to the desire for cleanliness displayed by the men. But it will be a long time before health education abolishes scabies, and meanwhile the therapeutic problem urgently presses.

The ideal remedy for scabies yet remains to be found. It should act quickly, be easy of application and unlikely to produce dermatitis, and it should be cheap. The time-honoured remedy is sulphur, and notwithstanding its well-known disadvantages it is doubtful whether there is as yet anything which can effectively take its place. It can, of course, be employed in various forms, and which of them is best is open to discussion. There is no doubt that the ung. sulph. of the *British Pharmacopoeia* is unnecessarily strong and likely to promote dermatitis. It can be broken down to one quarter of the official strength and still remain effective and be less likely to irritate the skin. Other forms of sulphur treatment are the use of ointments of potassium polysulphides, the lather of sulphur soap, and sulphur baths. Besides sulphur, benzyl benzoate and derris root have of late been well spoken of, especially by those who have introduced them. It is clear that all these substances may form the basis of successful treatment, but, as has been said above, success depends much more on the skill with which the treatment is applied than on the particular preparation employed. For general use benzyl benzoate may be ruled out on the ground of expense and the difficulty of obtaining it; and we understand that derris root is not readily available. The old and classical treatment with sulphur ointment suitably diluted is undoubtedly efficient, but has the drawback that it requires three days to complete. Treatment with derris root powder is effective, but as it has to be applied three times in one day this necessarily means hospitalisation of the patient. On the whole we are inclined to think that the polysulphide ointment is the best preparation for ordinary use: it consists of 12·5 per cent. of potassium polysulphides in a base containing 1·5 per cent. zinc oxide and made up with vaseline, etc. The patient is given a hot bath and the burrows are laid open with a nailbrush—an essential procedure. After the patient is dried, the ointment is applied to the entire surface with a brush. The preparation is sufficiently soft to permit this and need not be rubbed in. The patient is then dressed (those parts which are not covered by clothes are bandaged) and sent home to bed for twenty-four hours. The patient is seen again the next day, is given clean clothes, and if necessary is given a soothing zinc cream or lotion to allay any irritation which may have arisen. But very few patients suffer from sulphur dermatitis after a single day's treatment. Most cases are cured, but subsequent inspections are recommended as a prudent measure. Perhaps the most important factor in the successful handling of the disease is that the medical officer in charge should be expert at diagnosing it, in order that he may detect slight cases, thereby minimising the spread of infection, and detect those which are not scabietic and so avoid aggravating an existing dermatitis, to the disrepute of the treatment employed.

The Nutrition Society

It was announced in the medical Press* last month that a Nutrition Society has been formed. Such a move had indeed been contemplated just before the outbreak of the war, and the final step now taken followed closely upon the circulation of a letter signed by the distinguished heads of a number of research centres in this country. The letter states that many research workers were in favour of holding meetings to discuss nutritional problems, and that "such meetings would serve a useful purpose, especially in enabling workers studying different aspects of the same problem in agricultural and medical institutions to meet and help each other with information and constructive criticism." The response to the letter was immediate and a provisional committee was formed under the chairmanship of Sir John Orr. The first meeting of the society was held in the Physiology Department of Cambridge University on October 18th, and the attendance of some 250 people was testimony to the wide interest in the subject and bodes well for the future of this newcomer to scientific bodies. The meeting was devoted to papers and discussion on the evaluation of nutritional status. There has been a tendency among practising doctors to prescribe individual vitamins or nutrients such as glucose rather as they prescribe individual drugs, but, as Dr. C. Crowther pointed out, the effect of adding a single nutrient to a diet must depend on the nature and amount of other nutrients in that diet—a point brought out by other speakers when they stressed the relative

* *Brit. med. J.*, 1941, **2**, 405.

* *Brit. med. J.*, 1941, **2**, 521.

importance of multiple deficiencies compared to simple, uncomplicated avitaminoses. The speakers in the clinical section—Dr. W. C. W. Dixon, Dr. R. H. Dobbs, and Dr. B. S. Platt—showed that such deficiencies, single or multiple, may come to the surface under the effect of physiological stress, of heavy manual labour, or of the onset of hot humid weather. The part played by vitamin B_1 in carbohydrate metabolism makes it plain how an extra call on muscular reserves may catch out a person with a submarginal intake of this food factor. Dr. John Hammond showed how by depriving animals of different dietary constituents at different periods of growth their shape as well as their weight may be altered. The "human" nutritionist is led to speculate on the lesson this observation may have in the feeding of infants, children, and adolescents, and to reflect that as a result of food deficiencies there may be other changes of shape than, for example, the malformations of gross rickets.

The pooling of knowledge from so many varied sources in the Nutrition Society should prove a sharp stimulus not only to the laboratory worker but also to the worker in the field, especially the clinician and the medical officer of health. The latter has, indeed, wide opportunities, of which he has already made valuable use, of large-scale investigations of the nutritional status of both adults and children in the area under his administration. Through the school medical service the effect can be observed of compulsory mid-day meals upon the general health of the children and upon the minor defects so common among the poorer sections of the population. It is to be hoped that those medical officers of health with a special interest will join the Nutrition Society and make a contribution to its deliberations which no other section of the profession is in such a favourable position to make. Particulars can be obtained from the Honorary Secretary, Dunn Nutritional Laboratory, Field Laboratories, Milton Road, Cambridge.

Parliament and Health

Although the debate on the health of the nation in the House of Commons on October 21st largely escaped the attention of the lay Press, it was not surprising to find that *Hansard* for that date was soon out of print. Five medical members of Parliament took part in the debate, and the Minister of Health replied at length. On all sides it was realised that health governs industrial production as directly as it governs the fighting quality of armies. There may have been similar debates during the last war, but they can hardly have had the same note of urgency or shown the same recognition of the vital character of health services.

The debate was cheerful in tone but on occasion tended towards complacency. Epidemics of serious character have not appeared, but it is well to "touch wood." The absence of serious epidemics during the first two years of war is remarkable when the factors favouring their onset are considered. During those two years a large proportion of the population has been redistributed, re-housing has been suspended, black-out and transport difficulties have added to nervous strain, and during the second year large numbers of city dwellers have spent their nights in shelters. There have been changes in diet—withdrawal of certain foods, lessened amounts of others; but restriction of some foods has not been without value.

Two danger signals were mentioned in the debate. One is the rise in infant mortality during 1940; but this was only on the exceptionally low rate of 1939, and the rate still remains low in comparison with preceding years, while in maternal mortality a new low record has been created. The other danger signal is a certain increase, again in 1940, in the death-rate from tuberculosis, though in the first quarter of 1941 there was a reduction of 7 per cent. compared with the corresponding period of the year before, during which, however, weather conditions were exceptionally rigorous, causing a high mortality from all respiratory diseases. Dr. A. B. Howitt, who opened the debate, declared that a great mistake had been made in evacuating so many cases of tuberculosis from sanatoria at the outbreak of the war; steps have now been taken to get these people returned, but the damage, if any, so far as their home contacts are concerned has been done. Dr. Haden Guest mentioned some recent findings in Glasgow showing an increased incidence of pulmonary tuberculosis and an increased mortality therefrom. The Glasgow survey† attributes this to the effect of long hours, overwork, strain, and ill-spent leisure, and mimimises the effect of malnutrition. Dr. Guest said that to combat tuberculosis and other ills of wartime life medical officers of health should be "switched over" to the supervision, control, and direction of the conditions of life of people employed in industry, just as the medical officer in the Army is employed to keep the men "fighting fit." This is a tall order, and the Minister later reminded the House of the "extraordinary variety of new duties which medical officers of health have had to shoulder."

Inevitably the question of voluntary *versus* State hospitals figured largely in the debate. Both had their defenders, and nobody seemed satisfied with the present position or thought it likely long to survive the war. Mr. Messer, the Labour member for South Tottenham, who is also a member of the Middlesex County Council, described the voluntary hospital as an anachronism, and Dr. Edith Summerskill attacked it with energy if not with discrimination. Sir Francis Fremantle, who as a former president of the Society of Medical Officers of Health might be supposed, if he had any bias at all, to have it in favour of the State or municipal institution, deprecated any talk of sweeping away the voluntary hospitals or bringing them entirely into a State system, and he spoke of the wonderful services which have been developed in these hospitals notwithstanding their inequalities and deficiencies. He wanted to see hospitals, whether voluntary or municipal, become collective centres of all the services required for health. He thought that the medical officer of health should have his offices there, that clinics instead of being scattered over the locality should be concentrated there, and that the hospital should be the centre of research, of private practice,

* *Brit. Med. J.*, 1941. **2**, 437.

and of preventive medicine. Most of the speakers—Capt. G. S. Elliston, Prof. A. V. Hill, Dr. Howitt, and others—looked for some compromise between the two systems—"partnership" was Mr. Brown's own word. One thing which evidently rankles in the minds of friends of the municipal hospitals is that the head of each sector in the London region should be the representative of a voluntary hospital. Mr. Brown pointed out, however, that apart from this highest seat of all there was a duality in the E.M.S. The deputies of the chief officer are one from the voluntary and the other from the municipal hospital, and the same applies to the lay officers and matrons.

Finally there is propaganda, which bears the same relation to the fight against disease as the broadcast bears to the war front. Mr. Brown commended the work of the Central Council for Health Education, in particular its pamphlets dealing with dirt and disease and with contagious skin affections, which pointed, he said, to the need for more inspectorial powers for medical officers of health. He referred also to the leaflets on influenza, lice, bugs, diphtheria, and to the pamphlets entitled "Health in the Shelter" and "Health for A.R.P. Workers." "I regard this health effort," he said, "as a magnificent opportunity for spreading knowledge about health."

School Meals

The rationing of food is the fairest and most logical method of distribution in a time of limited supplies; its disadvantage is its lack of flexibility. It would be a perfect method only if every person had equal needs, but actually, even in the smallest domestic unit, needs are far from equal. The growing child requires a larger proportion of certain foods for body-building purposes. Many parents, no doubt, make the necessary adjustment, but not all parents are knowledgable or wise; some are not even solicitous.

The new "push" for school feeding recently announced by the President of the Board of Education and, in an expanded statement, by the Minister of Food is really a national effort to overcome the defect of the coupon. It can be only a partial measure, because there are other members of the community besides school-children—for example, adolescents—who have special needs. Moreover, even with the utmost energy and goodwill on the part of local education authorities it must be some time before it can be brought into effect. But the statement shows the determination of the Government to ensure an approved meal for the school child, and so it was received with general acclamation, and neither in the Lords nor the Commons was a word said about the delegation of parental responsibility.

There are five million children in the elementary and secondary schools, and up to now only 300,000 have been receiving school meals. To encourage a large-scale increase the rate of exchequer grant to local authorities is to be raised by 10 per cent., bringing it to a minimum of 70 per cent. and an average of 80. School canteens are to have first claim upon foodstuffs to produce balanced meals of the type recommended by the medical and scientific advisers of the Ministry of Food. Cooking depots capable of providing 400,000 meals a day are to be set up, but obviously these will have to be largely supplemented by individual or central kitchens. The provision of service may be a difficulty. Imagine the army of washers-up of five million mugs and platters—unless the children do it themselves, which might well be considered. Even the provision of utensils may not be easy. And all this will have to be carried through amid the competition for supplies, labour, and kitchen equipment of those responsible for canteens for service, factory, and transport workers and for evacuated persons. To expand a service at present covering 6 or 7 per cent. of the school population to somewhere near 100 per cent. will tax the resources of education departments to the full. The extension of the milk scheme, which is also to be made, is more likely to yield immediate results, although the difficulty here may be not so much in obtaining the milk as in obtaining the bottles. At present 60 per cent. of children are taking milk in the schools. The exechequer grant for this purpose now stands at 100 per cent. as against the new grant averaging 80 per cent. for school meals.

These tasks will cast new burdens upon local authorities. But the astonishing feature of the war has been the capacity of local authorities to learn new duties from new occasions. In this drive for communal feeding of the school population, which may well become a permanent feature of our social life, they will be helping to save the next generation from malnutrition (not merely a wartime phenomenon), so that here at all events the ill wind of war has blown good.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

BOOTLE C.B.: Dep. M.O.H. & S.M.O., Dr. Maurice E. Hocken. Salary £750, rising to £850 p.a.

BRIGHTON C.B.: A.M.O.H. (Civil Defence), Cdr. G. E. D. Ellis, O.B.E., R.N. (ret.). Salary £600, plus car allowance of £50 p.a.

LIVERPOOL C.B. (Cleaver Sanatorium): Acting Med. Supt., Dr. J. A. Rushworth. Salary £900 p.a. and usual residential emoluments.

SHROPSHIRE C.C.: Dep. C.M.O.H., Dr. W. Stewart (Dep. M.O.H., Southampton C.B.).

WARWICKSHIRE C.C.: Dep. C.M.O.H. & S.M.O., Dr. James L. Newman (Chief A.C.M.O.H., West Sussex C.C.).

SCOTTISH APPOINTMENT

Dr. James Macfarlane, of the Department of Health for Scotland, has been appointed Medical Liaison Officer at the Scottish Office, Fielden House, London. He will maintain liaison with the Ministry of Health, and medical branches of the Service Departments and other Government Departments located in London.

Dr. Margaret Emslie is now Captain, R.A.M.C. acting Staff Capt. to Lt.-Col. Letitia Fairfield, who is woman medical adviser to the War Office, especially in relation to all matters concerned with the A.T.S.

HOSPITAL ORGANISATION AND TREATMENT OF GAS POISONING

By JAMES M. MACKINTOSH, M.D., D.P.H.,
Professor of Public Health, Glasgow University

Every hospital which is ready to undertake the treatment of casualties should have on its staff at least one physician whose duty it would be to take charge of the reception, sorting, and treatment of gas cases. In co-operation with the Medical Superintendent this officer should supervise the whole organisation, including the maintenance of equipment and the training of staff. He should arrange to hold exercises at regular intervals so as to ensure that all members of his team know how to use an oxygen apparatus and are able to deal intelligently with the reception and sorting of cases. The arrangements need not be elaborate or expensive; indeed there is a real value in simplicity. It is no doubt essential for gas identification officers to have an expert knowledge of the various types of gas which the enemy may use, but a doctor or a nurse should be content with an elementary classification into "skin" cases and "lung" cases.

If gas is known to have been used, and the type has been identified, the process of sorting is straightforward; but if the issue is in doubt, or if a mixture of gases is suspected, then the reception officer must rely on one or two simple principles or he will become hopelessly confused. The questions he should ask himself are:

1. Is the patient breathing easily (although probably with short, excited movements) or with real difficulty?

2. Is his colour good, and his pulse, although no doubt fast, neither weak and thready nor very full and bounding?

3. Is he wearing a respirator?

The answers to these questions will give the sorting officer a good *prima facie* indication whether he is dealing with a lung irritant case. If in doubt he should regard the patient as a lung case and admit him direct to hospital without preliminary cleansing. As a precaution, however, the patient's clothing should be removed before, or immediately after, admission. If the examination indicates a "skin" case the patient should be passed through the cleansing unit unless he is so gravely wounded in addition that the process would endanger his life. Lung cases should be treated in a special ward equipped with oxygen apparatus. Wounded patients can safely be admitted, after undressing and cleansing the exposed parts, to an ordinary surgical ward.

When the reception process has been completed the casualty hospital will reserve for treatment: (*a*) lung irritant cases, all nursed in bed or on stretchers in one ward, with oxygen in readiness; (*b*) presumptive skin cases: the wounded in a surgical ward and the unwounded to be transferred as soon as possible to base hospitals or, if the condition is slight, to their own homes. Re-admission to hospital may become necessary for patients who subsequently develop pulmonary lesions or extensive burns.

Hospital Treatment

LUNG IRRITANT CASES

Soon after admission these cases can conveniently be sorted into three groups. The "mild" case will probably complain of cough, pain or tightness in the chest, and some discomfort in breathing. But there is little dyspnoea and no cyanosis, and no physical signs of pulmonary oedema are found. The pulse rate and quality are not greatly disturbed. Such patients should be treated in a separate ward or, if conditions permit, in the open air. They can be nursed on stretchers if the available beds have to be reserved for more serious cases; but they must on no account be allowed to get up or exert themselves for a period of forty-eight hours, and then only if no symptoms have appeared. Exertion may bring on serious symptoms in a patient who looks and feels well. All patients exposed to lung irritants should therefore be prescribed absolute rest, fresh air, fluid diet, and, if necessary, a mild sedative. None should be evacuated except as a stretcher case within the critical period of forty-eight hours.

The "moderate" case will show the same symptoms in more severe degree, with some dyspnoea and perhaps a little cyanosis. Treatment is on the same lines, and further benefit can be secured by administering pure oxygen from an ordinary nitrous oxide bag for a few minutes every quarter of an hour. If the patient makes good progress the oxygen can be discontinued; if his condition deteriorates in spite of these measures continuous oxygen therapy must be immediately instituted.

The "severe" cases (perhaps 20 per cent. of the admissions) show urgent dyspnoea. Two stages are described: in the first there is a striking blue cyanosis, often with physical signs of pulmonary oedema or with actual expulsion of froth from the mouth and nose. The pulse is usually full and bounding and there is intense headache. Patients in this stage are relieved as a rule by prompt venesection, 15 to 20 ounces being drawn off with a wide-bore needle. In the second stage the cyanosis is "ashen-grey" and the patient shows signs of collapse, with a feeble pulse, low blood pressure, and cold extremities. Both stages should be treated with continuous oxygen, but venesection is not permissible in the latter. Oxygen should be given in sufficient quantity to maintain a pink colour, and it may be necessary to continue treatment for two or three days. The closest watch must be kept on the patients, and the efficiency of the cylinders and oxygen-feeding apparatus must not be neglected. It may be necessary to raise the bottom of the bed to allow the escape of oedema fluid, but no other special treatment is indicated; such drugs as morphine and atropine are best avoided. The segregation of the severe from the mild case ensures effective supervision, and it is important from the psychological point of view.

SKIN CASES

This group includes the treatment of patients affected by mustard gas and lewisite. Our knowledge of the latter depends almost entirely on experimental work, but mustard gas was the chief agent for producing gas casualties in the last war. At that time the great majority of the patients presented combined lesions of

skin, lungs, and eyes, but if gas is used in this war it may be anticipated that the protection afforded by the respirator will give predominance to uncomplicated skin lesions. This is especially true of civilians, whose clothing offers less protection than that of the soldier.

Mustard Gas

The "skin" group of cases may conveniently be divided into two types: the mild and the severe.

The Mild Case

After a latent period of about twenty-four hours the patient begins to complain of watering and irritation of the eyes, followed by a sensation of heat in the skin and a dry tickling cough. In twenty-four hours or so his lesions have reached their maximum—diffuse erythema with perhaps slight necrosis in the groin, injection and watering of the eyes, hoarseness and a troublesome cough. The great majority of these patients are well in a week, but in about a quarter recovery is retarded by aphonia, persistent photophobia, or "effort syndrome." These conditions have a large element of neurosis and the patients should not be retained in hospital. A combination of fresh air, encouragement, and discipline is the best treatment, and in cases of photophobia the wearing of an eyeshade should be forbidden.

The Severe Case

In a typical "combined" case there is a latent period of three to four hours; then the patient complains of heat in the skin, dry throat, and smarting eyes. Sometimes slight initial shock is observed with giddiness and occasionally vomiting; but this soon passes off and causes no anxiety. By the end of the first twenty-four hours the patient presents a woeful picture. He lies on his back, breathing noisily with his mouth open and his nose blocked by thick discharge. His cough is hoarse and painful and he has great difficulty in expelling the thick tenacious sputum which collects in his mouth and pharynx. His eyes are closed by red oedematous lids which can be opened only with difficulty. There is a diffuse erythema of the face closely resembling measles at the time of onset of the rash; and the rest of the body shows patchy erythema, with localised burns of a deeper character, especially in the areas normally rich in sebaceous glands or liable to sweat.

By the second day the more severe burns stand out as purplish areas on which crops of vesicles develop. By this time the patient is excessively uncomfortable but not obviously ill. The most troublesome skin lesion is in the genital area, and oedema of the scrotum is a cause of great discomfort and even pain. The eye condition, however, is most distressing to the patient, because he fears loss of sight. It is important to reassure him.

By the third day pulmonary infection has begun to make its appearance. Respirations and temperature rise rapidly and some degree of cyanosis is always present. Increasing restlessness and deepening cyanosis are grave signs. In a more favourable case no fresh developments take place until about the seventh day, when there is commonly a striking exacerbation of the symptoms. This is no doubt due to the separation of sloughs when tissue necrosis has reached its height. About this time patients cough up extensive masses of "false membrane" from the trachea, but no case of acute laryngeal obstruction has been recorded. This position may well be different in the case of children.

Improvement in the lung condition generally sets in about the twelfth day with a slow, irregular fall of temperature as a rule. There is often a "smoulder" until septic absorption has been completed, but renewed pyrexia usually means the onset of a complication such as abscess or empyema. The skin lesion seldom causes anxiety after the twelfth day, although healing is often slow and troublesome. There is no systemic disturbance apart from sepsis.

Eye Lesions

In the series of cases under consideration the eyes were affected in 75 per cent. of the patients; of these, 24 per cent. were classed as severe, but only 3 per cent. had ulcers of the cornea leaving permanent scars. The feature of the severe case is profuse lachrymation and photophobia out of all proportion to the severity of the lesion. In the early stages the lids were intensely oedematous and difficult to open, and the margins tended to stick together so as to interfere with drainage. Unless the cornea was damaged an intractable blepharitis became the most disabling condition. Two main types of corneal lesion were observed: in the first the cornea was hazy with scattered pits of deeper necrosis, and the conjunctiva showed intense congestion; in the second the bulbar conjunctiva was relatively pale, while a more or less continuous grey band of solid oedema crossed the cornea at the level of the palpebral fissure. In this type the nutrition of the cornea was interfered with to a serious extent and ulceration was the rule.

The immediate treatment of eye injuries from vapour or liquid is water, and the eyes should be irrigated as soon as possible. There is no time to wait until a patient reaches a first-aid post; every second counts. On admission to hospital the patient has passed beyond the stage of first aid and systematic treatment must be undertaken. The eyes must be opened every three hours or so to allow proper drainage, but it is not advisable to wash out the eyes frequently with fluid. A 2·5 per cent. solution of albucid, instilled three times a day, has given good experimental results. The eyelids should be smeared with raw cod-liver oil or liquid paraffin to prevent sticking. If corneal injury is suspected the patient should be seen as soon as possible by an ophthalmic surgeon and 1 per cent. atropine drops instilled. Cocaine should not be used as it tends to injure the already damaged cornea.

Skin Lesions

Some degree of erythema was present in all cases in the series (1,500), and 36 per cent. suffered from local burning severe enough to be responsible for pyrexia lasting more than a week. Of fifty deaths only two were uncomplicated skin cases, but in a further eight the skin lesion was recorded as the principal cause of death.

Great improvements have been made since the last war in the treatment of burns, and the new methods are generally applicable to skin lesions caused by vesicant gases. In severe cases all degrees of burn may be found from a simple erythema to a deep necrosis. The "gas" burn, however, has two special characters: that the necrotic process tends to spread during the first few days, and that the exudation is remarkably profuse. Treatment varies according to the area affected. In the "open" areas such as the trunk and the larger limb surfaces early application of amyl salicylate has given good results by reducing exudation, relieving discomfort, and limiting the extension of the burn. The undiluted liquid is applied on gauze and the dressing is changed once or twice daily according to the amount of exudate. After some days, if progress is slow, the amyl salicylate may be replaced by one of the milder coagulants such as the triple dye. In "closed" areas, such as the perineum, the use of amyl salicylate is not practicable; the most satisfactory treatment is irrigation with saline or eusol. The hip-bath is very comforting as it relieves the oedema and extreme irritation. For lesions of the face raw cod-liver oil gives satisfactory results. Amyl salicylate is not suitable as its vapour is injurious to the eyes.

Blisters caused by mustard gas should be evacuated, but it is not necessary to remove the epithelium.

General nursing is of great importance: the patient should be protected as far as possible from irritation from clothing, and the use of full-size bed cage and modern methods of slinging is recommended. It is too early to indicate whether the use of sulphonamide preparations will be of benefit, but their effects will no doubt be reported if gas casualties occur. Cautious local application of sulphanilamide powder should have some influence in the prevention of sepsis, but the blood picture, especially the number of white cells, must be watched. It need hardly be added that a constant watch should be kept for the onset of albuminuria.

Respiratory Lesions

Severe laryngitis occurred in a third of the cases, but ulceration of the vocal cords was reported in only 1·4 per cent. The lower tract was involved in 25 per cent. of the cases, varying from bronchitis to a rapidly fatal pneumonia. In the pneumonic cases the principal complications were acute bronchiectasis, abscess formation, empyema, and pneumothorax. These were the result of focal necrosis of the bronchiolar walls and of surrounding areas of pulmonary tissue. Good nursing is all-important. Frequent cleansing of the mouth and nose is essential, and the patient must be encouraged to effort in bringing up sputum. Oxygen was tried for a time, but abandoned because it caused great discomfort to the patient without any compensating advantage.

Lewisite

Little is known of the mass action of lewisite on human beings, but if the people are so trained that they carry their respirators there should be no danger of catastrophic results from its use as a weapon of war. It differs from mustard gas in several respects. In the first place it has an immediate, powerfully vesicant action and is therefore less insidious than mustard. In the second place it is less stable than mustard, and is readily hydrolysed by hot water and by alkalis. On the other hand its rapid penetrative action and the grave systemic effects which this gas produces render it a potentially dangerous weapon for a surprise attack.

Liquid lewisite produces an immediate stinging sensation on the skin, and its rapid penetration renders the usual remedies of little avail after the first few minutes. After penetrating the skin lewisite forms a reservoir capable of distributing poison throughout the system. In the eye the liquid causes immediate pain and spasm, with profuse lachrymation. An acute conjunctivitis follows in a few minutes, with oedema of the lids, intra-ocular pain, and photophobia. In a matter of hours there may be irreparable damage to the cornea.

The vapour of lewisite is fortunately much less violent in its action, but the damage is rapid and preventive treatment must be begun at once. Water is the most accessible preventive and no time should be lost in washing the eyes and any skin affected. When the patient reaches hospital the injury is fully established. For the eyes warm normal saline followed by liquid paraffin are probably the best remedies, and good experimental results have been obtained with albucid. On the skin the immediate application of plenty of hot water is the best preventive. When the injury is developed, application of hydrogen peroxide (20 vols.) to the affected skin relieves the local condition and hinders the absorption of the poison. The skin is first washed, and then the hydrogen peroxide is applied on a gauze compress. This is effective from a half to one hour after injury.

RE-ORGANISATION OF MEDICAL SERVICES*

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Before the war great concern was being expressed both among doctors and among the general public at the inadequacy of our medical services. Built up piecemeal, as they have been, they inevitably leave big gaps and, on the other hand, result in occasional overlapping. The rising standard of public welfare has resulted in the institution of new forms of public medical service, so that it is now true that the greater part of medical practice is public; as much of it is on a part-time basis there is not yet a majority of the profession on a full-time salaried basis. Owing to the necessity for progress general practitioners have for the most part abandoned the old complaint against the "encroachments" of the public services; as a matter of fact the most considerable recent "encroachments" have arisen, not from extensions of the public services, but from the Hospitals Savings Association and changes in hospital practice which have been necessitated by economic conditions.

Some Problems

Apart from the problems of domiciliary practice, the reduction in the charitable income of the voluntary hospitals has created an increasingly acute problem. This, and the need for the co-ordination of the hospital services, has led to much useful work by the Nuffield Hospital Trust and other bodies, though they have not

* Paper read before the Metropolitan Branch of the Society of Medical Officers of Health.

yet reached any adequate solution of the problems raised. These problems may be stated briefly as follows:

1. The inadequacy of the National Health Insurance scheme in its failure to provide consultant, hospital, and auxiliary services such as dentistry, nursing, massage, etc.
2. The large part of the population, including professional and other non-manual workers, who cannot afford adequate medical service on the present fee-paying basis.
3. The separation of general and consultant practice from the public health side of medicine.
4. The decline in the charitable income of the voluntary hospitals rendering inevitable public subsidies and control.
5. General discontent with present lack of organisation among medical services and failure effectively to use modern scientific knowledge and facilities for the promotion of health.

Medical officers of health by the duties* laid upon them are intimately concerned in the solutions offered to these problems. It is obvious, however, that the latter are bound up with other social and political issues which the upheaval of the war has brought into prominence, such as the low standard of living of large sections of the population, the need for physical reconstruction of many of our towns and the town-planning and housing problems that arise therefrom, and the need for reconsidering the units and functions of local government. While these matters raise questions of policy with which it is neither necessary nor expedient for medical officers of health to deal, it is important that both the Government and the public health service should recognise the extent to which they affect the health of the community and therefrom the work of public health administrators.

Dealing specifically with the problem of creating a national health service imbued with the positive outlook of the modern public health service, the subject may be divided into the following parts: (1) domiciliary service; (2) consultant and hospital service; (3) areas and methods of administration.

Domiciliary Service

Before the war it had been generally recognised that a considerable modification of the National Health Insurance scheme was urgently necessary in order to render it more adequate as a health service and to extend its provisions to a much larger part of the population. Owing to the changes which have taken place since the war, particularly the uncertain position of medical practice, the lowered incomes of a large section of the middle class and the imperative needs of efficient national organisation to face the tasks of reconstruction, the problem to be solved has assumed much greater dimensions. It seems most improbable that it can be satisfactorily dealt with by any mere extension of the 1911 insurance scheme. Sir Arthur Newsholme, in several contributions to this problem before the war, foreshadowed the possibility of a state medical service, and there are substantially increased reasons for thinking that this has now become both a practical and a desirable way of meeting the situation. As he points out in *The Ministry of Health*, a considerable part of the medical profession is already engaged on public duties although most of them are on a part-time basis. He furthermore points out in *Medicine and the State*:

> "In private medical work the practice of paying in accordance with number of consultations and visits is a handicap to satisfactory medical care, whether hygienic or clinical. The same consideration makes it difficult to resort to specialists in doubtful and complicated cases, except where provisions to this end are made by voluntary hospitals and public authorities. The general practitioner frequently undertakes far too much work in a limited time to be able to do it well. For the above reasons modifications of private medical practice are needed for all except the rich."

These conclusions, reached in 1932, would undoubtedly be stated in more emphatic terms to-day.

Form of the Service

It is nearly as important to decide the form of a state medical service as the principle. The growth of "the firm" in medical practice is a recognition of the value of the team. What the public health service has brought more prominently to notice is the facility for efficient service provided by suitable premises, equipment, and auxiliary staff. It is in the combination of these two ideas—a team of full-time doctors working from a public health centre—that the most satisfactory form of state medical service is likely to be found in all urban areas. For rural districts a different form of service would be provided. It is assumed that each health centre would be equipped with all necessary diagnostic and simple treatment facilities and would be staffed with nursing and clerical assistants. Other auxiliary services such as dentistry, massage, and hydro- and electro-therapeutics could be provided either at the general health centre or at special centres, according to the circumstances of the district as regards distribution of population, etc. In accordance with the common practice of the public service the doctors and other personnel would be paid on a full-time salaried basis commensurate with their qualifications and previous experience, would enjoy regular hours of work (evening and week-end duty by rota), holidays, and superannuation. The doctors in the health service would have the right to obtain for their patients any consultant advice or specialist treatment that might be required.

The local units of the State Medical Service would be co-ordinated with existing branches of public health, such as maternity and child welfare, tuberculosis, venereal disease, mental disease, etc.; these would be regarded as specialist services which in turn could arrange with the general practitioners concerned for any necessary domiciliary observation and treatment. To assist the medical officer of health for the area in the organisation of the domiciliary service there would be assistant medical officers of wide experience in general practice.

Consultant and Hospital Service

In order to ensure that the services of consultants may be readily available as part of a national health service, it is necessary for a large number, if not all of them, to be engaged on a salaried basis. Whether such consultations should take place at the patient's home, the local health centre, or at the hospital to which the consultant may be attached, would depend upon the nature and circumstances of the case, but in any event it is to be noted that the inclusion of all concerned—doctor, consultant, hospital staff—in one national service must considerably facilitate the making and carrying out of such arrangements. It has already been indicated that the tuberculosis and other specialist services already established as part of the public health service will continue so to act. Gynaecology would, of course, be closely associated with maternity and child welfare.

The Nuffield Hospital Trust has already done much useful work in supplementing the efforts of other bodies to keep the voluntary hospitals going and to co-ordinate them with the public hospitals in the same area. It must be frankly recognised, however, that the attempt to replace by subsidies and insurance subscriptions the falling charitable income of the voluntary hospitals, and thus perpetuating the artificial distinction between them and the far more numerous publicly owned hospitals paid for out of rates and taxes, is a futile policy. Inevitably if we are to get the best results from existing resources we must have a unified hospital service. It is essential that the decision on this point should be reached soon in order that the post-war reconstruction of hospitals and their replanning, which will be necessary on a large scale, may not be delayed by doubts as to finance or control. The question is largely one of adding further general and special hospitals to the majority which already exist under public ownership and control.

It must be remembered that the hospital control branch of public health has acquired valuable experience in this field of administration as a result of the considerable expansion which followed the Local Government Act 1929.

Local Administration

The war has directed urgent attention to some weaknesses in the present areas and methods of local administration which were under consideration long before the war. Like almost everything else British, local government areas are the product of historical tradition and, as such, lacking in formal logic. They are certainly inapplicable to many large-scale functions, such as hospitals, transport, and town-planning. This irrationality of area applies with special force to the Metropolitan Boroughs and the contiguous boroughs and urban districts which make up Greater London, with the added complexity of allocating functions between the county councils and the local authorities. The extent of the problem is not even limited to that of area and function, because war conditions have emphasised what was previously insufficiently recognised—the need for greater co-ordination of policy between neighbouring authorities in large areas of the country, and for some more satisfactory adjustment of financial relations between local revenues and national exchequer grants. Regional organisation had been mooted long before the war and for other purposes, but war necessities have compelled its adoption for many aspects of civil defence. It does not need much prescience to suppose that regional organisation of some kind is likely to enter into any national health service.

Greater London

Leaving on one side the general problem as it affects the country at large, it may be simpler to consider it in relation to Greater London. It may be taken for granted that the present London County area will not survive any revision of London government. The only question will be whether the new area shall be that generally described as Greater London (roughly corresponding to the Metropolitan Police District), or whether it should be extended to include more if not all of the Home Counties. Within whatever the regional area may be, it is similarly probable that changes will be required in the local areas, which now range in size and character from Holborn to Wandsworth. In the provinces it has been found convenient to link small urban district councils together to make a more suitable administrative area. This course might advantageously be taken in London to bring about some greater degree of similarity of size and population between the Metropolitan Boroughs, a task facilitated by the wholesale shifting of population and destruction of property resulting from the war.

If we may contemplate a Greater London region with about sixty or seventy local authorities in the area (say some twenty of them in the present London County area) and a regional authority (constituted in what manner does not concern this argument), we may consider the type of health organisation that might be appropriate. The regional authority would have its medical staff, presumably in large part transferred from the London County Council and probably some from the other county councils bordering on London, under the general direction of the Regional Medical Officer of Health.

Regional and Local Divisions

The relative functions of the regional and local health authorities should in broad principle be based on the distinction between residential and domiciliary care. The local authority should have the general supervision of the health centres and their personnel, the maternity and child welfare and school medical services, tuberculosis dispensaries, sanitary and food inspection, etc. The regional authority would control the hospitals and consultant service and housing.

A considerable measure of government control and guidance, both in general policy and in practical administration, will be inevitable, particularly in the early years of the inauguration of such a big development of public medical service. Whether in this control and guidance the regional organisation of the Ministry of Health will be employed may depend on the extent to which the principle of regionalism is carried in the reconstruction of local government. If in fact there is a regional medical officer of health responsible to the regional authority (possibly a kind of federal body made up of representatives of the local authorities in the area), there does not appear to be much point in a duplicate regional organisation of the Ministry of Health. The chain of direction and guidance would proceed directly from the Chief Medical Officer of the Ministry through the regional medical officer of health to the local medical officer of health. In any event it is of particular importance that the medical personnel, both in the regional

* Ministry of Health Memorandum on Duties of Medical Officers of Health (1925)—Section A (General Duties), pp. 4-6.

offices and in the central department, should possess such qualifications and experience as may enable them efficiently to fulfil these functions. It is especially necessary that this control should be infused with the public health outlook and informed as to the practical difficulties of local administration; the closest liaison at every point in the service is equally essential.

A Complete Service

There are, of course, big financial considerations involved in any such national health service. Whether, however, such service should be paid for wholly out of rates and taxes as a civic right like education, or be partly so paid for and partly on some contributory basis, is a matter of general policy with which medical officers of health as such are not concerned. What is of practical moment is that the service should be a complete one and should be open to all who wish to benefit by it, irrespective of income or social class. No truly national and adequate health service can be built on any other basis.

The potentialities of such a service can hardly be over-estimated. Not only would the curative capacity of medicine be greatly increased, but the closer contact of general practice with the positive outlook of the public health service should lead to a substantial prevention of disease. The opportunity for periodical medical overhauls for persons of all ages should be of great value in the early detection of morbid conditions, a factor of immense significance in the future treatment of such diseases as tuberculosis, rheumatism, and cancer. At present, a doctor, whether in the public service or in private practice, confronted by the medical needs of the patient before him has to pause to consider whether the most suitable form of treatment is really available, either because of the income of the patient or because such facilities do not exist in the town, neither charity nor public enterprise having provided them; and there is no comprehensive health organisation to see that they are there. Incidental advantages such as increased facilities for medical education and research, availability of morbidity statistics planned on a scale hitherto impossible, would add to the tremendous addition to scientific knowledge and human welfare which a national health service might bring with it.

Transition Scheme

The great change in our medical outlook and organisation outlined above will obviously require some years to complete. This must occur when many other big tasks of reconstruction are being undertaken. At the same time we must face the fact that there are immediate problems of medical needs and medical man power which cannot and ought not to await the full inauguration of a national health service. It is essential that the main lines of the latter should be laid down now so that any temporary measures adopted may not conflict with, but may if possible, contribute to the final scheme, but there are some steps of an urgent character which should be carried out now.

The shortage of medical man power which is being so acutely felt arises not only because the actual medical needs of the population have increased as a result of the war, but also because medical needs are in various categories and the personnel is organised in separate compartments. Having regard, however, to the common expression which sums up the character of totalitarian war "We are all in it together," there does not appear to be sufficient justification for the maintenance of many of these distinctions of medical services, particularly in the light of possible invasion. It is suggested, therefore, that it is very desirable that forthwith all doctors remaining in civilian private practice be invited to enrol as full-time public medical officers willing to join a war emergency national medical service. This would at once make possible a pooling of medical personnel for all necessary services, whether general practice, clinics, hospitals, first-aid posts, rest centres, shelters, or medical examination of recruits. There seems no reason why in areas where the R.A.M.C. and other medical services attached to the armed forces are not fully occupied they might not be drawn upon for civilian needs. The institution of the emergency service, with its guarantee of a minimum income, would greatly increase the mobility of doctors now compelled by financial circumstances to hold on to a much diminished private practice.

It must be remembered that the abnormal conditions created by the war are likely to extend well into the period of peace and reconstruction, and therefore some rudiments of a national medical service appear to be urgently necessary, to meet both present needs and those of the transition period until a more permanent and comprehensive national health organisation can be created.

DISCUSSION ON DR. BORLAND'S PAPER

Dr. Fenton thought that the fears entertained by some general practitioners in regard to the conditions under which they would work in a State medical service were unwarranted. He pointed out that in a State service medical practitioners would get definite holiday periods, periodical opportunities for leaving their practices to undertake postgraduate study, and regular promotion based on merit. There would still be plenty of room for those who did not wish to enter the State medical service, for there would be many members of the public who would not avail themselves of it, just as there are to-day many who do not send their children to take advantage of the free State education provided in the elementary schools. He also agreed that there would have to be some revision of boundaries for local government administration in the Greater London area. With regard to the most efficient size for the local unit of administration, he felt there would be great difficulty in getting agreement on a basis of rateable value or acreage, and called attention to a report by Sir Harry Haward, late Controller of the London County Council, published in 1909, which indicated that a population of 250,000 provided a unit of administration which was more economical than a lower population or a higher population; indeed, a population of a quarter of a million proved to be the optimum from the financial point of view.

Dr. H. Stanley Banks disagreed with the view that the health and hospital authority should also be the local authority for the area. Town and County Councils, no matter how juch enlarged or combined, were not the bodies to which the whole future of British medicine should be entrusted. Their constitution and procedure were ill-adapted for this task. They were too rigidly governed by Acts and By-laws designed for quite

different purposes. Procedure was cumbrous, expensive, and far too slow. A central bottle-neck could not be avoided, and freedom of action at the periphery was too restricted. Above all, the day-to-day political influence to which their work was subjected was a fatal handicap. Small and backward local authorities often deliberately made use of the legal procedure to hamper developments which they did not understand. Large authorities tended to become bureaucracies. A centralised bureaucracy could be very thorough but was not efficient in dealing with a rapidly changing subject like medicine. Its attention tended to be centred on outmoded matters. It could not catch up with developing thought. It was also expensive, because responsibility was shirked and divided. An unwieldy machine was created whose output could never be of the highest quality. Political influence and bureaucratic centralisation were the two fatal handicaps of local authorities so far as the control of hospital and medical services was concerned. Who could doubt that if these services were wholly delivered over to local authorities British medicine would rapidly lose vitality and become relatively sterile?

Even although, for a time, health services and hospital services would be separated, it would be far better to create a new authority specially designed to take over hospital services and later all public medical services. This might consist, centrally, of a few commissioners nominated respectively by (*a*) Parliament, (*b*) local authorities acting jointly, and (*c*) the medical profession; regionally, of a small body formed from the same three elements; and locally, of a similarly constituted body to control a group of hospitals. The central body would be responsible to Parliament for the service and would be given a charter for a fixed period. It would determine its own procedure, and be responsible for high policy, high finance, conditions of service, general development, and probably such matters as supply. It would lay down certain broad standards and would exert its authority through the regional and local bodies. Neither the central nor the regional body would attempt the actual management of hospitals. The local body would have full autonomy within the framework of the general policy adopted and to the limit of the financial resources allowed. The aim would not be a dead level of uniformity but local development along individual lines. This could be achieved only by an authority not directly responsible to the electorate. As soon as a regional hospital scheme was sufficiently developed all clinics would be taken over from the public health authorities, for what could be the future of child welfare without pediatrics, of ante-natal work without obstetrics, or of tuberculosis work without medicine and surgery? In due course the general practitioner medical service would be formed and this work linked up with the hospitals and clinics. Thus the new authority would gradually absorb the great bulk of the hospital and medical services of the country. The public health authorities would continue to be responsible for the services of environmental hygiene. Even these, in time, might be absorbed into the ambit of the new authority, and thus give rise to a single area authority for all health and hospital purposes. It would be essential that the charter of the new authority specified preventive medicine as the primary aim of its policy, that all developmental proposals should conform with this principle, and that, with this end in view, support should be given to medical research.

Dr. Lethem said that the statement often made that payment by salary encouraged slackness was not borne out by evidence, in either the medical or any other profession. Research workers and scientists, teachers and university professors, missionaries and ministers of religion, civil engineers and members of the fighting services were almost all paid by salary and their work showed no lack of initiative or energy. Lawyers, on the other hand, were mostly paid by fees, and however hard they might work individually it could not be maintained that the law as a profession was either progressive or adaptable.

Dr. Radford agreed that wholetime salaried officers worked conscientiously, but said that they were in a difficulty in advising their authorities in regard to matters which were the subject of party controversy. He thought that we must have a State medical service but urged the importance of maintaining the professional status of doctors—if this were not done the doctor would become a mere technician—and said that there should be professional participation in the control of the service.

Dr. Brooke emphasised the immediate importance of the transition service, especially in evacuation areas, and advocated the national registration of all doctors under 60 in order to secure the most effective pooling of their services. He was doubtful whether all voluntary hospitals would disappear, and disagreed with the proposed allocation of hospital and domiciliary services as between the regional and local authorities, maintaining that to preserve co-operation they should both be under the same control.

Dr. Thompson drew attention to the fundamental criterion of any scheme—the view and interests of the ordinary private citizen and its probable results in better health. He instanced the beneficial effects of the National Milk Scheme. He thought there would possibly be a reduction in the number of hospitals necessary owing to the better standard of health. He would like to see all general practitioners working at health centres in their own consulting rooms and responsible for so many families and in contact with social welfare organisations, especially after-care, for the well-being of their patients. Caring for the family, compulsorily insured as a unit, with measures of social security, would reduce expenditure on hospitals. With regard to the present local government of London, he thought it was quite out of date. What was wanted was an integrated health organisation from the Ministry of Health through a regional authority to the local authority for an area of such a size as rendered efficient health administration practicable. The system of administration should eliminate friction. Dr. Lennane pointed out that the questions at issue affected the interests of the general body of the profession and suggested the adjournment of the discussion for the circulation of the paper. Dr. Trotter suggested that Dr. Banks prepare a note of his contribution for circulation. Drs. Radford and Fenton thought that both paper and discussion might be published in PUBLIC HEALTH.

In reply to the discussion, Dr. Borland pointed out that Dr. Banks's views about regional organisation were rather ambiguous. He thought the voluntary hospitals were bound to go with the drying up of voluntary charity. With regard to the general question, he thought the final arbiter must be John Citizen.

On the motion of Dr. Topping, who was doubtful of the practical significance of "bureaucracy" and thought we should eschew vested interests and prejudices, a hearty vote of thanks was accorded to Dr. Borland for his interesting and illuminating paper.

Six representatives were appointed to a Joint Committee with the Home Counties' Branch to consider medical planning.

MEDICAL PLANNING*

By F. HALL, M.D., D.P.H.,
Barrister-at-Law,
Medical Officer of Health of the Lancashire County Council.

Medical officers of health in the North-Western Branch are in close touch with medical services which minister to a very considerable mass of population, most of whom are engaged in industry, and it is a matter of first-class importance that we should take an active and helpful interest in the deliberations of the B.M.A. Planning Commission.

Nature of the Problem

At this stage I suggest it would be more advantageous if we limited our discussion to questions of general policy—that is, the manner in which medical services should be managed—and leave for the time being matters in respect of particular services which require in themselves that detailed examination for which the Commission has been appointed. I suggest this line of action because in the absence of any clear-cut general policy governing these great and expanding services a position may be reached which, by hindering or preventing their integration, would not be in the public interest. If, however, such an issue as general policy is raised, and it seems to be inevitable that it must be raised, then we have a right to ask the questions: What is the force behind this movement for reorganisation ?, and upon what lines should it be accomplished ? I believe these two questions can be answered as one, and that it is unnecessary to go into the complicated details of this or that branch of medical practice to justify the need for reorganisation.

The remarkable advances in practically all branches of medical science are known not only to the profession itself but also to the general public, and the real force behind the movement for reorganisation is the desire that the best means for the prevention, detection, and treatment of disease shall be easily available for all members of the community. The second question is, therefore, answered in that planning for reorganisation must be directed to making available all the resources of medical science for all classes of the population.

Medical Personnel

Confronted with a problem of this nature it is clear that before we consider its solution—and I believe it is capable of solution—we should carefully examine the present state of the medical services and endeavour to ascertain their weaknesses and how they have arisen, for in so doing we shall obtain a guide to the path of reform. We may, therefore, review in broad outline—(1) the recruitment and postgraduate training of medical personnel; and (2) the main divisions of medical practice and the extent to which they serve the public efficiently.

With regard to recruitment and training I propose to make only two observations. I believe that recruitment is on sound lines and that those now entering the profession are well fitted to maintain its high traditions. The question of improvements in postgraduate training is too technical to be dealt with now, but I would draw attention to the facts that, after taking a recognised degree or diploma, there is no legal obligation upon the practitioner to improve his or her knowledge and skill, and there is no compulsory retiring age.

Let us pass on to consider the present state of civilian medical practice which may be classified under three heads: (1) the public health services, (2) the domiciliary services, and (3) the hospital services. Each of these main divisions can, of course, be subdivided into special categories, but medical planning as I see it will be directed principally to the integration of the three policies now governing these separate divisions, for it is only by their integration that the object we have in view can be achieved.

Public Health Service

The history and organisation of the public health services—the first division—is well known to us; we are all proud of what has been achieved, but we are also conscious that the services can be improved and made more effective. Generally, the public health services are well organised, and for most of our public health activities improvements can be carried out by administrative action. But there are two very important branches which, by reason of fresh legislation or in the light of experience, are in need of revision—namely, the maternity and child welfare service and the school medical service.

Welfare and School Services

The passing of the Midwives Acts and the establishment of ante-natal and post-natal clinics have materially affected the medical aspects of the welfare centres, and have led to a certain amount of overlapping of function. If, for instance, an expectant mother can attend an ante-natal clinic and receive appropriate and expert advice there appears to be little necessity for her to attend the welfare centre for the same purpose. In the case of infants and children of school age there is a more serious criticism. Child welfare centres and school clinics are staffed, or should be staffed, by expert paediatricians assisted by highly qualified trained nurses, yet diagnostic facilities are lacking and restrictions are placed upon treatment, and I doubt very much whether, after years spent in the routine of maternity and child welfare centres or in the school medical services, many of the whole-time officers retain that keen clinical sense which is the mark of the experienced physician. In any event the public is denied the use of a large amount of technical skill, both medical and nursing.

General Practice

The further logical development of these services, however, most certainly will bring us into the domain of the second division of medical practice—the domiciliary services—and in respect of these the case for reorganisation must depend upon whether or not the domiciliary services now provided enable patients to obtain the best possible treatment. That serious deficiencies exist is evidenced by the large amount of

* Paper read at a meeting of the North-Western Branch of the Society of Medical Officers of Health.

medicine prescribed by the panel service, the still larger amount bought on their own initiative by the public, and the crowded out-patient departments of general hospitals. How have they arisen ? The answer, as in the case of some of the public health services, is the incompleteness of the service. Under the present system it must always be so, for the great majority of the public cannot afford to pay for an adequate domiciliary medical service. That it works at all is a great tribute to our professional colleagues in domiciliary practice, who, constituting the great body of the profession, maintain a fine tradition of service to the public. I have not the slightest doubt, however, that owing to the manner in which the services are organised there is here, as in the public health service, a wastage of technical skill and ability, but on an infinitely greater scale.

The Hospitals

The third main division consists of hospital services. These for various reasons are attracting much attention, but they are only part of a greater problem. There are certainly difficulties of finance and administration in connection with the hospitals, but far more important is the fact that the domiciliary practitioners—again, let me emphasise, constituting the great body of the profession—are very largely divorced from the hospital services. Even if all our hospitals were fully equipped and properly classified this separation would still exist, and hospital costs, made heavier by the improvements, would continue to rise. With advances in methods of treatment there will surely be a demand for more and more hospital beds; a consequent increase in the ancillary technical services; and no diminution in the great mass of out-patients which absorb so much of the energies of hospital staffs—medical, nursing, and lay.

These briefly are the outstanding facts in the organisation of medical services which medical planning is bound to take into consideration, and they may be summarised as follows:

1. Certain of the newer public health services—*e.g.* the child welfare and school medical service—are incomplete and should be more closely linked up with the domiciliary and hospital services.
2. The domiciliary services have not at their command adequate facilities for the diagnosis and treatment of disease according to modern standards. They are divorced from the public health and hospital services.
3. The hospital services in attempting to fill the gap are becoming more costly and the public is being put to greater inconvenience.

Defects and Remedies

We have, then, in the three main divisions of medical practice defects of which the existence cannot be disputed and which I submit are of a fundamental character. Administrative measures in the public health service, extensions of the panel system in domiciliary practice, and the grouping of hospitals into regions will not remove the cause of these inadequacies. The real cause is that private enterprise is not capable of providing an adequate domiciliary and hospital service, and in the case of the public health services private enterprise stands in the way of their development.

Probably this is not the occasion to put forward constructive proposals in favour of this or that type of service. We are now concerned only with a request for observations which may be placed before the Medical Planning Commission, and I have taken the view in opening the discussion that our first duty is to state clearly the defects which we are of opinion exist. Constructive proposals must of necessity take into consideration social, financial, and geographical questions, and these require detailed examination, but the value of such constructive proposals depends upon policy.

If it is agreed that private enterprise cannot provide an adequate domiciliary and hospital service and that it is impeding further development of the public health services, that directly or indirectly it is wasteful of medical and nursing skill, then I would suggest that it is the duty of the Commission to formulate a policy in accordance with the following resolutions:

1. Planning for the better organisation and integration of the medical services will necessitate proposals for the establishment of a salaried domiciliary medical service.
2. The domiciliary medical services have not adequate facilities for the diagnosis and treatment of disease according to modern standards.
3. The maternity and child welfare and school medical services should be brought into close association with the domiciliary and hospital services and with each other.
4. Medical practitioners in domiciliary practice should be also employed in all departments of the hospitals and in the ancillary services.
5. The present system places undue burdens upon the hospitals and is the cause of congestion in all departments.

These are the resolutions I submit for consideration; they are guides and signposts to the path which should be followed and as such cannot be separated from each other. The first resolution governs the whole, for it is beyond doubt that the domiciliary services are the key position in this matter of reorganisation. The resolutions are far reaching in character, and they are based on the fact that private enterprise has failed and will continue to fail in providing for the great mass of the population medical services which are in all respects efficient. The interests of the public and of the medical profession are indivisible, and I am confident that integration of the services on these lines would prove to be in both its administrative and economic aspects, a sound policy.

The National Council of Social Service, 26, Bedford Square, London, W.C.1, has issued a leaflet which comprises information on work which has been done by voluntary organisations to assist in dealing with social problems arising after heavy air raids. It gives useful details about rest centres, migration from a bombed area, emergency clothing and bedding, emergency feeding, and of the voluntary organisations which offer help to the distressed.

THE APPOINTMENT OF MEDICAL OFFICERS OF HEALTH

The following memorandum was prepared in 1936 *for the Council of the Society of Medical Officers of Health. It was referred to the Branches and Groups for comment. On May 21st,* 1937, *the Council, having considered the comments, decided to forward the memorandum to the Association of Municipal Corporations and the County Councils Association with a request for their favourable consideration of it. The memorandum was not printed in the journal at that time, but it may now be regarded as of more general interest and worthy of wider circulation in view of the re-awakened interest in medical planning.*

Introductory

In March, 1932, a resolution of the Northern Branch in the following terms: —

> That the Ministry of Health be approached by the Society of Medical Officers of Health with a view to the establishment of a special Committee which shall be available to advise Local Authorities in the selection of candidates for appointment in the Public Health Service

was considered by the Council of the Society and circulated to the Branches and Groups. Much interest in the proposal was subsequently taken by Fellows of the Society, and in November, 1933, the Council approved a recommendation of the General Purposes Committee that we should prepare a memorandum on the method of making appointments in the public health service for the consideration of the Council. Our delay in presenting the report has been partly due to difficulties in obtaining some of the information which we thought might be useful to the Council.

General

We propose to limit the subject of this memorandum to the method of selecting medical officers of health for appointment. We have arrived at this decision for the following reasons. The efficiency, atmosphere and outlook of a local government department depend largely upon the qualifications, character, ability and experience of the officer in charge of it. We believe that most local authorities look to their medical officers of health for guidance as to the appointment of other officers in health departments, and, as a general rule, attach due weight to their advice. Where this policy is followed, the desirable principle that local governing bodies should make their own appointments, but that they should receive and pay regard to expert advice, is satisfied, and it does not seem to us necessary to introduce any other intermediary between the appointing body and the department; but, if there is a senior medical officer in charge of a section to which an appointment is about to be made, his or her advice should also be available to the council through the medical officer of health. If a medical officer of health should introduce any improper or unfair methods into this process of selection, as has been suggested in some recent instances, the Society has means of drawing attention to such exceptional instances and of endeavouring to prevent their recurrence. Complaints of this kind are too infrequent to justify any suggestion that the method of appointment requires reform. Some of the difficulties which have recently arisen might be removed by an extension of the Minister's power to make regulations as to the qualifications of medical and other technical officers in health departments, including the school medical service (*see* L.G.A., 1929, sect. 59). On the other hand there is clearly widespread discontent with the way in which appointments of medical officers of health are sometimes made, which may react upon the quality of entrants to the service if no better means can be found.

The Present System

The view which is widely held, especially among the younger men who have reached an age and acquired experience fitting them for responsible posts, is that the present system of making appointments leaves too much to chance, and sometimes even results in a decision being made on other grounds than merit. They feel compelled to apply for every possible appointment, whether they are confident that they are well fitted for it or not, because of this element of chance which they cannot afford to ignore. Consequently, a local authority who have a vacancy are inundated with large numbers of applications from professional men which they have neither the time nor the specialised knowledge to examine thoroughly. In the preliminary process of elimination they naturally and rightly take into consideration the importance of the post which a candidate holds, the size and importance of the area which he serves, his previous appointments, any higher qualifications which he holds and the manner in which his application is set out. In our experience, few members of appointing committees find time to read through all the testimonials submitted by all the applicants. It is a rough and ready system which gives a premium to candidates who can find other means of bringing their names to the notice of members of councils or committees, and often penalises those who treat seriously the announcement commonly appearing in advertisements that canvassing directly or indirectly will be a disqualification. The position of deputies or senior assistants is peculiarly anomalous; if they are already in the service of the appointing authority they are certain of consideration but, if they are not, they may stand a poor chance of being included in a short list along with men already holding responsible posts, however distinguished their records and however large and important the area they serve may be.

The position of those whose names appear on a short list is often difficult. They are, at least, assured of having an opportunity of appearing before the appointing body, but they are frequently surprised at the motives and interests revealed at such interviews as actuating the minds of the members, or at the perfunctoriness of their enquiries. They may have refrained from canvassing and yet find that others have done it without penalty; or they may learn that steps they have taken to use influence have discredited them while other candidates who have been more fortunate or discreet in using similar means have benefited by

them. The widespread conviction that, even when merit has brought a candidate to the short list, it is not the governing factor in determining the final appointment is bad for those engaged in the service and leads them to adopt an attitude of cynicism in advising able young practitioners who think of entering it. Public health officials freely refer to appointments which have been made in recent years as illustrating the unfortunate results of the system.

While members of local authorities take a keen interest in appointments—indeed they are usually the occasion for exceptionally well attended meetings of the committees concerned—they cannot be regarded as well equipped for selecting senior officials, especially when the position calls for high professional standing as well as administrative experience and competence. Not infrequently councillors, in private conversation, admit the difficulties which they encounter in this connection and express regret that there is at present no practical alternative. It is not surprising that there is a growing predilection for internal promotion, a practice which has some advantages but is not always conducive to efficiency and may be unfair to other officers in the service.

As far as we can gather most experienced officers, as well as members of councils, hold the view that no system would be workable in this country which took the responsibility of making appointments of chief officials out of the hands of local authorities, and we are entirely in accord with this opinion. The problem is to find good and acceptable means of helping authorities without introducing new opportunities for abuse.

Departmental Committee on Qualifications, etc., of Local Government Officers

This Committee, which reported in 1934, devoted some attention to the subject under discussion, but their deliberations were not exhaustive as might have been expected in view of their wide reference. Certain of their general observations are, however, pertinent to the question. The method of selection of local government officers, they say, should be carefully calculated to secure the ablest of the candidates who present themselves and (this being a consideration specially applicable to a public service) the method of selection must be strictly impartial (p. 20). They recommend that all local authorities should provide by standing order that canvassing for any appointment will disqualify the candidate; and should see that the order is observed (p. 21). The Departmental Committee's more practical suggestions include the setting up by every local authority of an establishment committee entrusted with all questions of recruitment, promotions, etc., and directly concerned, among other things, with the appointment of senior officers, which would best be dealt with by a small joint group composed of members of the employing and establishment committees (pp. 46-7). The final recommendation of the Departmental Committee, on which they lay special stress, is the establishment by local authorities of a central advisory committee, representative of themselves, the Ministry of Health and perhaps of local government officers and educational bodies, which would advise them on all questions of recruitment, etc., and which might also be used as their agent (pp. 48-50). It will be seen that the Committee's recommendations on the specific point at issue were not very far-reaching, except in relation to the possible functions of a central advisory committee to which we shall return later. In 1934 the Minister of Health set up a Standing Advisory Committee representing local authorities to advise him on any question of policy or administration affecting the public health services which may be referred to them by the Minister, and, while this committee does not appear to have been constituted for the particular object with which we are concerned, the question is one which might be referred to them if the Minister thought proper.

Foreign Practice.

We have obtained some information from the Health Organisation of the League of Nations as to the practice in European countries. The systems of local government, however, and the relations between central and local administration are so different from ours that we have not thought it worth while quoting from the information. Appointments and promotion by examination or selection by the Minister, as, for instance, in Italy and Poland, would not, we feel sure, find favour with most of the members of the Society, and would certainly not be acceptable to local authorities. In America, where the most striking feature of local government is its variability from place to place, it is too often assumed in this country that the prevailing autocratic power of state governors and mayors during their period of office leads to bad appointments. Sometimes the governor or mayor, faced with the appointment of a health commissioner or health officer, refers the matter to a small committee of experts convened for the purpose and abides by their selection. For instance, in Washington, the constitution of whose government is peculiar, a recent selection was made in this way with satisfaction both to the authority and those engaged in the public health service. Generally it is correct to say that in the United States of America use of expert guidance as to senior appointments is rather more common than in this country.

Irish Local Appointments Commission

The method which has been adopted in the Irish Free State to improve the selection of local government officers deserves more attention than it has received in this country. We are indebted to the Local Appointments Commissioners for very full information on the subject, and the following is a brief epitome of it. The Commission was established by the Local Authorities (Officers and Employees) Act, 1926. The Act applies to appointments of chief executive officers, professional or technical officers other than teachers and any other officers or employees to whose appointment the appropriate Minister, with the concurrence of the Commissioners, may declare the Act to apply. By Orders made from time to time the following additional types of appointment have been brought within the Act, *viz.*, superintendent assistance officers, agricultural instructors of various kinds, accountants of county councils, chief clerks and storekeepers of mental hospitals, as well as a number of offices under specified local authorities. The net of the Commission is, therefore, spread wide. The Com-

missioners, three in number, are appointed by the Executive Council and may be salaried, and they are provided with staff. Appointments of the above type may be filled with the Minister's consent and without reference to the Commissioners only if the new incumbent holds or has held a similar pensionable post under a local authority and is appointed within three months of the vacancy. In all other cases the authority must request the Commissioners to recommend a person for appointment, and in the authority's default the matter is referred to the Commissioners by the Minister. The Commissioners may, under the Act, recommend either one person for appointment, or more than one for the authority's final selection. Qualifications for posts are prescribed by the Commissioners with the consent of the Minister and in certain circumstances qualifications for offices comprised within any particular description, class or grade may be prescribed. Generally selection for appointment may be made by competitive examination, but the Commissioners with the consent of the Minister may dispense with (and in fact in almost all cases have dispensed with) competitive examinations in favour of selection following interview.

The Commission, then, comes into operation at the request of the local authority—a request which is obligatory under certain conditions and seems to be the usual procedure for appointing medical officers of health. The Commission advertises the vacancy and invites applications. A board of selection, with a lay chairman and consisting of technical experts, according to the nature of the appointment, is constituted. The experts are chosen from panels supplied by the various professional or technical bodies and give their services gratuitously. The personnel of Boards varies for each appointment. The danger of candidates becoming known to Boards or *vice versa* is thus eliminated. The function of a Board is to arrange the candidates in order of merit and to advise the Commissioners. The Commissioners recommend the best qualified and most suitable candidate in accordance with such advice subject to satisfactory evidence of age, health and character and any preference for a knowledge of Irish. In practice only one candidate is recommended to the authority, since the Commissioners regard it as their duty to select and recommend the best person available, and consider that any other system would involve the publication of the Board's assessment of the relative merits of candidates, which would be unfair both to the candidates and the Board, and would not relieve the authority of the embarrassment of canvassing.

This scheme, which has been in operation in the Irish Free State for almost ten years, appears, on the whole, to have worked smoothly and to have proved acceptable to the authorities, their officers and the public. In the opinion of Irish practitioners it has greatly raised the standard of public medical services in their country.

Professorial Appointments

The method followed by some universities for selecting independent heads of departments is of interest in this connection. The governing body always retains the right to appoint members of its staff (except to Regius Chairs) but usually delegates the selection of one or more persons for their consideration to a committee which often has authority to seek assistance from outside. The committee may have an external assessor attached to it, or it may indeed, as in the University of Wales, consist of equal numbers of internal and external members, with the head of the college where the vacancy has occurred as its chairman, the external members and one of the internal being experts in the teaching of the subject in question.

Suggestions.

It seems to us that it is possible to arrive at certain conclusions from a consideration of the foregoing systems together with the circumstances of local government in Great Britain. We do not think that proposals to ensure the enforcement of prohibitions of canvassing are practicable under present conditions. This practice at least affords the members of authorities some means of forming their own opinion of candidates whose applications convey little to them. We desire to reiterate the view we have already expressed that the spirit and tradition of local government in this country would not lend themselves to any scheme which detracted from the autonomy of local authorities; while appointments are often unsatisfactory, they are not usually so bad as to justify any revolutionary change. Some system is desirable which would prove its own value and might be adopted voluntarily by an increasing number of authorities.

What appears to be required is to place professional guidance at the disposal of local authorities when they are making an appointment of a medical officer of health. The retiring officer may be available for this purpose, but sometimes the authority may hesitate to consult him or he may be in a difficult and invidious position if one of his own staff is a candidate. The local medical profession, outside the ranks of the public health services, are not usually in a position to give authoritative advice. Local authorities have been known to consult the medical department of the Ministry, and certainly their officers have opportunities of assessing the competency of men who have held responsible appointments elsewhere. The practice, however, does not seem to have found much favour. It would be preferable for local authorities to establish their own machine through the associations which represent them.

It is here that such a central advisory committee on recruitment, etc., as that suggested by the Departmental Committee might be utilised. The formation of a committee of this kind would afford to local authorities an opportunity to establish, through their own agency, a panel of experts, any one or more of whom would be available at the request of local authorities to advise them in the preparation of a short list, or, if it were desired, to assist an appointing committee in interviewing candidates and assessing their merits. It is not unlikely that councils would be willing to take advantage of such a facility if it were provided and recommended by their own central body. A panel of the kind suggested would preferably consist mainly of medical officers of health who either had retired or had reached such an age and standing that they would not themselves seek promotion or transfer.

If there is no prospect of the establishment of such a committee by local authorities, it is possible that the Minister, if representations were made to him, might regard the subject as appropriate for reference to the Standing Advisory Committee which he has already set up.

If a satisfactory method of selection can be devised, we do not think that it should be laid down as an axiom that every vacancy should be advertised. When a deputy or senior assistant in the department concerned is well fitted for the post and finds favour with the authority, it is unfair to other members of the service to induce them to apply by insisting on a formal and unreal throwing open of the appointment. But we believe members of the service and many councillors would feel more confidence in internal promotions if external advice were obtained, through some such organisation as we have suggested, before an officer were promoted to a post for which there might be even more suitable candidates in the service of other authorities.

February, 1936.

OBITUARY

James Kerr, M.A., M.D., D.P.H.

Dr. James Kerr, a pioneer worker in the school medical service and originator of the school medical service in Bradford, died at his home in Edinburgh on October 5th.

James Kerr was born in Glasgow and educated at Manchester Grammar School. He entered St. John's College, Cambridge, with a science scholarship, and gained first-class honours in the Natural Sciences Tripos in 1883. He received his medical education at St. Bartholomew's Hospital, where he held the senior science scholarship. He took the M.B., B.Ch. and D.P.H. of Cambridge in 1887, and proceeded to the M.D. in 1891.

Dr. Kerr joined the honorary medical staff of the Bradford Royal Infirmary and the Bradford Eye and Ear Hospital, but later he turned from clinical to administrative work and became medical superintendent under the Bradford School Board. It was at this time that he organised the school medical service of the city. He became first medical officer to the old London School Board, and when this was taken over by the L.C.C. became Medical Officer (Education), a post which he held with distinction from 1902 to 1911. Dr. Kerr's public duties were wide and varied. He was secretary of the second International Congress of School Hygiene, and served on the International Commission on Standards of Illumination and on the examination board for the English Board of Education. He gave the Ingleby Lecture before the University of Birmingham, and was awarded the Howard Medal by the Royal Statistical Society. During the war 1914-18 he served in the R.A.M.C. with the temporary rank of major, and he was honoured by the rank of Officier de l'Instruction Publique de France. His published works include several books: *The Air We Breathe*; *School Vision and the Myopic Scholar*; *The Fundamentals of School Health*. In the last publication Dr. Kerr collected the information gained in his many energetic years of service with the schools. It was the first exposition of present-day developments in health culture among children and adolescents and is an exhaustive study of the subject, containing 850 pages and many references to original literature.

Dr. Kerr took an active interest in politics and was for many years a member of the Fabian Society, serving for a time on its executive. He was a member of the Labour Party's Advisory Committees on Public Health and on Education. When he retired twelve years ago he went to Edinburgh, where he became chairman of Donaldson's Hospital and took an active interest in the work of the hospital on behalf of the deaf and dumb. He is survived by his wife and by his son, Dr. Douglas Kerr, principal police surgeon under the Corporation of Edinburgh.

H. S. Burnell-Jones, D.P.H.

We regret to record the death at Worle, Somerset, after a long illness, of Dr. H. S. Burnell-Jones, recently acting tuberculosis officer for Worcester.

Harold Stanley Burnell-Jones received his medical education at Cardiff, Leeds, Bristol, London Hospital, and University College. He took the L.S.A., London, in 1907, the D.P.H., Oxon, in 1911, and the L.M.S.S.A., London, in 1917. He had practised in Birmingham, North London, and at West Wickham, Kent. He was at one time clinical assistant at the Central London Throat, Nose, and Ear Hospital, and he also ran the throat department of the Croydon General Hospital for some months after the death of Mr. Juler. He worked for a time in the skin department of the Royal Northern Hospital. Among his other appointments were Assistant School Medical Officer for Somerset, resident medical officer to the M.A.B. Fever Hospitals, and assistant in the Bacteriology and Chemistry Department of the Middlesex Hospital. His publications include *Further notes on Tuberculin* (1937) and *Further notes on tuberculin in treatment of cataneous tuberculosis* (1937).

Dr. Burnell-Jones was an accomplished organist. He was always neat in appearance and of a genial disposition. He leaves a widow and six children, four of whom are in the Services. One daughter is a Bart's nurse now serving in the Army, and of his three sons two are in Canada.

Alexander Robertson, M.B., Ch.B., D.P.H.

We regret to record the death at the age of 62 of Dr. Alexander Robertson, medical officer of health for the Burghs of Elgin, Lossiemouth, and Rothes.

Alexander Robertson went to Aberdeen University, and passed M.B., Ch.B., in 1902, taking the D.P.H. in 1905. For seven years he was in Kenya as Government medical officer. He next worked for four years as assistant medical officer at the Bermondsey Infirmary in South London. In 1914 he entered private practice in Elgin, where he also undertook public health administration. At the time of his death he was senior surgeon to Dr. Gray's Hospital.

Dr. Robertson was an elder of St. Giles's Church, Elgin. He was also a football enthusiast, and was vice-president and honorary medical adviser of the local football club.

BOOK REVIEWS

Food Values in War-time. By VIOLET G. PLIMMER. London: Longmans, Green and Co. 1941. pp. 80. Price 1s. net.

Cookery Under Rations. By M. PEARSON and M. M. MITCHELL. London: Longmans, Green and Co. 1941. pp. 69. Price 1s. net.

To read all that is now being published on what we should eat would tax the leisure moments of most housewives, and all who seek to instruct the public should ask themselves critically whether their contribution will serve to enlighten or to make the confusion greater. Mrs. Violet G. Plimmer, in her little booklet, *Food Values in War-time*, has plainly felt that she could clear up many existing misunderstandings for the ordinary reader. Her book is full of practical details but in some respects lacks the restraint which our present incomplete knowledge might have imposed. Many clinicians would join issue with the author when she states: "For weaned children and adults, milk is not an essential foodstuff"; or, "A lot of sob stuff is talked about cows' milk as the perfect food for infants and young children." Again, the Ministry of Food might justifiably question whether "the public is at the mercy of the large food combines who really decide what shall be eaten and what shall not be eaten." Is it true that our densely populated island "had not the foresight to store enough before the outbreak of war"? One is at least justified in asking "enough for what"? Furthermore, the booklet has no table of contents, and is strangely lacking in sequence; this, no doubt, accounts for much repetition that could easily have been avoided.

Cookery Under Rations is a book of recipes, and is a serious attempt to provide recipes for the "square meal" which we are all now trying to obtain. Many essential foodstuffs are assumed to be absent or gravely reduced in amount, and the recipes and instructions are of a commonsense character. There can be little doubt that the majority of housewives would benefit by having this sensible booklet as a work of reference in their kitchen.

Medical practitioners allocated for service at first-aid posts are to be reckoned as senior officers in the Civil Defence First-Aid Post Service and may be supplied by the local authority with the appropriate uniforms—namely, for men, serge battledress, greatcoat, beret, boots and leather anklets; for women, serge jacket and skirt or trousers, greatcoat, felt hat, and leather shoes. The issue of uniforms authorised (by Circular 2492) should be limited to the practitioners shown on Section 1 of the quarterly returns of first-aid post personnel (Form E.M.S. 125) made to senior regional officers of the Ministry, and is not authorised to other practitioners who may be included in the emergency lists of practitioners prepared by medical officers of health.

The Department of Health for Scotland has issued an E.M.S. Memorandum (No. 7) on the first-aid treatment of burns. It consists of four pages and a cover, and can be obtained at H.M. Stationery Office or through any bookseller at the price of 2d. net.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

ANNUAL REPORT OF COUNCIL, SESSION 1940-41

New Members and Resignations

During the past session 23 candidates have been elected as Fellows or Associates of the Society; 55 resignations have been received from members on their retirement from active practice or for other reasons, but it has been found possible to retain on the register on the basis of fully-paid life membership (provided for in Article 12) 15 members who have subscribed to the Society for 25 years or more and who would otherwise have been lost by resignation.

Deaths

The Society has to mourn the loss by death since October 1st, 1940, of Sir William Willcox, K.C.I.E., C.B., C.M.G. (Medical Adviser to the Home Office), Keridwen St. V. Armstrong (Brook Hospital, Shooter's Hill), Sidney Davies (formerly M.O.H., Woolwich Met.B.), R. N. Denning (M.O.H., Elland U.D.), D. Diamond (Deputy M.O.H., Hull C.B.), G. H. Dupont (formerly M.O.H., Twickenham M.B.), Duncan Forbes (formerly M.O.H., Brighton C.B.), T. J. L. Forbes (M.O.H., Whitworth U.D.), Lt.-Col. A. Gibson, L.D.S. (Army Dental Surgeon), W. Hanna (formerly Deputy M.O.H., Liverpool C.B.), J. R. Kaye (formerly C.M.O.H., West Riding C.C.), C. W. Laird (Cons. T.O., Lancs C.C.), G. P. McCloskey (M.O.H., Havant U.D. & Petersfield U. & R.D.s), R. G. Markham (M.O.H., Nelson M.B.), G. H. Masson (M.O.H. & T.O., Port of Spain), W. Parry Morgan (Pathologist & Bacteriologist, Glamorganshire & Cardiff C.B.), J. E. O'Connor (formerly M.O.H., Leicester & Rutland C.S.D., Quorndon U.D. & Melton Mowbray R.D.), R. J. Reid (Chief A.S.M.O., West Ham C.B.), W. Robertson (formerly M.O.H. City of Edinburgh), W. S. I. Robertson (A.C.M.O.H. Dumfries C.C.), H. Scurfield (formerly M.O.H., Sheffield C.B., and Prof. Public Health Univ. of Sheffield), E. H. Snell (formerly M.O.H., Coventry C.B.), G. M. A. Thomas (M.O.H., Porthcawl U.D.), Ruby Thomson (formerly M.O. i/c M. & C.W. Fulham Met. B.), A. T. Till (M.O.H., Mitcham M.B.), A. Trimble (formerly Chief T.O., Belfast C.B.), A. E. White (formerly M.O.H., N.E. Salop C.S.D.), W. W. Wildman (M.O.H., Downham U.D., Downham and Marshland R.D.s, A.C.M.O.H., Norfolk C.C.), J. B. Wilkinson (formerly M.O.H., Oldham C.B.), and others.

Present Strength and Recruitment

Allowing for resignations and deaths, the membership of the Society at the close of the session shows a net loss of 61 members, making the total strength 1,778 on September 30th, 1941. In view of war conditions, the Society has done well to incur such a small loss of membership.

Honours Conferred on Members

The Society was sincerely gratified at the honour of knighthood conferred on our President-Elect, Sir Alexander Macgregor, O.B.E., and great pleasure was also felt at the conferment of the C.M.G. on Dr. James Balfour Kirk, the C.B.E. on Dr. Arthur Massey, the O.B.E. on Drs. Ethel Cassie, J. A. Scott and H. C. Maurice Williams, and other awards for gallantry on Drs. O. M. Holden, P. G. Horsburgh, K. E. Tapper, Malcolm Manson, and W. S. Walton. The Society also noted with satisfaction the appointment of Sir Weldon Dalrymple-Champneys, Bart., Drs. R. Veitch Clark, W. G. Clark and James Ferguson to be Honorary Physicians to H.M. the King.

Meetings Held During the Session

In view of the difficulties of travel and other war conditions, it was only possible to hold the following general meetings during the year under review:—

November 15th, 1940.—Installation of the President for his second year of office, 1940-41, and election of new members.

May 23rd, 1941.—Election of President for 1941-42 (Sir Alexander Macgregor) and election of new members.

Luncheon to Surgeon-General Thomas Parran

The Society gave a luncheon in honour of Surgeon-General Thomas Parran, head of the United States public health service, on Friday, February 21st, 1941, with the President, Dr. F. T. H. Wood in the chair. The guests included the Lord Mayor of the City of London, the Chairman of the London County Council, members of local authorities and representatives of the Ministry of Health. Approximately 70 members of the Society attended the luncheon, which was held at the Piccadilly Hotel.

Work of Council and Committees

During the session there were held four meetings of the Council, two of the General Purposes Committee and one of the Journal Committee.

As it became increasingly difficult for members to attend these meetings owing to the urgency of A.R.P. duties, matters which could not be postponed were referred by the Acting Executive Secretary to the Emergency Committee consisting of the President, Dr. Cyril Banks (Chairman of General Purposes Committee), Dr. G. F. Buchan (Hon. Treasurer), and Prof. R. M. F. Picken (Chairman of the Journal Committee), who were reappointed early in the session with power to act on behalf of the Council.

The Retiring President

Having been elected for a second year of office as President, Dr. F. T. H. Wood has given valuable service to the Society throughout the past session. Although beset by war difficulties of exceptional severity in his own area, he has given close attention to the affairs of the Society, and his directions have been available at short notice for the guidance of the Society's staff. The Council desire to place on record their appreciation of Dr. Wood's devotion to the interests of the Public Health Service during a period of great strain.

Other Officers and Retiring Members of Council

The Society once again owes special thanks to its Hon. Treasurer (Dr. G. F. Buchan), to the Chairman of the General Purposes Committee (Dr. Cyril Banks) and to the Chairman of the Journal Committee (Professor R. M. F. Picken).

The annual interchange of Branch and Group representatives on the Council involves the retirement of Drs. Catherine Morris Jones, A.T. W. Powell, Maitland Radford, A. G. G. Thompson, P. H. Stirk and others, who have given the Society valuable service.

Secretariat

Mr. G. L. C. Elliston, Executive Secretary, remained on service with the Royal Naval Volunteer Reserve during the year, and the Society is indebted to Captain G. S. Elliston, M.C., M.A., M.P., the Consultant Secretary, for his willingness to continue on a part-time basis the duties of Acting Executive Secretary and for his attentive and able conduct of the business affairs of the Society.

REPORT OF THE HONORARY TREASURER FOR THE SESSION 1940-41

I have pleasure in submitting my report for the year ended September 30th, 1941.

Revenue Account.—The total income of £3,515 4s. 8d. is less by £234 8s. 0d. than that of last year. This is mainly due to a fall in subscriptions of £208 11s. 1d. and an adjustment in the income received from investments during the year. This adjustment brings into account only the actual money received from investments and not in addition the sums from investments accrued but not received during the financial year. This arrangement will be followed in the submission of the audited accounts in future.

Expenditure.—The actual expenditure during the year was £3,051 14s. 10d. as compared with an expenditure of £2,990 18s. 3d. The only noteworthy increase in expenditure is in the production of the Journal which has cost £76 19s. 7d. more than in the previous year.

It is pleasing to record that the revenue account shows a credit balance of £463 9s. 10d. on the year's working.

Balance Sheet.—The balance sheet shows that the cost of the Society's investments was £9,234 19s. 7d. and the present value of these investments stands at £9,007 9s. 4d.

Staff.—I desire to record my appreciation of the assistance given me by Captain G. S. Elliston, M.P., and the staff of the Society in respect of the checking of accounts and the preparation of the Annual Report.

GEORGE F. BUCHAN, *Hon. Treasurer.*

SCOTTISH BRANCH

At a meeting of the Branch held on October 25th Dr. G. V. T. McMichael was unanimously elected to the office of President for the session 1941-42.

The Society of Medical Officers of Health

BALANCE SHEET

At 30th September, 1941.

1940. £ s. d.		1941. £ s. d.	£ s. d.
	CAPITAL ACCOUNT—		
4000 0 0	Mr. Berridge's Bequest ...	4000 0 0	
150 0 0	Dr. Neech's Gift	150 0 0	
451 10 0	Furniture	451 10 0	
4601 10 0			4601 10 0
	ACCUMULATED INCOME—		
4522 7 2	At September 30th, 1940 ...	5281 1 7	
	Add Excess of Income over Expenditure for the year ended September 30th,		
758 14 5	1941	463 9 10	
5281 1 7			5744 11 5
34 19 10	Sundry Creditors	86 11 0	
—	Subscriptions received in advance	38 6 6	
—	Journal Subscriptions unexpired	25 0 0	
			149 17 6

GEORGE F. BUCHAN,
Hon. Treasurer.

G. S. ELLISTON,
Acting Executive Secretary.

£9917 11 5 — £10495 18 11

1940. £ s. d.		1941. £ s. d.	£ 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	£1000 Local Loans 3% Stock	921 3 10	
483 3 6	£500 Manchester Corporation 3% Stock	483 3 6	
509 9 6	£500 Birmingham 3% Stock	509 9 6	
—	£1000 3% Defence Bonds ...	1000 0 0	
—	£400 3% Savings Bonds ...	400 0 0	
7834 19 7			9234 19 7
165 0 0	FURNITURE at cost *less* amounts written off ...		165 0 0
	SUNDRY DEBTORS—		
35 10 7	Dividends accrued		
133 15 2	Advertising	125 11 6	
1 1 0	Reprints	4 18 6	
18 18 0	Lettings	18 18 0	
15 19 0	Miscellaneous	25 2 9	
205 3 9		174 10 9	
25 0 0	*Less* Provision for Doubtful Debts	25 0 0	
180 3 9			149 10 9
	CASH BALANCES—		
1686 19 7	At Bank	887 10 6	
50 8 6	Petty Cash	58 18 1	
1737 8 1			946 8 7
£9917 11 5			£10495 18 11

* *Note.*—The market value of the Society's Investments last year and at September 30th, 1941.

1940. £ s. d.		1941. £ s. d.
3244 2 6	£4099 17s. 5d. India 3% Stock at 79⅛ and 90½	3710 7 8
499 11 0	£514 16s. 0d. Metropolitan 2½% Consolidated Stock at 97 and 99	509 13 0
662 3 9	£650 3½% War Loan at 101⅞ and 106	689 0 0
238 6 10	£320 16s. 7d. 2½% Consols at 74¼ and 82½	264 13 8
504 7 6	£500 3½% Conversion Stock at 100⅞ and 105¾	528 15 0
868 15 0	£1000 Local Loans 3% Stock at 86⅞ and 95½	955 0 0
397 10 0	£500 Manchester Corporation 3% (1891) Red. Stock at 79⅛ and 91	455 0 0
397 10 0	£500 Birmingham 3% Red. Stock 1956-58 at 79½ and 99 ...	495 0 0
—	£1000 3% Defence Bonds at 100	1000 0 0
—	£400 3% Savings Bonds at 100	400 0 0
£6812 6 7		£9007 9 4

REPORT OF THE AUDITORS TO THE MEMBERS OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.

We have examined the above Balance Sheet dated September 30th, 1941, and have obtained all the information and explanations we have required. We report that in our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Society's affairs, according to the best of our information and the explanations given to us and as shown by the books of the Society.

5, London Wall Buildings,
London, E.C.2.
10*th November*, 1941.

DELOITTE, PLENDER, GRIFFITHS & CO.,
Auditors.
Chartered Accountants.

REVENUE ACCOUNT

For the Year ended 30th September, 1941.

EXPENDITURE.

1940. £ s. d.		1941. £ s. d.	£ s. d.
	PREMISES—		
200 0 0	Rent	200 0 0	
1 3 0	Insurance, including War Risks	17 1 0	
14 16 1	Fuel and Lighting ...	11 2 3	
30 18 11	Cleaning	29 19 6	
246 18 0			258 2 9
	STAFF—		
503 7 11	Executive Secretary (including Pension Contribution)	339 3 7	
	Acting Executive Secretary		
25 0 0	Salary	100 0 0	
25 0 0	Expenses	100 0 0	
451 10 0	Office Staff	471 0 0	
26 0 0	Mrs. Swain's Weekly Pension	26 0 0	
1030 17 11			1036 3 7
	GENERAL—		
2 10 3	Roll of Members Printing	2 10 3	
8 0 6	General Printing ...	2 1 0	
106 6 7	Stationery	55 17 4	
72 2 9	Postages and Telephone	73 18 11	
32 1 1	Miscellaneous Expenses	31 3 6	
14 13 11	Library	21 13 6	
22 10 4	Office Equipment ...	—	
21 0 0	Auditors' Fees and Accountancy Charges (two years)	63 0 0	
46 13 4	Dinner Account	48 2 3	
164 15 7	Travelling Expenses (Members of Council) ...	171 17 5	
5 5 0	Neech Prize	5 5 0	
4 0 0	Removal Expenses ...	—	
4 4 0	Refresher Course ...	—	
504 3 4			475 9 2
	PRODUCTION OF JOURNAL (for Receipts see contra)—		
516 16 4	Printing	552 9 9	
17 8 11	Reprints	19 6 11	
150 0 0	Salary of Editor ...	50 0 0	
—	Acting Editor	100 16 0	
34 18 0	Editorial Contributions	39 16 10	
84 10 0	Clerical Assistance ...	96 0 0	
18 8 6	Libel Insurance ...	18 7 11	
133 3 3	Postages	155 7 2	
955 5 0			1032 4 7
	PROPORTION OF SUBSCRIPTIONS PAID TO BRANCHES—		
26 2 6	North-Western Branch	24 12 6	
20 7 6	Yorkshire Branch ...	20 12 6	
29 2 6	Metropolitan Branch ...	25 0 0	
6 7 6	Eastern Branch ...	6 0 0	
10 12 6	Southern Branch ...	9 10 0	
12 10 0	Northern Branch ...	12 12 6	
40 10 0	Home Counties Branch	38 17 6	
11 7 6	West of England Branch	10 12 6	
11 0 0	Welsh Branch ...	10 17 6	
13 7 6	East Midland Branch	13 7 6	
12 10 0	Scottish Branch ...	12 2 6	
15 7 6	Midland Branch ...	15 7 6	
36 15 0	Dental Officers' Group	36 10 0	
246 0 0			236 2 6
7 14 0	BRANCH AND GROUP MEETING EXPENSES		13 12 3
758 14 5	*Balance*: being excess of Income over Expenditure for the year		463 9 10
3749 12 8			£3515 4 8

INCOME.

1940. £ s. d.		1941. £ s. d.	£ s. d.
2870 12 9	SUBSCRIPTIONS		2662 1 8
	INCOME RECEIVED FROM INVESTMENTS (*less* tax)—		
76 17 5	On £4099 17s. 5d. India 3% Consolidated Stock	66 17 6	
7 8 1	On £514 16s. 0d. Metropolitan 2½% Consolidated Stock ...	6 18 4	
15 1 0	On £650 3½% War Loan	13 8 0	
5 0 4	On £320 16s. 7d. 2½% Consols	4 7 4	
11 7 7	On £500 3½% Conversion Stock	10 1 4	
18 15 0	On £1000 Local Loans 3% Stock	16 6 3	
9 0 0	On £500 Manchester Corporation 3% Stock	7 13 9	
9 0 0	On £500 Birmingham Corporation 3% Stock	7 13 9	
—	On £1000 3% Defence Bonds	7 12 5	
—	On £400 3% Savings Bonds	9 6	
152 9 5		141 8 2	
	Less Proportion thereof taken to credit at September 30th, 1940	35 10 7	
			105 17 7
	RENT—		
18 18 0	Sundry Lettings ...		18 18 0
	JOURNAL ACCOUNT—		
36 16 4	Sales	34 5 4	
102 10 9	Subscriptions (Nine Months to September 30th, 1941)	78 0 1	
20 13 6	Reprints	26 5 3	
547 11 11	Advertising	589 16 9	
707 12 6			728 7 5
£3749 12 8			£3515 4 8

BRANCH AND GROUP MEETINGS

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Agnes H. M. Young (A.C.M.O.H., Warwickshire).

Hon. Secretary: Dr. Katherine M. Hirst (Deputy M.O.H., Islington M.B.).

Hon. Assistant Secretary: Dr. Violet I. Russell (A.M.O.H., Kensington M.B.).

Annual General Meeting

The Annual General Meeting of the Maternity and Child Welfare Group was held on July 26th, at the Palace Hotel, Lancaster Gate, London, W.1. The President, Dr. Agnes Young, took the chair and 20 other members were present.

Election of Officers.—The meeting elected Miss Virginia Saunders-Jacobs, M.A., M.D., D.P.H., as President for the coming session. The names of other officers for the session were published in the October issue of PUBLIC HEALTH.

Annual Reports.—The meeting adopted the reports of the Group representative on the Council and of the Hon. Secretaries for the sessions 1939-40 and 1940-41.

Presidential Address.—The President, Dr. Agnes Young, gave an address entitled "Meditations," in which she broke away from tradition and addressed the meeting on a non-medical subject. Members of the Group undoubtedly appreciated a respite from the many and pressing problems of daily work, which the President at first deliberately set aside whilst she spoke of memories and meditations on life—yesterday, to-day and to-morrow—urging that "during these dark days of war, so fully charged for all of us with urgent responsibilities, with fears and restrictions and more or less complete alteration in the accustomed routine of our lives, it is good and satisfactory for us occasionally to reflect in leisure moments on more pleasant matters and on past arresting personal experiences." Dr. Young carried the meeting with her in peace-time memories of Christmas on the West Coast of Scotland, summer days in Devonshire, Nazi Germany in 1937, Copenhagen in a holiday mood, the Rugger International at Twickenham, and again to Scotland and a quiet memory of Sunday in a fishing village in the North.

Dr. Young continued: "This year is generally regarded by most thinking people as a very important one in our history—a year in which momentous events would take place everywhere, and they have. Problems have sprung up calling for more courage, and still more courage, and yet we go on. These exists, however, a constant anxiety and an apprehension of the future which tends to wear down our resistance, physical and mental—the former influenced doubtless by the restriction and rationing of food, although you will agree that the human body adjusts amazingly well to fewer meals, to less quantity and less exotic feeding, and thrives equally well, if not more so, on simple foods. There has been an absence so far of any increase in epidemic disease such as would have been most reasonably expected owing to the unusual conditions in the country. This is, I think, proof of the adaptability of the average individual to very difficult and different circumstances and to completely strange living conditions, as well as a tribute to the high standard of public and personal hygiene throughout the country. Although more drastic conditions may come, and produce an increase in disease and distress, there is every justification for anticipating that if any such increase were to show signs of developing the battle against it would be waged persistently, meticulously, and successfully. And what of the mental strain? For none of us is life easy now. The strain is almost more than can be borne by many and we wonder what it all means. There must be no mistake about what it means. There is, I am sure, a very real meaning. Out of it will come character. Out of all sorrows and troubles come effort and courage and, in due course, victory and peace. Victory and peace will come at last, if there is a continuous, steadfast and valiant spirit of sacrifice; and equally steadfast faith in the justice of our cause and a determination, with the help of God, to put every possible effort into the present tasks of life."

On the motion of Dr. Back, a vote of thanks to Dr. Young was carried with acclamation for her delightful and unusual presidential address, and for her unfailing interest and work for the Group as President during two difficult years.

DENTAL OFFICERS' GROUP

Yorkshire Dental Officers' Sub-Group

At a recent meeting of the Yorkshire Dental Officers' Sub-Group a paper was read by Dr. R. Weaver on "Nutrition and Dental Caries." He described the system of nutrition assessment on a clinical basis which is recommended by the Board of Education, and drew special attention to the Board's view that carious teeth and other local defects should not in themselves be regarded as evidence of faulty nutrition. He discussed various definitions of nutrition, and maintained that since health depends on other factors besides the intake and assimilation of food nutrition and health were not synonymous, and that a child might be well nourished without being in all respects healthy. Mention was then made of a recent investigation by Miss Irene Allen from which it appeared that there was no correlation between the dental condition of children at a given time and their nutrition as measured by a weight-height index. In view of the Board's opinion that assessment on a clinical basis was to be preferred to assessment based on a weight-height index, Dr. Weaver described how with the co-operation of three public dental officers he had carried out an investigation designed to see if any correlation existed between children's nutrition assessed on a clinical basis and the incidence of caries. This investigation covered 1,062 children in infants departments of public elementary schools — the nutrition being first assessed by Dr. Weaver without his having any knowledge of their dental condition, which was then recorded by the dental officers. In addition to noting the number of carious teeth, the number of septic teeth, and the number of teeth missing, which were presumed to have been extracted, these officers made a record of the presence or absence of gingivitis. In only eighteen cases was any evidence of gingivitis noted and in no case was it severe—a point of considerable interest in view of the fears which had been expressed as to the possible deficiency of vitamin C in our present diet. As for the total incidence of caries, no difference whatever was found between the various nutritional groups, but the children recorded as of excellent nutrition had on the average considerably fewer septic teeth and more teeth extracted than had those of bad nutrition. Dr. Weaver pointed out that it would be unwise to assume that the excellent nutrition of the children

assessed as "A" was due to the removal of most of their septic teeth; it was possible that the excellent nutrition and the larger amount of dental attention which the "A" children had received were both due to their having their parents who took good care of their children's health. Dr. Weaver said that, whilst people not infrequently differed in their nutritional assessment of individual children on a clinical basis, there was no doubt in his mind that as a group the children assessed by him as "A" were better nourished than those assessed by him as "B," and so on. He therefore claimed that the investigation showed the Board of Education to be justified in advising that carious teeth should not in themselves be regarded as evidence of faulty nutrition.

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 was held at the Institute of Preventive Medicine, Cardiff, on July 18th. The President was in the chair and 18 other members were present. The minutes of the last meeting, held on June 27th, were read, approved, and signed by the President.

The question of flash pasteurisation was referred to, but it was decided to defer consideration until the Ministry had issued their Circular.

The Hon. Secretary reported that he had informed Dr. Midgeley, Hon. Secretary of the Tuberculosis Group, that there had been no change in the Branch's representation on the Tuberculosis Group Committee.

Day Nurseries

A discussion on day nurseries was then held. Introductory papers were read by Dr. W. A. Murphy, M.O.H. for the Ogmore and Garw Urban District Council, by Dr. T. I. Evans, M.O.H., Llantrisent and Llantwit Fardre Rural District Council, and by Dr. J. S. Peebles, M.O.H., Bridgend Urban District Council and Penybont Rural District Council.

Dr. Murphy began by stating that the establishment of day nurseries in the mining areas of Glamorgan was a complete innovation inasmuch as it had never been the practice for married women from these districts to seek employment outside the home. But the employment of women in munition and other factories had become necessary to release men for the Forces and to conserve man power in the mines. Originally it had been suggested by the various Government departments concerned that "minders" should be employed for a group of children, but he was glad that this proposal, which had nothing to commend it, did not appear to have been pursued. Circulars from the Ministry of Health and the Board of Education had authorised local authorities to set up wartime nurseries, either part-time or whole-time, for evacuated children and children of women in employment, the net approved expenditure to be reimbursed by the Ministry of Health. In his opinion, it was essential that the nurseries should be staffed by a trained nursing staff acting under the direction of a matron who should be a fully-trained (general or children's hospital) nurse. The needs of the children between the ages 2 and 5 would be supervised by a teacher. The mothers would have to pay 1s. per day for each child. Having regard to the fact that a congregation of children of varying ages under 5 years might easily lead to outbreaks of infectious diseases, it was important that careful attention should be given to the premises to be used for the purpose. The Ministry of Health, goaded no doubt by a zealous Treasury, suggested that suitable premises might be found in a dwelling-house. Dr. Murphy then described the accommodation which would have to be provided, and stressed the importance of a garden or open space in which the children could play with safety. Furniture could be obtained from the central stores of the Ministry of Health or on loan from the London County Council, as many nursery centres in the Metropolitan Area were not now in use. In his own district there had been a reasonably ready response on the part of the mothers for the establishment of part-time nurseries, but there were few mothers who would be prepared to avail themselves of the facilities of a whole-time nursery. It was quite certain that only whole-time nurseries could be of any assistance in releasing women for war work, especially where the "three shift" was in operation. There were many advantages in encouraging the attendance of children at nurseries: regular supervision, so that early signs of ill health might be detected; training in good conduct and good habits; routine medical inspection; and the possibility of obtaining more readily parental consent to diphtheria immunisation. As regards the disadvantages, he stressed the great danger of spread in infection amongst the children. Fresh air and cleanliness must be rigidly insisted upon. Gastro-intestinal infections among children under 2 years could spread with great rapidity and disastrous results. Scabies and impetigo were also likely to be troublesome and difficult to eradicate. Early exclusion of infected children might help to prevent the spread of these conditions. The children should be strictly supervised and appropriate measures taken on noting any deviation from normal health. Success or failure of any nursery depended on the superintendent or matron in charge, and careful selection was necessary to ensure the appointment of a suitable person for the post. It was probable that wartime nurseries would be established throughout the country, and it seemed reasonable to assume that these would be continued as nursery centres after the war, providing for the toddlers facilities for early training, education, and guidance under healthy conditions.

Dr. Evans stated that he had first been approached by the Welsh Board of Health to report on the position in his area with regard to the opening of nurseries in order to allow mothers to do work of national importance, but since that time circulars issued by the Ministry of Health and the Board of Education indicated that the aim was much wider than this. Under paragraph 3 of the Circular in which the aims and scope of these schools were given the phrase "both for evacuated children and for the children of women in employment (whether evacuees or local residents)" indicated that the foster parents were to be relieved of their care, whether in employment or not. If that were so, why should not the same facilities be given to the many harassed mothers who were local residents. Local inquiry by his health visitors in the most populous part of his district proved that at the moment there was no demand for day nurseries. At the same time there was no evidence to prove that mothers would not utilise such a nursery were it actually established. There was also the question of the older children. At present the methods adopted was for the mothers to send all the children out to relatives or neighbours or to get people in to look after them. Thus the children attending school could also be looked after; whereas if infants attended a nursery he had been asked who would then look after and feed the school children. The next

joint was that of payments. One shilling per child a day was rather a lot even if there were only one child to board out. When there were three children this would mean £1 1s. per week out of wages ranging from £2 15s. to £3 9s. The question of fares had also to be considered. Obviously all shifts ought to be catered for and this was a big task implying duplication of certain things and triplication of staff. As regards premises, he had inspected five different buildings and reviewed two others. None of these was suitable for the purpose. He understood that the Board of Education, in conjunction with the London County Council, was anxious to begin nursery schools in the reception areas of South Wales. Such a school had already been opened in Kenfig Hill. It might be tried in his area. It was an educational and sociological experiment and was not for the purpose of helping mothers to work in government factories. He saw no reason why the question of nurseries should not be reopened to be worked alone or in liaison with other authorities provided that other conditions could be fulfilled. His authority had now proceeded under the Circular of May 31, 1941, to take steps to open a day nursery school for children between 2 and 5 years of age and had already advertised for a woman superintendent. The setting up of this type of school had to be carefully controlled not only from the health point of view (a most important aspect) but also in what he might call its " objectives."

Dr. Peebles was unfortunately prevented from attending the meeting and his paper was read by the Hon. Secretary. Dr. Peebles first outlined the reasons why day nurseries were necessary: The employment of large numbers of women on war work, and also in the case of evacuees. It was the case that evacuee mothers might be billeted in a private house or in a larger establishment when many mothers were lodged together. In either case the circumstances were not the same as where one family occupied a house entirely by themselves. If the children from these families could be sent to a day nursery it would allow the mother for a certain period of each day to meet her friends much in the same way as she was accustomed to do in her old home. The most important consideration was that day nurseries implied improvement in the general health of the children, by means of regular routine, sleeping, cleanliness, etc. This was the main reason why local authorities should consider the necessity for the establishment of day nurseries. Personally he was inclined to think that part-time nurseries were preferable to whole-time nurseries, because he was old fashioned enough to believe that both parents and children benefited from the normal family life. A good mother's influence was bound to prove beneficial to her own children, and the majority of mothers were good and interested in their offspring. There was also the consideration of the difference in cost—namely, 6d. as against 1s. a day. He then touched on the difficulties of such a scheme. Premises were difficult to obtain, especially those with an open space surrounding the building or in close proximity to it. Where the Welsh Board of Health had sanctioned the erection of *ad hoc* premises for infant welfare work, these sometimes were very suitable; unfortunately they were used for centre work, ante-natal clinics, and immunisation. He thought that the special huts which the Ministry were prepared to supply would prove satisfactory, but he was convinced that these nurseries should not cater for more than thirty children, which meant that all over one's district there would need to be a large number of different buildings. Next he mentioned the difficulty of conveying the children to and from the nurseries; therefore the distances from the homes must not be too great. Again, there was the difficulty of the mother having to find a person who would take the child to and from the nursery. The mother's shifts of work might not coincide with the times of the day nursery. Finally, he touched upon the question of staff, and insisted that the matron should be thoroughly trained and that there should be someone of sufficient experience to deputise for her. The staff should be on the basis of one for every seven children, but in addition there would have to be a cook and a charwoman. A trained nurse would be of great advantage, but if this were too expensive one of the local authority's health visitors could visit the nursery once or twice weekly or when requested by the matron.

There ensued a lively discussion in which all present joined. Dr. Herbert dealt with certain practical details and expressed the opinion that it was necessary to start a nursery irrespective of whether there was a demand for it or not. In her experience mothers flocked to it once they saw how it was run. In Swansea they had a large waiting list. Dr. Howell stressed the importance of trained staff, as gastro-enteritis was an ever-present danger. Dr. Laird stated that in her experience voluntary workers were not desirable.

The Ministry of Health for England and Wales, the Department of Health for Scotland, and the Ministry of Labour for Northern Ireland have issued on behalf of the Ministry of Pensions a memorandum (248) on war injuries and war service injuries; this is a revision of the memorandum issued in September, 1939.

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Editorial

Industrial Medical Service

In 1940 a special committee was set up by the Council of the B.M.A. " (1) to further the co-ordination of industrial medical practice with other branches of medical practice, in particular with general practice and the public health and hospital services; (2) to co-operate with Government Departments and voluntary organisations in all measures affecting health in industry." The report of this Committee has now been published as a B.M.A. gray book. The observations of the committee are limited to places of work covered by the Factory Acts, and do not include collieries. The report describes the place of medicine in industry, defines the duties of an industrial medical officer, refers to the relations of the industrial with the outside medical services, deals briefly with rehabilitation, and discusses medical education in industry, industrial health research, and the future of industrial medical practice. One appendix reproduces the ethical rules for the guidance of industrial medical officers in their relation to medical services, and the other is a memorandum by the Association of Industrial Medical Officers on a syllabus of instruction.

Through the ill-health of workers, it is stated, industry loses more than 31½ million man-weeks' work in a year, and loss through accidents expressed in terms of money amounts to over £30,000,000 a year. While conditions in industry are by no means necessarily the immediate source of these losses, there can be little doubt that with a properly organised industrial medical service much suffering, ill-health, and time would be saved. For example, as a result of medical care one firm reports the complete disappearance of its special hazard, lead poisoning. By making available an adequate medical service firms have cut down by more than half the time of absence because of sickness. Quite apart from the value of immediate repair work—for example, prompt application of first-aid—medical supervision of the health of the worker in the factory environment should go far to prevent mental and physical disorder, especially when such supervision is carried out in close co-operation with outside medical services. One point of special interest is that more than half the factories in this country are small and employ fewer than 250 people. The solution of the medical problem of these small firms would seem to lie in the appointment of an industrial medical officer to a group of them.

It is evident that a doctor taking a post in industry must acquire knowledge of industrial organisation and factory methods, and make himself familiar with the processes in the factory to which he is attached. Of

first importance are the particular occupational hazards in a given industry, and without a knowledge of these the medical man's general supervision of the health of the workers will lack a solid basis. At present the medical examination of new employees under 16 and of workers in certain special processes is compulsory, but the committee's opinion is that medical examination of other new entrants should be compulsory. Such a measure would seem to be of the highest importance, especially if adequate methods of examination were available—as, for example, miniature radiography. This would afford an excellent opportunity of detecting disease at an early stage and those variations from the physical and mental norm which can be corrected by suitable regime and treatment. If such an examination were accompanied by intelligence and vocational tests employees could be drafted into occupations suited to their individual qualities. In this country the industrial field is so wide that it offers unrivalled opportunities for mass observation of the various factors making for health and disease and for the collection of statistical records.

One problem calls for solution, and that is the higher sickness absence rate in women, which is apparently not wholly to be explained by gynaecological conditions. The increased incidence of tuberculosis among women in industry in the last war, and the foreshadowings of such an increase in this war, are just one indication that women are being subjected to a strain either to which they are not physiologically adapted or which becomes too great when the factory worker at the same time has heavy domestic duties and/or worries.

On the matter of appointment, the committee doubts whether it is satisfactory that this should be made by the employer, and suggests that an advisory body under the aegis of a Government Department should be set up to guide employers in making a suitable choice. Obviously medical men of experience and authority should have the biggest say in the choice of medical personnel, and with the establishment of harmonious relations with industry it is probable that industrial managements would hesitate to turn down the strong recommendations of an independent and impartial outside body. It is essential that the industrial medical officer should be given the greatest possible freedom in carrying out his duties and in making his recommendations for the improvement of the health of the workers. The danger that he may be looked upon as being on the side of the management is one that must be constantly guarded against, and in the long run this can be secured only if the industrial medical officer does not feel hampered in the making of recommendations that will prove unpopular to the management. Although he must take into full account the point of view of the management his first concern must always be for the health and safety of the worker, and once the workers know this their full co-operation in preventive and hygienic methods will be secured to the evident advantage of themselves and to the industry in which they work.

The report stresses the need for close relations between industrial medical officers and the general practitioner. So also should there be the closest relations with the public health department of the district in which the factory is situated. The report states that, though the medical officer of health has the statutory right of entry into all factories and workshops, he is concerned "only with water closets and the provision of fire escapes." "Matters of factory hygiene, ventilation, cleanliness, spacing, temperature, etc., are controlled by the Factory Inspection Department of the Ministry of Labour (formerly of the Home Office). Only a small proportion of the factory inspectors, however, are medical practitioners, in 1940 the proportion being approximately one for every 500,000 workers." This statement is incomplete, as according to the Factories Act a district council can enforce the provisions relating to cleanliness, temperature, ventilation, etc., in any factory in which mechanical power is not used. In any event the situation is anomalous. Industrial medicine is, after all, essentially a branch of public health in its widest sense. It would indeed seem inadvisable to set up a special and separate industrial medical service under the administration of the Ministry of Labour. For that unification towards which everyone now seems to be striving, industrial medicine should be administered as a part of the public health service under the Ministry of Health.

The report of the committee has many wise things to say on medical education and research in the new field with which its report deals. It is pointed out that the Industrial Health Research Board is not able to spend money without the consent of the Medical Research Council, and that the Secretary of this Board is, during the present war, required to devote part of his time to acting as Chief Medical Officer to the Ministry of Supply. A wisely devised research organisation in industry should be able to make valuable contributions to the problems of health and disease in the community at large. The full report will repay the close attention of all those in the public health service.

Foodstuffs and Gas Contamination

The information contained in the Ministry of Food's Public Information Leaflet No. 6, *Poison Gas and Food in Your Home*, was intended as a bare outline of the simple measures to be taken to protect food against poison gas, and contained instructions on what should be done should food be contaminated; this was considerably amplified in the Ministry's memorandum, *Food and its Protection Against Poison Gas*. In this pamphlet the possible contamination of foodstuffs in the home, in retail shops, and in institutions, and of food stored in bulk in warehouses and docks is considered. Full information is given about the protection afforded by different materials holding or covering foodstuffs, and the effects of poison gases on some foodstuffs. The administrative arrangements for dealing with food contaminated by poison gases are set out in the Ministry of Food's Memoranda M.F.G. Nos. 1, 3 and 4. It is with the help of the information in these documents that local authorities have for some time past, each in the light of its own peculiar problems, been formulating their proposals and setting up the necessary organisation,

The problems arising are discussed in the July issue of the *Journal of the Royal Sanitary Institute*. Dr. Page, of the Imperial College of Science and Technology, deals more particularly with the damage to foodstuffs, amplifying in certain respects the information contained in the Ministry of Food's pamphlet. He points out that the damage will depend on the chemical and physical properties of the foodstuffs themselves and of the chemical used, and on the degree of exposure of the foodstuffs to the chemical. Foods may absorb substances by solution in the water or fat that they contain, or by adsorption on their solid surfaces. Either process may be followed by some degree of breakdown of the chemical. Absorbed substances subjected to the hydrolysing action of water are in the main converted into comparatively innocuous products, though lewisite will still be poisonous even if deprived of its vesicant properties. Hydrolysis being so much slower a process than solution, exposed watery foods or liquids may remain contaminated for a long period. Solution in fats is seldom followed by any action comparable to the hydrolysis effected by water, so that the surface of a fatty food once contaminated is usually permanently unfit for human consumption.

While the chemicals used in chemical warfare are nearly all liquid or solid at ordinary temperatures, liquids are sufficiently volatile for a proportion to exist as gas. The degree of volatility not only affects the extent of penetration of foodstuffs on exposure, but also determines the success of decontamination by airing. In general it may be said that the more volatile the liquid the more rapidly it will diffuse into the air spaces in granular foods, and the more rapidly it can be subsequently diffused out again by airing. Most of the vapour, however, even of the most volatile of the war chemicals, will probably be absorbed by the outer layers of the food. The most serious degree of contamination will arise from contact of the foodstuffs with the liquid chemicals in the form of splashes or of spray. As this will be limited in general to the less volatile liquids the contamination produced is initially heavy and is difficult to remove by airing.

These considerations emphasise the importance of studying the ways of protecting food against exposure to contamination by liquid, and to a lesser extent by vapour. Dr. Page deals with the principles to be considered both in stacking and in the selection of containers for food, and, discussing some of the problems arising in the sampling of contaminated foodstuffs, stresses the importance of sampling being carried out carefully and systematically. He points to the necessity of obtaining samples not only from the surface and from the interior of packages but also from packages in the interior of a pile. In the tests carried out in the laboratory the most important is that for the presence of arsenic, the two next in importance being those for mustard and lewisite. Most methods make use of the removal of a sufficient quantity of the substance as a gas in a stream of purified air, from which the substance is recovered in solution and identified by specific tests. Because of the low volatility of some of the gases and the degree to which they are held by most foods, these tests, even where they may be successful qualitatively, may be unreliable quantitatively.

The paper in the same issue of the Institute Journal by Mr. Roland Woods, the gas contamination officer of the County Borough of Sunderland, raises points of real importance to the administrative officer responsible for the operation of the scheme, and includes informative detailed instructions by the Borough Public Analyst on the sampling for analysis of foodstuffs contaminated by poison gas.

Safe Milk

As Dr. E. W. McHenry in a symposium on milk* points out, recent food surveys in Great Britain, the U.S.A., and Canada have shown that the main dietetic deficiencies are in calcium, iron, and the vitamin-B group. Milk, as everyone knows, is a valuable protective food, and a most convenient source of calcium—a common dietary deficiency in Canada. The Canadian Council on Nutrition has recommended that an adult should have at least half a pint of milk daily, and that children should have according to their age from one and a quarter pints to one quart daily. Dr. W. C. Hopper, however, shows that the average Canadian consumption per head is 0·55 to 0·75 pint per day. In four cities the average was 0·70 pint and in three villages 0·63 pint, whereas in 823 farm households the figure was 1·37 pints. But on farms the amount of whole milk consumed varies greatly. In some cases the amount of buttermilk drunk averaged 0·27 pint per day. As was to be expected, low-income families took less milk than families with high incomes. Only 23 per cent. of the adults in 3,207 families drank milk, and over 20 per cent. of children in the households visited drank no milk. In a more detailed study relating to the Vancouver area, J. S. Kitching found that 46 per cent. of the families were drinking less milk than the minimum suggested by the Canadian Council of Nutrition. Pasteurised milk only was drunk by 74 per cent. of the families, raw milk by 20 per cent., and 6 per cent. had both.

Consumption of milk is one thing; consumption of safe milk is another. As a step towards securing safe milk, A. R. B. Richmond recommends washing of the animal's flanks, belly, tail, and udder with a chlorine disinfectant. As it is the first few streams of milk from each teat that contain most of the bacteria, they should be discarded either into a calf-bucket or into some other type of container, but not upon the ground. Unsterilised milk utensils constitute the most important source of contamination. After sterilisation the utensils should never be dried with cloths. In dealing with tests for quality, C. K. Johns says that the plate-count is still the most satisfactory method for low-count milks, but it reflects only a highly variable proportion of the actual number of bacteria present. For incoming raw milk the direct microscope test—the Breed count—has advantages over the plate-count in that it is cheap, speedy, and can be carried out on large numbers of samples. It often shows the type of the bacteria present. On the whole Johns prefers dye-reduction tests, which are as accurate as counting methods and give an indication of the state of activity of the bacteria. Poorly cooled milk will

* *Canad. publ. Hlth. J.*, April, 1941.

reduce more rapidly than a well cooled milk of equivalent bacterial content, and consequently the test gives some idea of the efficiency of handling. The "creaming error" is due to aggregation of organisms in the surface cream. To obviate this Wilson advocates injection at thirty-minute intervals, but Johns has found injection at intervals of one or even two hours equally effective. The methylene blue test is the one usually employed, but the author gives a brief description of the resazurin test, which he considers less valuable in indicating abnormal milks.

M. P. Ravenel, in an informative article on the transmission of animal diseases to man through milk, observes that brucellosis was recognised in Canada about twelve years ago, and cases have occurred in Vancouver, Edmonton, and elsewhere. He gives a very useful summary of the problem of pathogenic cocci. The *Str. zooepidemicus* of Frost, which is a cause of bovine mastitis, has not so far produced sore throat in man. Ravenel says that, up to 1938, 194 cases of lung tuberculosis caused by bovine bacilli had been reported in Great Britain, and in the world a total of about 350 cases. Since then it is probable that the figures have increased. Dealing especially with the relation between the actual and the recorded incidence of food-borne diseases, C. E. Dolman estimates the minimum annual incidence of milk-borne typhoid fever, paratyphoid fever, scarlet fever, and sore throat in Canada as 1,500 cases with 130 deaths. On a similar basis he estimates the incidence for Britain as 1,200 cases. In Canada there is an annual average of 121 recorded cases of milk-borne enteric infection, which is high when compared with the incidence in Great Britain or in the United States. The incidence of tuberculosis in cattle in Canada has declined to 3 per cent. of nine million cattle, but there is much disparity in tests : for example, although 100 per cent. of cattle were tested in New Brunswick and Prince Edward Island, only 4 per cent. were tested in Alberta. Hardman stated in 1938 that 15·5 per cent. of milk cows in Ontario were infected with Bang's disease. In a ten-months survey of pooled milk a positive culture was obtained on at least one occasion from twenty-two different dairies out of the maximum of forty-eight. In the Vancouver district large-scale blood investigation of the human population gave 3·8 per cent. as showing agglutination against *Brucella* suspension in dilution of 1 in 20 or higher. Dolman submits that pasteurisation is the only remedy. J. S. Fulton states that the average percentage of infected cows up to 1939 was 5·7, but the figure is now falling. *Br. abortus* was isolated in the milk of 70 per cent. of the cows which gave positive tests. He points out that the remedy is not pasteurisation alone, but this process combined with the testing of dairy cows and the elimination of positive reactors. In Saskatchewan the councils of towns and villages may pass a by-law making it compulsory to test all dairy herds supplying raw milk. The blood samples are collected by practising veterinary surgeons and the testing is done at the University.

The engineering features of pasteurising plants are dealt with in a paper by G. A. H. Burn. The contents are not easily summarised, but it may be mentioned that the author states that not enough attention is usually paid to the rise of temperature—with consequent increase in organisms—which may occur during the bottling process of milk. A. E. Berry discusses the legal aspect of pasteurisation. In Ontario pasteurisation was made compulsory in all cities and towns irrespective of population. The Act of 1938 imposes penalties falling between $25 and $500 for contravention. This new Act removes from local bodies the onus of deciding for or against pasteurisation, and it sets up standards for the process. Any municipality can adopt higher standards if it so desires, but, so far, all the authorities have maintained the provisional standards.

In a comprehensive short article, P. J. Moloney discusses the progress made in the phosphatase test. It is agreed that the test is of great value in controlling the efficiency of pasteurisation, but there is a difference of opinion regarding the evidence which it gives of the destruction of the tubercle bacillus by pasteurisation. Of pasteurised milk samples which gave a negative phosphatase test, Kay found that no sample gave a positive guinea-pig test for the tubercle bacillus out of 150 examined, whereas Sutherland obtained 12 positives in 334 samples.

China and Western Medicine

Just over a hundred years ago "foreign medicine" first came to China. It was introduced by missionaries, and from then right on to the establishment of the republic in 1912 it was to the missionary that all efforts to educate the Chinese in medicine were entrusted. Since the revolution of 1912, and particularly since the establishment of the Nationalist government some thirteen years ago, China has been trying to do things for herself, and in spite of the frustrations of war has made considerable progress. The story of that progress was told briefly by Dr. George Hoan Hsing Woo in an address at the China Institute in London on November 21st. He preceded it with an interesting account of the old Chinese medicine, the first records of which go back for several thousands of years. Some of the practitioners of native Chinese medicine must have been very subtle observers. They lacked the scientific background, and their ritual was copied by many who possessed none of their clinical instinct, but they made some surprisingly good guesses. For example, they practised in an empirical way the principles of endocrinology, prescribing liver in blood diseases and pig's stomach in anaemia, and employing some kind of thyroid therapy in goitre.

It was in 1835 that Dr. Peter Parker of the American Missions Board arrived in Canton and founded a hospital, and, what is more, started medical teaching. Robert Morrison, who preceded him, had already established a dispensary manned by a native who had learned the principles of European treatment. Sun Yat-sen, who incidentally started his medical studies at the college founded by Parker, when he came to power grasped the importance of health in the social evolution of the Chinese people, and set up a Bureau of Health in the city that is now called Peiping. But it was only a small affair and was more or less shackled in its activities. There was great enthusiasm for western methods after the establishment of the republic and medical schools were built in the principal cities; but the enthusiasm was not properly canalized, there was too much blind copying of the west, too little care in adaptation to Chinese life and thought. The methods of education followed in the different medical schools were along the lines pursued in the U.S.A., Great Britain, France, or Germany, according to the country in which the authorities at a particular school had received their own training.

With the establishment of the Nationalist government of Chiang Kai Shek in 1928, a Ministry of Health was set up; large sums of money were spent, a health programme was worked out, and the assistance of a League of Nations expert was obtained. In 1933 an official medical curriculum was established by the Ministry of Education for all medical schools, and 1934 saw the introduction of a system of state medicine. China was, of course, a virgin soil for experiment. It had not the deeply-rooted voluntary tradition which arouses opposition to a state medical service in this country. Incidentally, Dr. Woo remarked that there was no desire to copy the methods of state medicine followed by its great neighbour the Soviet Union, but only to devise a system whereby scientific medical care can be afforded in time to its vast population. At present there are only some 10,000 qualified registered practitioners, and the population of China is 480 million. He added that if it was objected that state medicine tended to become bureaucratic and impersonal, there were, on the other hand, not entirely fortunate results from the competitive system of private practice.

The effect of the Sino-Japanese war, and of every major military event in it, has been to delay progress, and yet much has been achieved. The Nationalist government has steadily encouraged the growth of the new medicine. The appeal for registration of the schools of the old native medicine has been categorically refused. China is busily engaged in transforming herself into a modern state within the family of nations. The progress she has made has not always been obvious, but in the field of medicine and medical organisation it has been consistent. But how great a task is before her, even if she were not harassed by war! Deaths from infectious diseases account for about 41 per cent. of all mortality. The death-rate in China is something like 30 per thousand as against rather more than 12 per thousand in this country. In other words, if only the health conditions in China could be approximated to those in Great Britain the number of deaths in China in a year would be fewer by some eight million. To diminish the incidence of deaths from infectious disease is the immediate task, and it is on this that the health administration is concentrating.

On December 1st, 2nd and 3rd, Dr. E. V. McCollum, Professor of Nutrition, School of Hygiene, Johns Hopkins University, Baltimore, U.S.A., delivered at the University of Toronto, Canada, the Harben Lectures for 1941 upon, "Nutritional Science and Public Health." These lectures, three in number, are delivered annually under the auspices of the Royal Institute of Public Health and Hygiene in accordance with the terms of the Harben Trust.

OBITUARY

JOHN MCCLYMONT, M.D.

We regret to record the death of Dr. J. McClymont, who was for over twenty years medical officer of health for Cheshunt urban district.

John McClymont was born in 1871, and graduated M.B., C.M., Edinburgh, in 1892, proceeding to M.D. with honours in 1896. For a time he was demonstrator of anatomy at the Edinburgh School of Medicine, and demonstrator of histology at the Royal Dick Veterinary College. Later he settled in private practice at Enfield, and was appointed M.O.H., School Medical Officer, and Medical Officer to the Isolation Hospital, Cheshunt U.D. His published papers include *A Plea for the Antiseptic Treatment of Diphtheria* (1898), *Aetiology of Acute Rheumatism* (1897), and *Case of Reduplicated Cardiac Sounds and Impulses* (1902). His loss will be felt by many friends in all walks of life.

GEORGE EZRA HARTHAN, M.B., B.CH.

The death occurred suddenly on September 27th of Dr. G. E. Harthan, medical officer of health for Evesham U.D.C. and Pershore and Evesham R.D.

George Ezra Harthan was born in Cheshire in 1874, and was educated at Oundle, Jesus College, Cambridge, and Manchester. He graduated B.A. in the Natural Science Tripos of 1895, and took the M.B., B.Ch. in 1899. He entered general practice at Evesham, and after recovery from a long illness in 1920 was appointed one of the assistant medical officers of health for Worcestershire. He became M.O.H. for Evesham U.D.C. and Pershore and Evesham R.D. He also served for different periods as senior house-surgeon to the Worcester General Infirmary, house-surgeon to the Royal Infirmary, Manchester, and house-surgeon at Evesham Hospital. Since the war his health suffered as the result of heavy A.R.P. duties. He did fine work in the district and will be greatly missed by many friends in Evesham and the surrounding country.

MATTHEW BRUCE, M.B., C.M.

Dr. M. Bruce died on September 20th at the age of 85.

He graduated M.B., C.M. at Edinburgh University in 1885, and became medical officer for 2a District, Morpeth Union, and medical officer of health for Ashington U.D.C. First aid and home nursing were his special interests, and in spite of his age he was actively in charge of a first-aid post until the day of his death.

Many will learn with regret of the death of Miss T. Montagnon on October 27th, 1941, at the Westminster Hospital. Miss Montagnon, who had been a woman inspector for the Ministry of Health since June, 1920, took her general and midwifery training at the London Hospital and was a State Registered Nurse. During the last war she was working as a Health Visitor in Cheltenham, and for a short while was a Sister at the Red Cross Hospital there. Miss Montagnon was one of the first trained nurses to be appointed to the staff of the Ministry of Health and she did a great deal to help public assistance authorities in many parts of the country to maintain a high standard of care for the old people and children in their institutions and homes.

A VILLAGE OUTBREAK OF COMMON INFECTIVE JAUNDICE

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In December, 1940, and during the first four months of 1941, thirty cases of jaundice occurred among children attending the elementary school at Charlbury, a small village in Oxfordshire. With the help of the headmaster the dates on which the children fell ill were ascertained. These are given in Table I, together with the sex and school standard of each child and an indication of the houses in which more than one case occurred. In addition six adults and three children under school age had jaundice, and such details of these cases as were available are also given in Table I. The chart shows the daily incidence of cases, Case 4 being omitted because the date of onset could not be determined. The local practitioners and the health visitor assisted in tracing cases and supplied clinical details.

The name "common infective jaundice" is applied to the outbreak described here. There is no biochemical or pathological evidence to show whether the jaundice was "catarrhal"—that is, of the obstructive type and due to a primary inflammation of the biliary passages—or "infective hepatic jaundice," with primary involvement of the liver cells. It appears, however (Cullinan, 1938-9; Findlay, 1940; Maclagan, 1941), that in many cases diagnosed as catarrhal jaundice the primary pathological process is not an obstruction of the bile ducts but a hepatitis. Cases of true catarrhal (obstructive) jaundice are said to be uncommon and, as a rule, sporadic. It is preferable, therefore, to use the term "common infective jaundice" for an epidemic of the type described here.

Clinical Course

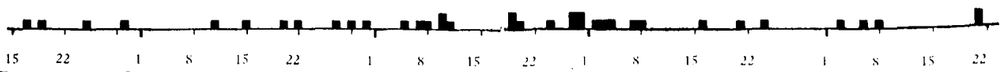
In most cases the illness began with vomiting and fever. Malaise persisted for some days, and then jaundice appeared in the conjunctivae and spread over the body, frequently giving rise to itching. Dark urine and pale stools were commonly observed. There were no deaths, but the severity of the disease varied from case to case. Some adults, though jaundiced, continued at work; no details about them are available. Some patients, after a febrile onset with vomiting and abdominal discomfort, and in many cases a slow pulse, became jaundiced but felt well. Others, particularly some of the adults, were seriously ill in the early stage with vomiting, headache, loss of appetite, and rapid loss of weight. Later they were jaundiced and listless, and it was some months before they recovered completely.

Epidemiological Features

There had been no epidemic of jaundice in the district since an outbreak seventeen years before. Sporadic cases had occurred, but no evidence was obtained of the appearance of the disease in the few months before December, 1940.

The monthly case rate from December to April was 5, 7, 14, 8, 5, with the peak in February. An epidemic wave of this sort, with a symmetrical rise and fall, appears to be uncommon in infective jaundice. Pickles (1939), for example, gives records of five epidemics in country districts in which there were rarely more than 1, 2, or 3 cases a month. A similar monthly incidence is described by the School Epidemics Committee (Report 1938) in 25 outbreaks in boarding and day schools. Morgan and Brown (1927) describe three epidemics with monthly case rates of 4, 5, 1; 1, 2, 7; and 4, 11. Bashford (1934) records an outbreak with 23 cases in one month and 26 in the next. Glover and Wilson (1931) describe 1 case in one month and 93 in the next. Their epidemic, with 93 cases appearing within fifteen days, had an explosive character which is in marked contrast to the usual long-drawn-out series of cases. However, an epidemic wave resembling the Charlbury one is described by Follows (1940) in an epidemic with 7, 14, 17, 13, 19, 3 cases in successive months.

CHART OF DAILY INCIDENCE OF CASES
(Case 4 omitted)



During the jaundice epidemic at Charlbury there was an epidemic of measles in January, February, and March. Eighteen of the jaundice patients also had measles. Thirteen had jaundice first and measles later; and five measles first and jaundice later. No human measles serum, adult or convalescent, was administered to the children at Charlbury, so that there is no question of jaundice following the administration of human serum to protect against measles, as described by MacNalty (1937) and Propert (1938).

The age and sex distribution of the cases and the attack rate in the school are given in Table II. The age distribution is that usually found in common infective jaundice, with maximal incidence in children and 15 to 20 per cent. of the cases in adults. The preponderance of females is unusual, for the sexes are as a rule equally affected. There was a slightly larger number of girls than boys in the school, and it is possible that the observed difference was due to chance.

The attack rate was 7·2 per cent. in the school as a whole, or 15·8 per cent. in the infant and junior schools together. This is higher than the incidence in the outbreak in day schools described by Follows (1940), where the percentage of children affected varied from 0·4 to 5·6 in the eight schools concerned, with an average of 2·9. A higher incidence than at Charlbury

is recorded by Booth and Okell (1928), who found 34·7 per cent. affected in one school. Pickles (1930) gives an incidence of 32·1 per cent. in one village school, and 36·4 per cent. in another. Glover and Wilson's (1931) epidemic in two boarding schools had an attack rate of 23·1 per cent. in the senior school and 25 per cent. in the junior school. Day schools in the same town apparently had a lower incidence. These fluctuations in attack rate may be due to environmental factors favouring or hindering the spread of infection. Such factors were considered by the School Epidemics Committee (Report 1938) to be the probable explanation of the origin of jaundice epidemics. During the five years of their records more than 70 per cent. of all the cases in the schools were not followed by another case, so that conditions favourable for the spread of the disease were seldom present. The concurrence of measles with jaundice at Charlbury, and of sore throat with jaundice in Glover and Wilson's (1931) epidemic, indicate that conditions were favourable for the spread of certain nasopharyngeal infections. There is no mention of concurrent nasopharyngeal infections in the descriptions of the other jaundice epidemics, but this point seems worthy of attention in future investigations.

Owing to the presence of evacuees from London there was more crowding than usual in the school at Charlbury during the jaundice epidemic. Of the children who had jaundice, 22 were local inhabitants and 8 were evacuees.

Incubation Period

There is general agreement (Pickles, 1939; Cullinan, 1938-9) that the incubation period in common infective jaundice is from three to five weeks, though Glover (1938-9) maintains that there are epidemics with an incubation period of about six days. In these epidemics sore throat is said to be a common initial complaint. This was not a feature of the Charlbury outbreak. The ideal way of determining an incubation period is to establish what Pickles (1939) describes as a "short and only possible contact." Unfortunately this is impossible from the data available for the Charlbury outbreak. Nevertheless, there are indications that the incubation period was relatively long. The straggling series of cases suggests (Glover, 1938-9) that the incubation

TABLE I
Details of Cases

Case No.	Name	Sex	School Standard	House	Jaundice Onset	Measles Onset
1	Stella B.	F.	2	A	17.12.40	10.2.41
2	Madeleine C.	F.	In.	...	19.12.40	...
3	Daphne S.	F.	4	A*	25.12.40	18.2.41
4	Mrs. M.	F.	Ad.	A*	...	...
5	Mrs. C.	F.	Ad.	...	30.12.40	...
6	Sheila O'R.	F.	In.	...	10. 1.41	...
7	Eva B.	F.	1	H	15. 1.41	3.3.41
8	Nancy E.	F.	1	B	20. 1.41	3.3.41
9	Carol P.	F.	1	...	22. 1.41	27.2.41
10	Joan B.	F.	3	...	27. 1.41	...
11	Miss S.	F.	Ad.	...	29. 1.41	...
12	Graham P.	M.	1	G	31. 1.41	...
13	Joan H.	F.	1	D	5. 2.41	10.3.41
14	Mrs. G.	F.	Ad.	...	7. 2.41	...
15	Baby G.	M.	P	...	8. 2.41	...
16	Joy S.	F.	2	A	10. 2.41	13.3.41
17	Mary S.	F.	1	A	10. 2.41	10.3.41
18	Teddy H.	M.	2	E	11. 2.41	11.3.41
19	Brian C.	M.	In.	...	19. 2.41	...
20	Terry P.	M.	In.	...	19. 2.41	...
21	Norman S.	M.	In.	F	20. 2.41	(2.3.41)
22	Mary S.	F.	1	F	24. 2.41	(8.3.41)
23	Mavis H.	F.	1	C	27. 2.41	(20.1.41)
24	Anne B.	F.	In.	G*	27. 2.41	...
25	Kathleen M.	F.	In.	D	28. 2.41	...
26	Mary M.	F.	S.3	D	28. 2.41	...
27	Ronnie S.	M.	P	F	2. 3.41	(12.3.41)
28	Donald E.	M.	2	B	3. 3.41	6.1.41
29	Kathleen H.	F.	4	C	4. 3.41	(18.1.41)
30	Donald O.	M.	In.	...	7. 3.41	...
31	Peter S.	M.	P	F	8. 3.41	(22.3.41)
32	Mrs. B.	F.	Ad.	H	16. 3.41	...
33	Michael H.	M.	2	...	21. 3.41	...
34	Peter M.	M.	4	D	24. 3.41	...
35	Winifred L.	F.	4	E*	3. 4.41	3.3.41
36	Fred. W.	M.	Ad.	A	6. 4.41	...
37	Teddy H.	M.	4	D	8. 4.41	18.3.41
38	Daphne P.	F.	4	...	21. 4.41	...
39	Chrissie A.	M.	2	...	21. 4.41	...

Column 4. P = child under school age. In. = Infant School. 1, 2, 3, 4 = Standards in Junior School.
S.3 = Standard 3 in Senior School. Ad. = Adult.
Column 5. X* = next door to X. Bracketed dates of measles are approximate only.

TABLE II

Age and Sex Incidence and Attack Rates

Age Group	Years of Age	No. of Cases	Percent. of All Cases	No. at Risk	Attack Rate per cent.	Sex M.	Sex F.
Pre-school	1– 4	3	7·7	—	—	3	0
School Infants ...	5– 7	8	20·5	60	13·3	4	4
Junior ...	8–11	21	53·9	124	16·9	7	14
Senior ...	12–14	1	2·6	230	0·4	0	1
Total ...	5–14	30	77·0	414	7·2	11	19
Adult	15 and over	6	15·3	—	—	1	5
All cases	—	39	100	—	—	15	24

period varied considerably. This favours a period of three to five weeks rather than one of about six days.

A feature of epidemics of jaundice with the long incubation period is that cases appear in a household one at a time at intervals of about a month. This is probably because infection occurs only with intimate contact, as when children play together or sleep in the same bed (Pickles, 1939). Intimate contact was known to occur between two children (Cases 12 and 24), who were constantly playing together. The one became ill 27 days after the other. Also, in House D all five children of two families living together in two rooms had jaundice, and there were intervals of 29, 24, and 15 days between their falling ill (Table III). Though there were, of course, many contacts between the children in the village outside their home and class, opportunities for intimate contact were more likely to arise between children in the same class or house. It seemed worth while, therefore, to examine the dates of onset of the disease in cases in the same class or house for evidence of three- to five-week intervals. The relevant figures are given in Table III.

TABLE III.

Intervals between the onset of illness in cases in the same Class or House.

School Standard or House. Case No. from Table I.	Days between Cases.
Infant School	
2, 6, 19, 20, 21, 24, 25, 30	22, 30, 0, 1, 7, 1, 7
Juniors. Standard 1	
7, 8, 9, 12 13, 17, 22, 23	5, 2, 9, 5, 5, 14, 3
Juniors. Standard 2	
1, 16, 18, 28, 33, 39	55, 1, 20, 18, 31
Juniors. Standard 4	
3, 29, 34, 35, 37, 38	69, 20, 10, 5, 13
House A	
1, 3, (4), 16, 17, 36	8, (?), 47, 0, 45
House B House C	
8, 28 23, 29	B—32 C—5
House D	
13, 25, 26, 34, 37	23, 0, 24, 15
House E House F	
18, 25 21, 22, 27, 31	E—41 F—4, 6, 6
House G House H	
12, 24 7, 32	G—27 H—60

The figures for the intervals between cases in the school may underestimate the incubation period, for it is probable that patients are infectious for some days before jaundice appears. Booth and Okell (1928) record a case occurring 31 days after a short and only possible contact with a boy who developed jaundice six days later. After jaundice has appeared patients have proved infectious on the fifth and seventh days, but infectivity has almost certainly ceased after a fortnight (Pickles, 1939). Only one child (Case 17) returned to school under a fortnight from the beginning of the illness. She returned eleven days after falling ill. There were two later cases in her class, but these children fell ill three and six days after her return and were probably not infected by her. Apart from this case, the time during which infectious children were in class was limited to the period before they became ill. In the houses there were opportunities for infection after the illness began, and the intervals between cases may overestimate as well as underestimate the incubation period.

In the infant school the first child may have infected the second who developed jaundice twenty-two days later, and was followed thirty days later by the third and fourth, and thirty-one days later by the fifth. The sixth child was probably infected by a child who fell ill twenty-seven days before, because, as has been mentioned, they often played together. The seventh child fell ill twenty-three days after a previous case in her house (D) and on the same day as her sister (Case 27), who was the only case in the senior school. The eighth case in the infant school occurred sixteen days after the fourth case and forty-six days after the third and fourth cases. The intervals between cases in the infant school can therefore be explained on the basis of a relatively long incubation period. A similar explanation would apply to the intervals between cases in Standards 2 and 4 and in Houses A, B, D, E, and G.

In Standard 1 of the junior school there was a succession of short intervals between cases. The sixth child (Case 17) may have been infected at home, as symptoms developed forty-seven days after another case (3) in House A, but the other children were not likely to have been infected at home, and it is possible to argue that there was a case-to-case infection in Standard 1 with a short incubation period. This explanation receives support from the monthly incidence of cases (Table IV),

TABLE IV

Monthly Cases

Month	Pre-school	Infants	Junior Standards 1	2	3	4	Seniors	Adults	Total
December ...	–	1	–	1	–	1	–	2	5
January ...	–	1	4	–	1	–	–	1	7
February ...	1	5	4	2	–	–	1	1	14
March ...	2	1	–	2	–	2	–	1	8
April ...	–	–	–	1	–	3	–	1	5
Total ...	3	8	8	6	1	6	1	6	39

which suggests that the epidemic spread through Standard 1 in January and February, and passed to Standard 2 in February and March and to Standard 4 in March and April. However, it is possible to explain the apparently short incubation periods in Standard 1 and in Houses C and F by supposing that cases appearing within a fortnight of one another were infected by the same preceding case. This seems preferable to assuming that short and long incubation periods occur in the same epidemic, though Barber (1937) states that he has seen such an epidemic.

The estimation of an incubation period from intervals between cases disregards the possibility that infection is spread by subclinical cases and carriers. Mild cases of jaundice certainly occur. There were some adults at Charlbury who were able to continue at work though jaundiced, and in other epidemics patients have been observed with only minimal gastric disturbance followed by dark urine for a few days without jaundice. Carriers also may exist, but there is no means of assessing the part they or the mild cases may play in the spread of infection. The Charlbury epidemic can be explained on the basis of case-to-case infection and the three- to five-weeks incubation period which has been observed to follow " short and only possible contacts " in other epidemics. Thus there is no need to invoke missed cases or carriers to explain the course of the epidemic.

It is perhaps worth while to point out that the intervals between cases in the epidemic as a whole (see Chart) in Standard 1 and in Houses C and F are similar to those in some epidemics which have been adduced as evidence of the short incubation period. The short incubation period is apparently a hypothesis framed to explain such epidemics and the explosive one described by Glover and Wilson (1931). Its existence will be proved only by the fortunate observation of a " short and only possible contact " preceding a short incubation period. Such an observation has apparently not yet been made.

Summary and Conclusions

An epidemic of common infective jaundice is described in which at least 39 cases occurred. Thirty were in children attending the village school, three in children under school age, and six in adults. The age and sex incidence and the attack rate in the school are recorded.

Analysis of the intervals between cases in the same class at school or in the same house suggests that the incubation period was relatively long. This accords with the period of three to five weeks which has been found in other epidemics in which a " short and only possible contact " could be established.

Observations of " short and only possible contacts " in common infective jaundice are required in order to determine the duration of infectivity in cases of varying severity and in carriers, if such exist. Similar observations alone can confirm or exclude the occurrence of epidemics with a short incubation period.

I wish to thank those who helped in tracing the cases at Charlbury, and Professor G. S. Wilson for the opportunity of investigating the outbreak and his aid in preparing the manuscript.

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British Drug Houses, Ltd., have issued a leaflet describing the use of rotenone lotion in the treatment of scabies. Rotenone is an active principle of derris (*D. elliptica* and *D. malaccensis*); it is a white powder which is highly toxic to insects. It is available for the treatment of scabies and other dermatoses of parasitic origin as a non-oily, mucilaginous preparation containing 2 per cent. of rotenone.

Glaxo Laboratories have brought out a sulphur preparation—under the name of Sulfomil—for the treatment of scabies. The tablet is moistened and rubbed into a lather which leaves a dry sarcopticidal coating on the body. The main advantages claimed by Glaxo Laboratories are (1) that free uncoated sulphur particles maintain intimate contact with the skin and kill the parasites, (2) that risk of sulphur dermatitis is practically abolished, (3) that sulfomil avoids the messiness of ointment, and (4) that it is soothing. Cost of treatment is said to be about 8d. per patient.

CHILD WELFARE WORK IN WAR-TIME*

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It may be worth while to consider how a public health department intimately associated with the care of women and children has responded to the stresses of war. This account refers to an industrial area subjected to considerable and prolonged attention by the enemy. The chief difficulties discussed must be those of all similar areas, but varying methods have probably been employed to meet emergencies. I hope the survey given here may be of some interest at this time.

Authorities differed in their attitude as to what part child welfare work would play in war-time. Among other people some medical officers of health were convinced that in the cities, the obvious targets for enemy attack, child welfare work would cease, and in preparations made before the actual declaration of war many child welfare centres and other institutions were commandeered for first-aid posts; even institutional provision for maternity cases was treated as of little importance. Those of us who suggested that the work of health visitors and child welfare centres would play as necessary a part in war-time as in peace-time were thought rather childish. But this attitude, like many other preconceived ideas, proved fallacious.

Evacuation

Soon after the outbreak of war the evacuation of mothers and young children to receiving areas began. The Ministry of Health had little or nothing to do with the early planning, and consequently health departments came into the picture in a somewhat inconsequential way. This was particularly unfortunate in the receiving areas, where the billeting of women and young children presented great difficulties and should have been dealt with by those accustomed to the particular problems involved. Later, when it was at last realised that the evacuation of mothers and young children included the evacuation of pregnant women, the Ministry of Health did intervene and the maternity arrangements operated fairly well.

In Birmingham at the time of the Munich crisis it was arranged by the local committee that the child welfare department should co-operate in the arrangements for the evacuation of women and young children, and after the crisis the emergency arrangements were more or less stabilised. The chief complication was the division of the city into two zones—the inner as an evacuation area, the outer as a neutral area. The women to be evacuated were coming mainly from the poorest, the most ignorant, and the least adaptable class. This fact increased the billeting difficulties and, in fact, all arrangements, for people of this type live from day to day and can seldom be expected to adhere for long to any decision. Moreover, the anxiety of the authorities to complete the scheme (and, I am afraid, to have impressive numbers) led to very active efforts through the school attendance officers to receive early and numerous registrations.

The health visitors reported that numbers of women who had filled in registration forms told them they had done it "to oblige" and had no intention of going. But they did not cancel the registration, though supplied with cards for the purpose. In fact it was easier to do nothing. All the arrangements for evacuation were made on this false register, and as August, 1939, came to an end and some real desire for evacuation developed the register became further swollen, although many women came up to register one day and to cancel the next. The whole scheme would have worked better if, instead of their being urged to go, going had been made a privilege, with a small fee for registration.

With a stable register, the billeting authorities could have had early lists and fixed billets for individual families. There was ample time for this procedure, but, apart from those for school-children, the billeting arrangements in many areas were chaotic, though in others they were fairly good, considering the circumstances.

SOME DIFFICULTIES

The final arrangements for evacuation included special arrangements for pregnant women and their children, for whom the Ministry of Health had intervened in relation to provision for their confinement and antenatal care. The evacuating area was asked to supply equipment and medical and nursing staff for maternity homes, and this was done. The expectant mothers with their children came to the child welfare centres on the day of evacuation and were taken to special trains by bus. They were accompanied by midwives provided with equipment for all emergencies and by health visitors to assist in settling them in billets. All these arrangements proceeded without a hitch. The ordinary trains taking mothers and young children had health visitors on board with voluntary workers to assist, and a certain number of health visitors remained in the district to help with billeting, etc. As everyone knows, the numbers who actually went away were only one-third of those who registered, and of these a large number returned within a day or two. Health visitors returning from acting as train stewards met mothers going back home.

The telephone buzzed for weeks in the endeavour to straighten out financial and other difficulties. On the one side recriminations were made about verminous infections, mismanaged toddlers, and ungrateful women. On the other, less was said but more was thought of absurd billeting arrangements and of lack of communal help. The women quickly helped to solve the difficulties by rapidly returning home, and by Christmas less than 3 per cent. remained, including expectant mothers. Doctors were first recalled, then health visitors and midwives, for the city child welfare centres remained hard at work and the maternity homes were full.

Looking back to those pre-war days one feels that the evacuation policy was right, but it was carried out on fundamentally wrong lines where the women and young children were concerned. They should not have been included in the scheme for the evacuation of school-children. Carried out through the health departments

* Presidential Address at meeting of Midland Branch of Society of Medical Officers of Health.

by the medical officers of health, with better co-ordination between receiving and evacuating areas, the scheme would have been more successful, and if the anticipated immediate air attacks had occurred it would have been valuable. As things were a tremendous amount of work was done to little or no purpose.

Voluntary evacuation of mothers with young children was officially arranged in 1940 through the Education Department, and a number of women have left the city under this scheme, as shown below:—

	1940.	1941, up to July 4th.	Total.
Children under 5 ...	4,188	1,828	6,016
Mothers with children under 5 years with or without children of school age ...	4,033	2,047	6,080

Post-Delivery Homes

In arranging for the provision of emergency beds, the maternity beds in the city hospitals were reduced and additional cases had to be dealt with in the maternity homes. This situation was quickly met by the provision of post-delivery homes, a novel form of institution which has proved useful, safe, and economical. Women are moved by ambulance in groups of four. They go on or about the fourth day after their confinement if they are well, thus setting free beds in the maternity home proper. The post-delivery home does not require all the elaborate equipment of a maternity home, while the medical and nursing staff are a simpler proposition.

A children's resident nursery, from which the children had been evacuated, and a convalescent home for mothers and babies were adapted and used, and have done excellent work. One of these, the Lordswood Home in Harborne, has now dealt with about 1,500 post-delivery cases since it was opened. No patient has suffered any ill effects from the transfer. The women themselves appreciate the change to the more peaceful atmosphere with less hospital routine, and the babies appear to benefit with more intensive attention, owing to fewer excitements in relation to theatre work. So valuable an arrangement might well be retained in some form as a permanent feature of maternity work. The training of midwives can be carried on successfully by transferring pupils, as required. In war-time there can be no doubt of the value of this secondary institution, and if the post-delivery home is in a remote suburb its value is increased. This scheme has been adopted now by the voluntary maternity hospital. Such institutions can also be used for the transfer of post-delivery cases where houses have been rendered un-inhabitable by enemy action, provided single rooms are available.

Maternity Homes

The management of maternity patients in maternity homes during air raids has caused some anxiety. It has been found necessary to provide emergency delivery accommodation on ground floors, protected as far as possible. Recent deliveries had to be removed to the air-raid shelters, fortunately with no untoward results. Complicated cases, such as cardiac patients, have been housed in ground-floor wards with blast protection, and all pyrexial cases have been placed in single rooms on the ground floor, as they could not be taken to the common air-raid shelter. Both the maternity homes have suffered damage in raids, but have fortunately so far escaped major destruction. The women have behaved well—a little excitement is pardonable during raids—while the staff have done wonders: maids and nurses have all thought first of the patients and helped them to keep cheerful and calm.

The district midwifery service has continued to do its work splendidly, maintaining as high a standard as ever. Many instances of bravery, coolness, and devotion have been reported. For example, one midwife called to her case during an air-raid was blown from her bicycle by the blast of an exploding bomb, but, though bruised and shaken, she continued her journey and conducted the delivery of her patient. It has been difficult to obtain enough new midwives for the service, and we have been grateful for the help given by the emergency relief midwives made available under the arrangements of the Central Midwives Board for the return of retired midwives. Even with this help, however, we have been glad to encourage evacuation and the use of maternity beds to diminish the strain on the existing staff, who have, however, done extra work without complaint, often under very tiring and indeed nerve-racking conditions. The situation is becoming more difficult.

"Trickle evacuation of pregnant women" began in September, 1940, and has been useful in dealing with the more nervous patients and also in relieving district midwives and freeing beds which would otherwise have been required where houses have been destroyed. A very simple type of hostel was provided in selected receiving areas where maternity accommodation was available, and the women go out between the thirty-sixth and thirty-seventh week, paying 16s. a week for hostel accommodation and an assessed maternity fee. One of the weaknesses of the arrangement has been the lack of provision for children. This has often prevented women taking advantage of the scheme who would otherwise have been glad to do so. In Birmingham the women have to produce a satisfactory medical certificate and make alternative arrangements for their confinement in the city to avoid difficulty in the event of premature labour or a change of plan. The women come to a central child welfare centre on the day of departure, are seen by a medical officer, and are taken by charabanc to their destination when possible; otherwise they go by train. On the whole the arrangement has worked well. There have, of course, been grumbles and complaints, but only a very few women have returned home before their confinement. Between twenty and twenty-five women take advantage of the scheme weekly.

Expectant mothers have continued to attend the antenatal clinics at centres and hospitals and maternity homes. This part of our work goes on as usual.

Unmarried Mothers

Among the expectant mothers there is one group who require rather special methods—the unmarried mothers. The voluntary homes for unmarried mothers have fortunately continued to function in Birmingham.

During 1940 there was no increase in the number of unmarried mothers, but in the first six months of 1941 there has been a large increase, amounting to 30 per cent. (eighty-five additional cases). Half these cases were among transferred munition workers; the other half included married women expecting illegitimate children. As a result, the number of adoptions arranged has much increased. The demand for children for adoption remains active, while foster mothers are less easily obtained. We have all regretted the suspension of the Adoption Act, 1938.

The city home for difficult cases was closed and is functioning as the ante-natal department of a maternity home, so the Committee has permitted a limited total expenditure on lodgings (now £10 a month) while the girl is unable to work, and some of this money has been repaid. This method is economical, and is used where the girls refuse to go into homes or when they are unsuitable for homes. The homes usually demand three months' residence after the birth of the baby, and the women are anxious now to get back to work as soon as possible. The fall in the infant mortality rate among illegitimate children has continued.

Child Welfare Centres

Two of the largest centres were taken over for first-aid posts on the outbreak of war. The temporary premises which had been arranged proved hopelessly inadequate and small houses were later substituted. Very good work has been done in both, but, of course, under great difficulties. The part played by the centres and health visitors in the evacuation scheme has hardly been referred to, but it was considerable. The centres dealt with the supply of gas helmets for infants, and no little tact and judgment were required to handle the women when supplies were delayed. With the coming of winter and the black-out the hours for clinics were altered: they are now 9.30 a.m. to 12 a.m. and 1.30 p.m. to 4 p.m., and attendances were well maintained, though some of the educational classes and group talks were discontinued.

With the summer of 1940 the National Milk Scheme for liquid milk was established and the milk meals at the centres now came to an end, though the thirteen dinner centres continued to function. One of these came to an end when the church hall where it was established was completely destroyed by enemy action. Three others have been closed as unnecessary. Recently it has been arranged that dried milk under the National Milk Scheme should be made available at the centres. On July 1st, 1941 the new arrangement came into force. The sale of proprietary preparations continues, because many women will not change the method of feeding, but there can be little doubt that the national dried milk will, to a great extent, gradually replace the other preparations since it is free or cheaper. It should be mentioned that Birmingham has never given cheap or free dried milk, but simply sold it at cost price. Now the Food Office sends a clerk to each ordinary children's consultation to deal with the elaborate permit system, and milk is supplied in the cases where the baby is regularly weighed and advised; in other cases, the dried milk can only be obtained from the Food Office.

The dinner centres proved most valuable in the earlier air raids before the A.R.P. arrangements were organised. Additional food was somehow sent down and the health visitors provided dinners for many homeless women and children and, in some cases, for the fathers too. At this time, and later still, the centres were used for places of rest for women and children. Babies and toddlers were bathed, fresh clothing was supplied, cots were improvised for sleep periods, and the mothers themselves became more cheerful after a wash and a cup of tea. The centres are open every morning, and health visitors go to all rest centres and hostels daily, when these are in use. There is always some help they can give.

Infested Children

The centres have played their part in the intensive diphtheria immunisation campaign, and recently a special enquiry has been carried out as to vermin infestation. The percentages are, on the whole, better than one had expected. The total number of children examined at the centres in July was 8,447, and, of these, 97 per cent. were clear, 2·3 per cent. had nits, and 0·02 per cent. (seventeen children) had lice. At the same time inspections were carried out in the homes, because it was felt that the more careful mothers attended the centres. This is borne out by the figures: 14,784 children were examined at home; 95 per cent. of these were clean; 4 per cent. had nits; and 0·08 (or 122 children) had lice. Even these figures are good. They give no grounds for the somewhat unnecessary outcry about the high rate of infection in city toddlers. It must be remembered, too, that conditions are far from normal in Birmingham, and there is some excuse for an increase. Children under one are over 99 per cent. clean, and many toddlers must be infected by school children. At the same time this is a preventable condition which should diminish under normal conditions as standards of cleanliness rise.

There is the usual war-time increase of scabies, for which shelter life is chiefly to blame. Recently, arrangements have been made for home treatment of scabies in advanced pregnancy.

Attendance at Centres

The effect of the war on the visited child population under 5 is of interest. In 1938 this population was 69,698, and, of these, 43,888 attended centres—that is, 63 per cent. In 1939 the population rose slightly to 70,289, and 42,178 children attended the centres—that is, 60 per cent., a fall of 3 per cent. In 1940 the child population under 5 fell to 67,826 and 41,021 attended the centres—again 60 per cent., and this in spite of all war-time difficulties. The attendance counts given for 1938 and 1940 refer to consultations and medical inspections and take no note of all the odd visits for various purposes; nor do they include attendances at light clinics, dental clinics, remedial exercise classes, toddlers' dinners, etc. A fall in the number was expected. It is unexpectedly small. The fall is not evenly distributed over the city, and, indeed, some districts show an increase. The percentage attending the centres varies from 38 to 78. The areas affected by enemy action show the lower rates. The total attendances at the children's clinics at the centres was 185,273 in 1940—an average of 4 visits per child attending.

Routine home visiting has fallen off to some extent. This was inevitable but unfortunate. The figures are 308,220 for 1938, and 274,567 for 1940, a fall of over 33,000.

Nutrition

The effects of war on nutrition is of great interest and importance. On the whole, children are not losing weight and there is no increase in rickets, thanks to the special preventives freely used. There is, however, some apparent increase in anaemia, possibly due to the lack of vegetables, fruit, eggs, and meat. The children suffer from lack of rest. It has been noted in the day nurseries that they sleep heavily from two and a half hours to three hours in the afternoon, showing the shorter sleeping period at night.

The expectant mothers are suffering more severely than the children. The cheap or free milk allowed to the expectant mother has ceased to benefit her, because this milk is now often the only milk available for the family. Whatever the woman's diet may be, she is bound to provide enough for her husband, and consequently her diet will be low in fats and proteins, particularly the latter. Since women are weighed at each attendance at the ante-natal clinic as part of the technique for early detection of toxaemia, it is possible to obtain comparative figures.

Gain in Weight in the Last Ten Weeks of Pregnancy in Normal Cases.

	Year.	Number of Cases.	Percentage showing no Gains or a Loss in Weight.	Loss in Weight or Gains below 6 lb.	Gains from 6 lb. to 8 lb.	Gains over 8 lb.
				Percentage.	Percentage.	Percentage.
Maternity Homes	1936	100	3	40	13	47
	1941	100	12	67	13	20
Child Welfare Centres	1941	250	6	60	20	20

The year 1936 was selected as an average, and the weights of 100 consecutive normal cases in that year were compared with 100 in 1941. The expected gain in weight during the last ten weeks of pregnancy should be 6 to 8 pounds or over. A gain of 6 pounds is a minimum gain without loss of weight in the mother. Taking the maternity home cases where the figures are strictly accurate, we find that:

In 1936 3 per cent. of the women made no gain or actually lost weight.
In 1941 12 per cent. were in this category.

In 1936 40 per cent. of the total lost weight or gained less than 6 lb.
In 1941 67 per cent. were in this group.

In 1936 and 1941, 13 per cent. gained between 6 to 8 lb.

In 1936, 47 per cent. gained over 8 lb.
In 1941, 20 per cent. gained over 8 lb.

This indicates a transference of 27 per cent. from the highest to the lowest group. These figures were taken from the maternity home cases; to confirm them, 250 cases were taken from ten child welfare centre clinics, and these gave similar results. The transference to the lowest group was, however, 20 per cent. The figures give an indication of a fall in nutrition among expectant mothers and should serve as a warning. It is realised that there is a loss of weight in the population generally, but in the case of the expectant mother such falls are serious. The period covered ten weeks in 1941 when there were no air raids of any importance. The anxiety and strain element was, therefore, at a minimum for this time.

How to supply extra nourishment in these cases remains a problem. In my opinion the need can best be met by supplying special preparations such as dried milk with iron, which will not be given to the children, rather than through dinner centres (which the women refuse to attend) or by special rations of ordinary foods which are simply given to the family.

The Employment of Married Women

The call for women to replace men in all forms of work and to supply labour in the new munition factories at once raises the question of caring for young children apart from their mothers. Repeated requests were received early in 1940 from various firms, and from the City Transport Department in particular, to provide nurseries; steps were taken in relation to such provision. A report was actually prepared to put before the Council, when the Ministry of Health intervened and offered to equip and adapt approved premises as nurseries and to pay a grant for maintenance. Unfortunately the official, recognised standard of equipment and adaptation was extremely low. It was based on expenditure by voluntary bodies who had failed to recognise the value of generous gifts. Gifts were no longer available, and the difficulties over minor details of essential expenditure made the task of dealing with these nurseries more onerous than should have been the case. Supplementary estimates and additional expenditure became inevitable as essential needs became insistent. The standards have now been raised somewhat.

Day Nurseries

In an industrial city the greatest difficulty is the finding of suitable premises in a possible position. One naturally first looks for large houses, which are usually, however, inconveniently placed; and in this city it became necessary to use rooms in the larger child welfare centres and make various makeshift arrangements, giving an

absolute minimum of convenience if day nurseries were to be provided at all. It was decided to use the child welfare central kitchen to supply the mid-day meals, and to send the laundry to the hospitals or to private laundries if the former failed. Some health visitors volunteered to act as matrons, and finally, in the autumn of 1940, seven day-nurseries were made available with 309 places. These were rapidly filling up when the "blitz" arrived, and for some weeks the nurseries opened for only three to ten children. Then the nurseries filled up again, but measles and whooping-cough came into the picture and attendances again fell to a minimum. However, with the spring waiting lists for admission became necessary. War-time day nurseries involve hundreds of problems which cannot be dealt with here: staffing, diet, laundry, A.R.P., coal, hot-water supplies, medical supervision, teaching of toddlers, open-air play, etc. It is indeed one thing after another. The only reward lies in the fact that the mothers have confidence in the nurseries, while the children themselves do well.

With the spring of 1941 the demand for more nurseries became so insistent that plans for six more nurseries were submitted to the Ministry of Health, and these plans have now been approved. It is hoped that the additional nurseries may be open by Christmas. In four of these, large huts in the grounds of child welfare centres give the greater part of the necessary accommodation.

It will be understood that no attempt has been made to provide ideal nurseries. The necessary minimum to keep the children well and happy and to make the work of the staff possible is all that is attempted. The new request to attempt some kindergarten teaching for toddlers is adding to the difficulties. Such teaching is desirable, but equipment is essential and is expensive. A further increase in the number of nurseries is now required. The new powers for requisitioning premises will be helpful.

Resident Nurseries

Resident nurseries are in great demand for the children of women working in the transport services, in the post office, and on night-shifts. Premises should be outside the city area and are very difficult to obtain, except by purchase. Fortunately two city convalescent homes were available and were offered for resident nurseries. The Ministry agreed to recognise them for grant on an experimental basis. Each nursery has approximately fifty places, and both filled at once. There is now a waiting list of 150 for vacant places, but this could easily be trebled. These institutions give more trouble to the administrator than day nurseries. There is a greater responsibility.

Daily Minding Scheme

The nurseries can in fact do comparatively little to solve the problem of freeing married women for factory work, and the Ministry of Labour and Ministry of Health evolved a "daily minding scheme" to give further assistance. This scheme could not succeed. It failed to deal with the realities of the situation. In the first place the daily minder was told to care for each child at 1s. a day and provide all meals. In actual fact the usual payment was 10s. a week, and the mother supplied milk and some rations under all voluntary arrangements. But this could be got over by saying the mother could pay what she wished, though the Government grant would not be more than 3s. a week. But the fact that all the official forms stated that 1s. a day was adequate payment served to produce discouragement.

The fundamental difficulty lay elsewhere. Three people have to be satisfied in any successful scheme for daily minding. The most important is the mother; then comes the daily minder, and finally the child welfare worker. Setting aside the small percentage of the careless and stupid, the mothers are well able to sum up the position. There is only one service they find really interested in young children—that is, the child welfare service. They have confidence in this service and will accept a good deal from it. The Government scheme for daily minding includes the registration and approval of the daily minders by the child welfare department, but the labour exchange pays the daily minder. That seems strange to the women. The mother must register for a minder at the exchange and obtain cards there for a daily minder not much connection with child welfare there either. The women know quite well that the health visitors have little power to interfere with daily minders; they have seen that plainly enough for years, so the mothers have left the scheme alone.

The daily minder is to get 3s. from the Government and what she can from the mother. She has to fill up a form every fortnight to get the 3s., and receives nothing from the mother if she does not want to pay. In other words, there is no provision for bad debts. The daily minder must supply fire guards, etc. It is not encouraging in comparison with the financial rewards of factory work.

Then the child welfare worker has no confidence in the scheme and no enthusiasm for it. It gives no help in relation to all those homes where children are "daily minded" under bad conditions. Here the Government grant is simply not claimed and is too small to bother about. The health visitors know that young children are suffering under "daily minding" conditions; unless they can be helped no scheme is going to receive really effective support.

Three things are essential for the success of a daily-minding scheme, and the first is to place all daily minding under infant life protection legislation—at all events where such official schemes are in operation. Secondly, the scheme must be a child welfare scheme and payment to the daily minders must be the responsibility of that department. Thirdly, payments must be reasonable, and the authorities and not the daily minders must bear the cost of bad debts. Then propaganda and enthusiasm will do something at least to make the scheme a success and to give the mothers confidence. In any case there would be some chance of safeguarding the hundreds of children already daily minded, and in elaborating methods to assist daily minders in their difficult task. When women are being asked to leave their children more should be done to provide safeguards.*

* Since writing the above a modified scheme for Birmingham has been approved.

I have not been able to do more than give a general view of the effects on child welfare work of war-time conditions. There is much to encourage us and make us feel that this work for mothers and children is of great and increasing value. It must always be elastic and progressive, adapting itself to new conditions and utilising new knowledge, leaving behind what has ceased to be useful.

BOOK REVIEW

Plague on Us. By Geddes Smith. 1941. New York, The Commonwealth Fund; London, Humphrey Milford, Oxford University Press. pp. 365, with 12 illustrations, 10 charts, and 3 maps. Price 16s. 6d. net.

In his foreword to this fascinating book Geddes Smith writes: "I merely set down as clearly as I can some facts and theories about communicable disease that have interested me and, I hope, will interest other laymen." How many authors have "merely" set down without being clear? And how many would be so modest as to insert the qualifying adverb "merely," when the task of "setting down" facts and theories clearly is one that demands knowledge, restraint, and a sympathetic understanding of the medically untutored mind? Let it be said at once that Geddes Smith has fully succeeded in achieving his aim and more, because *Plague on Us* is a book not only, or even especially, for the layman: it is emphatically a book for the medical man, and one that is of particular interest and importance to readers of Public Health.

Between the "prologue" and the "epilogue" appears seven chapters packed with information about infectious diseases and well spiced with theory, comment, and surmise. In the chapter headed "Pestilence" Geddes Smith observes that the measures adopted against yellow fever in the Philadelphia outbreak of 1793 were reminiscent of those taken against a plague in London a century and a quarter earlier. The College of Physicians expressed its faith in gunpowder as being superior to fires as a prophylactic, but this view was supported so vigorously that the Mayor of Philadelphia finally had to prohibit the firing of guns as "dangerous." The author, a few pages further, gives a vivid account of the wave of yellow fever that swept up the Mississippi in 1878, when 20,000 persons died of the disease. Medical men knew that somehow or other yellow fever came in ships from Havana. Then they wanted to know "*how* it came": this, the author observes, marked progress; "medicine had learned to ask more searching questions."

In the chapter "Past Thinking," Geddes Smith traces in an attractive way the development of the theory of contagion, reminding us that 1546 Frascator suggested the possibility of a living contagion, and said that it could happen by contact, through fomites, and at a distance through the air. A century later Kircher saw through one of the early microscopes particles which he believed to be living carriers of contagion. And then others approached nearer to or receded from the essential nature of the problem, until the genius of Pasteur and of Koch brought matters down to the bed rock of hard fact. Geddes Smith summarizes Pasteur's achievements thus: "Stripped of this glamour, what was Pasteur's contribution to our knowledge of communicable diseases? Essentially this, that where other men had surmised, Pasteur experimented, and where other men had experimented inconclusively, Pasteur had the wit and ingenuity to devise and carry through experiments which left no room for doubt."

In the fourth chapter the tricks of the parasite are exposed and the ways of investigating it "set down clearly"—how the virus is spun down by the ultra-centrifuge, how virus and bacteria may be cultured in the chick embryo: "The bacillus of whooping-cough, for instance, clusters about the cilia . . . lining the windpipe and deeper air-passages in the chick embryo . . . just as it does in the child." From the sick person the author passes on to the first problem of the medical officer of health—the "sick crowd," and pays high tribute to the English workers Greenwood, Topley, and Dudley.

Plague on Us, a few aspects of which have been briefly and inadequately referred to, has depth as well as width. It is a book to buy, not to borrow. "When pestilence falls on the people there is a story to tell," concludes the author. And here it is told well and truly.

TEMPORARY REGISTRATION OF OVERSEA DOCTORS

A new Defence Regulation and a New Order made under it by the Minister of Health and the Secretaries of State acting for Scotland and Northern Ireland extend the classes of doctors who may be registered by the General Medical Council for the period of the war. Under the Regulation formerly in force it was necessary for a doctor to be by law entitled to practise in a territory to which the Regulation was applied by order, and this precluded a doctor from registration if he had passed the necessary examinations for a diploma but was debarred from practice by racial legislation or otherwise. The new Regulation applies to all territories without limitation, and puts persons who have passed the necessary examination in the same position as if they had obtained the diploma and become entitled to practise. The combined effect of the new Defence Regulation and the Order is that a doctor who does not possess any United Kingdom qualification may now be registered temporarily if he satisfies the General Medical Council that he fulfils the following conditions: (1) That he is of good character; (2) that he holds a medical diploma (or has passed the examinations for a medical diploma) recognised as sufficient by the General Medical Council; and (3) that he has been selected for employment as a medical officer in an approved hospital, institution, or service, or as an assistant to a doctor on the permanent register. Special provisions apply to persons selected for medical commissions in the British or Allied armed forces. The fact of registration does not affect the obligation of an alien to comply with the provisions of the Aliens Acts and Orders.

THE SCABIES ORDER

By Order in Council a Regulation has been added to the Defence (General) Regulations 1939 with a view in particular to strengthing the powers of local authorities in combating the increase of scabies, " which has resulted from war-time conditions such as overcrowding and difficulties in maintaining personal cleanliness " (Ministry of Health Circular 2517). If the Minister is satisfied that scabies or any other disease associated with verminous conditions is so prevalent as to prejudice the efficient prosecution of the war, or the maintenance of supplies and services essential to the life of the community, he may make an Order providing for the inspection of premises in which persons found to be verminous are or have been accommodated, for the examination and treatment of any other persons in those premises who may be verminous, and for any necessary cleansing or destruction of articles on the premises. Such an order, dated October 28th, 1941, has now been made, and is as follows: -

Whereas the Minister of Health is satisfied that scabies is prevalent to such an extent as to prejudice the carrying out of the purposes specified in subsection (1) of section 1 of the Emergency Powers (Defence) Act, 1939: Now therefore the Minister of Health, in exercise of the powers conferred on him by Regulation 33A of the Defence (General) Regulations, 1939, hereby orders as follows :—

1.—(1) This order may be cited as the Scabies Order, 1941, and shall come into force on the date hereof. (2) In this order " child " means a person who has not attained the age of sixteen years ; " occupier " in relation to any premises includes the person for the time being having the management of the premises.

2.—(1) Where a medical officer of health is satisfied, upon information given by a registered medical practitioner or otherwise, that a person is in a verminous condition, he may by notice in writing require the occupier of any premises in which that person is or has recently been accommodated to permit the inspection of the premises by the medical officer of health or by a person duly authorised by him in that behalf in writing.

(2) Where a medical officer of health is satisfied after such inspection that the medical examination of any person who is or has recently been accommodated in the premises is necessary or expedient, he may by notice in writing require that person to present himself, within the period specified in the notice, at a place specified in the notice at which arrangements for such examination are available and to submit himself to examination by the medical officer of health or some other registered medical practitioner.

(3) Where a medical officer of health is satisfied, upon such examination or upon a certificate of a registered medical practitioner, that a person is verminous and requires cleansing or treatment, he may (*a*) by notice in writing require that person to present himself, within the period specified in the notice, at a place specified in the notice at which suitable arrangements for the cleansing or treatment of verminous persons are available, and to submit himself to such cleansing or treatment ; and (*b*) by notice in writing require the cleansing, treatment or destruction of any article specified in the notice which is, or is likely to be, verminous by reason of having been used by, or in contact with, that person.

(4) Where any requirement made under this order relates to a child, the parent or guardian or other person for the time being having charge of the child shall do all such things as are necessary for the purpose of securing or facilitating the fulfilment of the requirement, and shall comply with any reasonable request or instructions given for that purpose by or on behalf of the medical officer of health.

(5) The medical officer of health or other person by whom premises are inspected in pursuance of this order may require the occupier of the premises to furnish particulars of all persons who are or have recently been accommodated on the premises.

(6) The cleansing of a female under this order shall be carried out only by a registered medical practitioner, or by a woman duly authorised by the medical officer of health.

Ministry of Health Circular 2521 states that the Minister has had under consideration the difficulty experienced by many hospital authorities in obtaining sufficient domestic staff. The Minister of Labour and National Service has already made it clear that he looks upon domestic work in hospital as of national importance and that women engaged whole-time in this work will not be called for interview or asked to transfer to other work. The Minister of Health has come to the conclusion that a badge should be issued to those engaged in this work. It will be circular in form, bearing the words " Ministry of Health " round the circumference and " Hospital Service " on a horizontal crosspiece. It will be issued free to all employed on the domestic work of hospitals, including supervisory and manual workers, if they give regular service whole-time or part-time for a minimum of 96 hours a month. It must be surrendered when the recipient leaves the service of the hospital. Distribution of the badges was not expected to begin before late November. In the meantime application for the appropriate number should be made by hospital authorities to the Senior Regional Officer. Hospitals in the Emergency Hospital Scheme in the London Sectors should all make application to the London Senior Regional Officer. As the name " hospital domestic worker," or " hospital domestic staff," is disliked by some people, it is suggested that authorities might discontinue the use of the word " domestic " and refer to the staff carrying out these duties by some such name as " hospital helpers."

The Ministry of Health, in Circular 2493, draws the attention of food and drug authorities to the power conferred on them by Section 16 of the Pharmacy and Medicines Act, 1941, to enforce those provisions of the Act which, save in specified circumstances, prohibit the publication of advertisements calculated to lead to the use of articles for the treatment of Bright's disease, cataract, diabetes, epilepsy or fits, glaucoma, locomotor ataxia, paralysis, or tuberculosis (Section 8). Similar power is conferred (Section 9) in relation to articles for procuring miscarriage. The Act further (Section 11) makes compulsory the disclosure by appropriate means of the composition of medicines sold by retail other than when prescribed, made up, and supplied for the use of a particular person. Here again, food and drugs authorities are empowered to enforce the provisions. Enforcement of the provisions of Sections 8, 9 and 11 of the Act is a duty laid upon the Pharmaceutical Society of Great Britain, and it is open to food and drugs authorities either to exercise the powers conferred on them or to communicate with the Society. Sections 8 and 9 came into force with the passing of the Act on August 7th, 1941, last. Section 11 comes into operation on July 1st of next year.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

COUNCIL MEETING

A meeting of the Council was held at Tavistock House, Tavistock Square, London, W.C.1, on Friday, November 21st, 1941, at 11 a.m., with the President (Sir Alexander Macgregor) in the chair.

There were present : Drs. J. S. Anderson, Cyril Banks, George F. Buchan, Vynne Borland, H. W. Catto, J. A. Charles, J. Fenton, J. Ferguson, Sir Francis Fremantle, Drs. D. H. Geffen, J. M. Gibson, A. G. Glass, C. E. Herington, Katherine M. Hirst, J. W. Hunter, Gordon Lilico, T. N. V. Potts, E. Virginia Saunders-Jacobs, F. A. Sharpe, J. E. Spence, J. A. Struthers, R. Sutherland, H. G. Trayer, E. Ward, H. Gibbons Ward, H. C. Maurice Williams and F. T. H. Wood.

Apologies for absence were received from Dr. J. J. Buchan, Sir Wilson Jameson, Drs. R. H H. Jolly, T. P. Puddicombe, J. A. Stirling, E. W. Caryl Thomas, and C. F. White.

The minutes of the meeting held on September 19th, 1941 (see PUBLIC HEALTH, October, 1941, pp. 20-22) were approved and signed.

REPORT OF THE HON. TREASURER

Dr. G. F. Buchan submitted his report as Hon. Treasurer, with Balance Sheet and Revenue Account for Session 1940-41 (see PUBLIC HEALTH, November, 1941, pp. 45-47). The report and account were approved and adopted for submission to the Annual General Meeting.

ELECTION OF COMMITTEES

Committees for the Session 1941-42 were elected as follows :—

General Purposes Committee.—The President, Vice-Presidents and Hon. Treasurer (*ex-officio*). Drs. J. S. Anderson, Cyril Banks, Vynne Borland, J. J. Buchan, J. A. Charles, J. Ferguson, R. H. H. Jolly, Gordon Lilico, R. M. F. Picken, T. N. V. Potts, E. Virginia Saunders-Jacobs, Sir William Savage, Drs. J. A. L. Stirling, R. Sutherland, H. Gibbons Ward and H. C. Maurice Williams.

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

LIFE MEMBERSHIP

The following Fellows were elected to Life Membership under Article 12 : Dr. C. S. Brebner, formerly M.O.H., Richmond M.B. (joined Society 1908), Dr. E. C. Pern, formerly M.O.H., Droxford R.D. (joined Society 1909), Dr. J. M. Cowie, formerly M.O.H., Burton-on-Trent C.B. (joined Society 1914).

MEDICAL SUPERINTENDENTS' SOCIETY

The Council considered a proposal from the Medical Superintendents' Society that there should be reciprocal representation of that Society and the Society of Medical Officers of Health on their respective councils. It was agreed to refer this proposal for consideration by the General Purposes Committee, and that in the meantime a copy of the constitution of the Medical Superintendents' Society should be circulated to the Committee.

HOSPITAL PHARMACISTS

A scale of salaries for hospital pharmacists was forwarded by the Guild of Public Pharmacists with a request that it be commended by the Council to members of the Society. The scale was referred for consideration by the General Purposes Committee.

COUPONS FOR BABY CLOTHING

The Consumer Needs Section of the Board of Trade asked the Society to secure the assistance of medical officers of health for the collection by health visitors of information regarding the use by mothers of baby clothing ration coupons, in order to ascertain what supplies should be made available. It was agreed that health visitors could usefully obtain this information by securing representative replies to the questionnaire at Infant Welfare Centres and Ante-Natal Clinics.

SUPERANNUATION ACTS

A letter was received from the Yorkshire Branch asking " that the Council of the Society should press for an alteration in the Superannuation Acts to ensure that war service will rank as non-contributory service for superannuation purposes in all branches of local government service." It was agreed that as this matter concerned all officials of local authorities it should be referred to the National Association of Local Government Officers.

A letter from Dr. A. Joe drew attention to an anomaly in the Local Government Superannuation (Scotland) Act, 1937, which seemed to conflict with decisions under the English Act, and it was decided to ask Dr. Joe for further information.

THE MIDWIFERY PROFESSION

A letter was received from the Association of Supervisors of Midwives stating that it was proposed to form a committee to deal with matters concerning the midwifery profession to be composed of members of the Society, the Royal College of Obstetricians, the Midwives' Institute and their own Association, and asking the Society if it would be willing to nominate members to serve on such a committee if it is formed. It was agreed that on the formation of the proposed committee the Society would accept an invitation to nominate representatives.

BRITISH SOCIAL HYGIENE COUNCIL

A letter was received from the Society to nominate two medical officers of the smaller ports in Great Britain to membership of the Standing Conference on the Brussels Agreement and cognate subjects. Dr. J. W. Hunter (Port of Ipswich) and Dr. F. A. Sharpe (Port of Preston) agreed to accept nomination for membership of the Standing Conference.

MEDICAL PLANNING COMMITTEE

Branches reported election of representatives to serve on the Society's Medical Planning Committee as follows : Eastern (Dr. J. W. Hunter), East Midland (Dr. W. G. Booth), Home Counties (Dr. D. H. Geffen), North Western (Dr. F. Hall, Southern (Dr. H. C. Maurice Williams), Welsh (Dr. H. W. Catto), West of England (Dr. I. G. Davies), Yorkshire (Dr. R. Sutherland). It was agreed that any Branch or Group of the Society desirous of submitting observations and resolutions in reference to medical planning for consideration by the Committee should be entitled to nominate a representative.

CENTRAL MIDWIVES BOARD

On submission of the report of the C.M.B. for the year ended March, 1941, the following memorandum was received from Dr. J. J. Buchan, the Society's representative on the Board :—

> The Report for the year ended March 31st, 1941, is quite a short one. It shows that at the end of the year the number of women on the Roll of Midwives was 64,440, a nett increase of 854, while the number who had notified their intention to practise

was only 15,874, a decrease of 1,347 during the year. More than half of these practising midwives had qualified during the 11 years 1930-40, while only 13·6 per cent. had qualified prior to 1920. The number of bona-fide midwives is now negligible, being only 11. These figures seem to indicate that the average practising life of midwives is just under 15 years.

The new Training Rules were in operation during the whole year, 1,879 candidates being successful at the first examination, an increase of 515 compared with last year, while 818 passed the second examination, and received their certificate. This latter number would, if it continued without change, lead to a serious shortage in the number of practising midwives, but it is noticeable from the report that the number of pupil midwives undergoing training for the second part of the examination is materially increasing, and it is hoped that, despite the difficulties of the times, a sufficient supply of well trained women will be forthcoming to meet the country's needs. The training of these pupil midwives has been carried on under circumstances of great difficulty, and the report of the Board states that the manner in which the teachers have carried on with it is deserving of the highest praise. The Board have co-operated in the task of obtaining midwives for the improvised maternity homes established, and in many cases have been able to give their valuable help to the authorities concerned.

The number of complaints against midwives during the year was 12 only, but in 7 of these cases the name was removed from the Roll, while minor penalties were imposed in three other cases, and no action taken in two cases.

The amount of the Board's deficit in the year was £8,997 8s., as compared with £8,140 14s. in the previous year. This sum has, of course, to be met by levies on local supervising authorities. Many of the items of expenditure were quite exceptional and are not likely to recur.

On the whole, it may be said of the Board that it has been able to carry on its important work with a relatively high degree of efficiency.

Dr. Buchan was accorded the thanks of the Council for his memorandum and for his services on the Board.

Medical Organisation

A resolution was received from the East Midland Branch as follows :—

> "That in the best interests of the nation, the East Midland Branch of the Society feels that the future development of medical organisation should be on the lines of a State Medical Salaried Service."

It was agreed to refer this resolution to the Medical Planning Committee.

National Wheatmeal Loaf

Dr. Cyril Banks drew attention to the leading article in the *Lancet* of November 15th which suggested that in many parts of the country the National Wheatmeal Loaf is nothing more than white flour with added bran. It was agreed that this allegation should be the subject of immediate inquiries by members of the Society through various channels.

Scabies

Letters in reference to the control, prevention and treatment of scabies were received from the Eastern Branch and the Urban District Councils Association. The suggestions in these letters had since been largely covered by the Scabies Order and the accompanying Circular (No. 2517) of the Ministry of Health, dated November 14th, 1941. It was agreed to reply to the letters to this effect, and to report the recommendation of the Eastern Branch in reference to anti-scabies propaganda to the Central Council for Health Education.

Daily Minders

Arising out of a letter from Dr. J. E. Spence and a resolution forwarded by the East Midland Branch, the Council unanimously adopted the following resolutions :—

> (*a*) That Daily Minders should be brought under the type of supervision afforded by the child life protection sections of the Public Health Act.
>
> (*b*) That without detracting from the development of the provision of Day Nurseries and Nursery Schools for as many children as possible, local authorities should be given power to select, employ, pay and supervise Daily Minders.

It was agreed that these resolutions should be forwarded to the Ministry of Health.

Vacancy on Council

The Council accepted with regret the resignation of Dr. L. C. Adam, at present prevented by official duties from attendance at the Council meetings. On the nomination of the Inter-Group Committee, Dr. H. Stanley Banks was elected as departmental representative in place of Dr. Adam.

Regionalisation of Hospital Services

Dr. Gordon Lilico, Hon. Secretary of the County Borough M.O.H. Group, reported correspondence in reference to this subject, and submitted the following memorandum :—

> At a meeting held in Derby in the month of July, the County Borough Group of the Society of Medical Officers of Health discussed the Regionalisation proposals of the Nuffield Trust.
>
> The meeting as a whole expressed grave concern as to the implications of the schemes of work which the Nuffield Trust had put forward. The principle of Regionalisation was practically unanimously approved, but it was felt that, in the constitution both of the Councils and Committees of the Nuffield Trust and in the general trend of the public speeches which have been made by the representatives of the Trust and in other ways, the Trust seemed to be primarily concerned with the interests of the voluntary hospitals of the country.
>
> It was fully realised that the Trust had on many occasions said that the local authorities, as the bodies for the County and Municipal hospitals, would have to come into the scheme if it were to be in any sense a true Regionalisation and co-ordinated effort in hospital service.
>
> It is also well known that three successive Ministers of Health have written letters expressing their appreciation of the principle of Regionalisation. The Group, however, are much more impressed with the fact that no official step has been taken by the Ministry to make sure that the rate-supported hospitals are, in fact, adequately represented in the deliberations of the Nuffield Trust and that the Nuffield Trust had not at the date of this meeting had any official relationship with the Ministry from its side with this in view.
>
> The Group were also concerned with the fact that there has been no public statement of the actual Trust Deed. The following issues also weighed considerably in directing the general trend of the discussion :—

1. There does not appear to have been any adequate consideration given to the question of the definition of regions in the country and where such regions are outlined they appear to have been so defined without reference to the local authorities concerned.

2. The income of the Trust is clearly not in any sense an annual sum adequate for the relief of any financial difficulties in the hospitals throughout the country generally, and while it is appreciated that the primary object of the above was to finance the establishment of Regionalisation, the Trust representatives have given it to be understood that this sum of money is also available for the assistance of needy hospitals.

3. The Group felt that local authorities have no means of coming to any conclusion as to what the result of Regionalisation might be upon local finance.

4. If the Trust had really fully appreciated the meaning of Regionalisation and co-operative hospital services, the mere fact that local health authorities are responsible for the enormous preponderance of the hospital accommodation of the country should have made the Trust from the beginning give at least a fifty-fifty representation of local authorities and voluntary authorities.

5. The Medical Officers present felt very strongly that the method of approach of the Nuffield Trust to be interested persons in the region was unsatisfactory, and when meetings had been called prearranged plans without adequate consideration of local authorities had been presented.

Since this meeting took place the County Councils Association and the Association of Municipal Corporations have by negotiation with the Trust been asked to nominate representatives of each of these bodies to serve on the Councils and Committees of the Trust. This is a step towards the elimination of some of the objections mentioned above, but even so, the representation is inadequate and in the opinion of the officers of the Group to whom this memorandum was referred requires material revision.

It was agreed to forward the memorandum to the County Councils' Association and the Association of Municipal Corporations.

Candidates for Membership

In reference to the decision of the Council (PUBLIC HEALTH, October, 1941, p. 22) that any revision of disciplinary decisions must be deferred until after the war, an appeal was received for earlier reconsideration from a candidate for membership. It was agreed to take no action in this matter.

Pasteurisation of Milk

A resolution from the Welsh Branch in reference to the "Flash" process of the pasteurisation of milk and the recent Government circular relating thereto was reported as follows :—

> "Whilst regretting that such a measure was found to be necessary, the meeting felt that it was undesirable to take up any antagonistic attitude at present, but that the matter should certainly be reviewed at the end of the war."

The resolution was approved by the Council.

Nalgo Reconstruction Committee

A letter was received from the National Association of Local Government Officers reporting their appointment of a committee to consider and report on proposals for the future of local government, and asking whether the Society would be willing to communicate its views to this Committee, on matters in which it is specially interested, and to arrange for exchange of memoranda, reports, etc., bearing on such matters. It was agreed to give the Nalgo committee the desired co-operation.

National Dried Milk

As requested by the Council, the Maternity and Child Welfare Group forwarded draft leaflets and directions for issue with the National Dried Milk. It was agreed to refer these drafts to the General Purposes Committee with a view to their submission to the Ministry of Health and the Ministry of Food.

The Council then adjourned.

ANNUAL GENERAL MEETING

The Annual General Meeting of the Society was held at Tavistock House, Tavistock Square, W.C.1, at 2 p.m. on Friday, November 21st, 1941, when Dr. F. T. H. Wood installed his successor, Sir Alexander Macgregor as President.

The minutes of the last Annual General Meeting held on November 15th, 1940, were approved and signed.

The meeting next adopted the annual reports of the Council and the Hon. Treasurer (together with Balance Sheet and Revenue Account) for the Session 1940-41, as printed in PUBLIC HEALTH, November, 45 *et seq.*

Messrs. Deloitte, Plender, Griffiths & Co. were appointed Auditors for the Session 1941-42.

On the proposal of Dr. James Fenton, a cordial vote of thanks was passed to Dr. F. T. H. Wood for his invaluable service as President of the Society for the past two sessions.

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

As Fellows :—Anderson, Margaret E., M.B., CH.B. (ST. AND.), M.R.C.O.G. ; Aitken, John Macpherson, M.B., CH.B. (GLAS.), D.P.H. ; Atkin, Minnie, M.B., B.S. (LOND.), D.P.H. ; Bowen, Phyllis Emily Mary, M.R.C.S., L.R.C.P., D.P.H. ; Bowie, Edgar Ormond, L.A.H.I., D.P.H., L.M. ; Buchanan, Georgina Scott, M.B., CH.B. (ST. AND.) ; Cairns, John G., M.B., CH.B. (GLAS.), D.P.H. ; Dodds, George Ridley, M.B., B.S. (DURH.) ; Donovan, George Edward, M.SC., M.B., B.CH. (IRE.), D.P.H. ; Drainer, Samuel Kennedy, M.B , CH.B. (GLAS.), D.P.H. ; Edwards, Lionel Roden Lewis, M.R.C.S., L.R.C.P., D.P.H. ; Elliott, Rachel Anna, M.D. (BELF.), D.P.H. ; Evans, Muriel Gordon, M.D., F.R.C.S. (EDIN.) ; Hart, Kathleen Mary, M.D. (LOND.), D.P.H. ; Hyde, William Dodds, M.B., CH.B. (EDIN.), D.P.H. ; Lones, Marian, B.SC., M.B., B.S. (LOND.), D.P.H. ; McCracken, David Andrew, M.D. (GLAS.), D.P.H. ; McCracken, Ian Earle, M.D. (EDIN.), B.HY. (DURH.), D.P.H. ; McDowell, Leslie Alexander, M.B., B.CH. (BELF.), D.P.H. ; Mackay, John Simpson Bain, M.A., M.B., CH.B. (ABERD.), D.P.H. ; MacFarlane, James, B.COMM., M.B., CH.B. (EDIN.), D.P.H. ; McKinney, James B., M.B. (BELF.), D.P.H. ; Martin, Peter Henry, B.M., B.CH. (OXON.), F.R.C.P., D.T.M. & H. ; Miller, Frederick J. W., M.B., B.S. (DURH.), M.R.C.P., D.C.H. ; Newton, Margretta Jane, M.B., CH.B. (EDIN.) ; Nicol, Charles Grant MacMahon, M.B., B.S. (LOND.), D.P.H. ; Norman, Leslie George, M.D., B.SC. (LOND.), M.R.C.P. ; Pearson, Richard Carden Mitchell, M.D., M.R.C.P.E., D.P.H. ; Warren, Patricia S., M.B., CH.B. (EDIN.), D.P.H. ; Williams, Norman Vincent, M.B., CH.B. (EDIN.), D.P.H.

As Associates : Ackers, Emily, L.D.S. ; Ackers, Sydney, L.D.S., R.C.S. (ENG.) ; Chesters, E. H., L.D.S., R.S.C. (ENG.) ;

Clayton, John Reginald, L.D.S., V.U. (MANC.); Golledge, Victor Fitzherbert Hedworth, L.D.S., R.F.P.S. (GLAS.); Lynn, Jules, L.D.S.

Sir Alexander Macgregor then delivered his Presidential Address, taking as his subject the Public Health Services in the War.

A vote of thanks to the President for his Address was proposed by Dr. James Ferguson, seconded by Dr. Cyril Banks, and carried by acclamation.

BRANCH AND GROUP MEETINGS

WEST OF ENGLAND BRANCH

President, 1940-41: Dr. B. A. I. Peters.

President, 1941-42: Dr. P. H. Stirk. (Formerly M.O.H. Exeter C.B.).

Acting Secretary: Dr. I. G. Davies.

A meeting of the West of England Branch of the Society of Medical Officers of Health was held at the Central Health Clinic, Bristol, on August 22nd, 1941. There were 10 members present. The President read a paper entitled *The Control of Streptococcal Infection in Cubicle Blocks.* He was followed by Dr. K. E. Cooper, Senior Bacteriologist of the Preventive Medicine Laboratories, Bristol, who gave a short address on the bacteriological methods used. An interesting discussion took place in which all members present took part. A vote of thanks for the paper was proposed by Dr. Wilson and seconded by Dr. Cookson.

The following Officers were elected for the Session 1941-42: *President,* Dr. P. H. Stirk, Exeter; *Vice-President,* Dr. J. B. Lowe, Deputy County M.O.H., Wiltshire; *Hon. Secretary and Council Representative,* Dr. I. G. Davies, Deputy M.O.H., Bristol; *Hon. Treasurer,* Dr. J. F. Blackett, M.O.H. Bath.

Dr. C. W. Gee, M.O.H. Yeovil, and Dr. T. Aubrey, Bitton, were recommended for election by Council as Life Members.

Reference was made by the President to Dr. Buchan's report on the British Medical Association Medical Planning Commission, outlined in the July issue of PUBLIC HEALTH. After discussion it was proposed and agreed that consideration of this matter be deferred to a future meeting, at which papers on the subject should be read by three members, followed by a discussion.

At a meeting held at Bristol on Friday, October 24th. There were 12 members present.

Dr. B. A. I. Peters took the chair and the minutes of the last meeting were read and confirmed. The retiring President, in the absence of the President-elect, asked Dr. J. B. Lowe, vice-president, to take the chair. A vote of thanks to Dr. Peters was proposed by Dr. Peirson and seconded by Dr. Lowe.

Dr. Lowe then read an interesting paper on "Detention of Mental Defectives Against the Wish of their Relatives." The paper, which was well illustrated by case histories, provoked a good discussion in which many speakers took part.

The Honorary Branch Secretary, Dr. I. G. Davies, was proposed and nominated as the branch member on the Central Medical Planning Committee of the Society. It was agreed that the meeting at which these matters would be discussed should take place at Bristol on December 11th. The Hon. Treasurer, Dr. J. F. Blackett, submitted his report, and was accorded a vote of thanks for his services.

YORKSHIRE BRANCH

President, 1940-41: Dr. N. Gebbie (M.O.H., Hull C.B.).

President, 1941-42: Dr. J. Galloway (M.O.H. Bolton C.B.).

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 August 29th. In the absence of the President, Dr. Sharpe, Senior Vice-President, took the chair; 16 other members and two guests were present.

The minutes of the last meeting were taken as read, approved, and signed. The Secretary read letters from Sir Alexander MacGregor, Dr. Massey, and Dr. Scott, in which they expressed their pleasure at receiving the congratulations of the Branch upon their recent honours.

Upon the proposal of the Council it was unanimously resolved that Dr. Pearce should be recommended for nomination by the Council of the Society as a fully-paid life member. In supporting this proposal Dr. Buchan spoke of Dr. Pearce's long and honourable career in the Society, and of the outstanding contributions which he had made to it since he joined in 1899. He had held the offices of President of the Society and of President and Secretary of the Yorkshire Branch. Dr. Jervis said that the Yorkshire Branch had been very fortunate indeed in having such a member as Dr. Pearce, who had always been a vitalising force. Drs. Gibson, Pickup and Sutherland spoke in support, and in reply Dr. Pearce said that he most sincerely appreciated what had been said of him.

MEDICAL PLANNING

The meeting then proceeded to consider the question of medical planning, particularly in the light of the paper by Dr. George Buchan, which appeared in the July issue of PUBLIC HEALTH, 1941. Dr. John Buchan said that during the last twenty-five years there had been a gradual change in the attitude of the general practitioner to the public health service and to the medical officer of health, from one of rather cold and contemptuous indifference to a readiness to play an increasing part in public health. This part, however, involved a definite responsibility to the Public Health Department. A dilettante attitude would no longer suffice. Already he had quite a number of responsible duties to the State for which he was being paid. They had to look forward to incorporating the general practitioner as a part-time but adequately paid worker in the public health service. It would be unfair to expect general practitioners to take part in work for the common weal without proper remuneration. There ought to be no more potent educator of the public in health matters than the general practitioner. Medical training was now teaching its students that part of their work would be the prevention of disease as well as its cure, and he hoped that increasing weight would be given to this branch of training in the years to come. In time this was bound to have a striking effect upon the attitude of the general practitioner. Speaking of the hospital system and its relationships, Dr. Buchan said they must not forget that hospitals were only a branch, albeit an important branch, of the whole of medical practice. It must not be so organised as to stand alone. Even the most distinguished hospital physicians and surgeons were merely co-operators with many much more humble practitioners. They had been lauded as great physicians and surgeons and honours had been heaped upon them, and the result was that

some of them had developed a superiority complex which was not entirely justified by their composite contribution to the well-being of the community when compared with the joint contributions of their less illustrious and less lime-lit colleagues. Dr. Buchan drew attention to the circular letter from the Association of Municipal Corporations advising local authorities not to commit themselves to any proposed regional hospitalisation scheme in the meantime.

Dr. Gibson observed that they had to decide whether they were to bring general practitioners more closely into contact with hospital work or to exclude them. While he realised there were difficulties, he thought the practice of medicine would be greatly improved if general practitioners followed their patients into hospital and really used consultants as consultants. It appeared to him that the subject was too big to discuss at the meeting. He thought that a small working sub-committee should be appointed to consider any suggestion put forward by any of the members. Dr. Fraser agreed with the forming of a sub-committee, and thought that among other matters the question of a State Medical Service should be considered.

Dr. Payne said that many of the older general practitioners had little conception of the principles of State medicine, and if a State service were to be established refresher courses would be essential. He felt also that the education of the present-day student left much to be desired. It should be much more practical. Undue weight was given to curative medicine. Dr. Sharpe considered that medical students should have more opportunity of coming under the influence of preventive-minded teachers.

Dr. Milne thought that much of the difficulty in the relation of general practitioners to hospitals arose because (*a*) there was no one person in a hospital who was responsible for the care of the patient as opposed to treatment; and (*b*) no one was responsible for considering the contribution the hospital could make to the community. He thought a hospital should, especially in its out-patient department, work in constant co-operation with the general practitioners. With regard to general practitioners working in hospitals, he thought the greatest difficulty would arise in ensuring a consistant standard of care. He considered the medical officer of health should take part on the administrative side.

Dr. Benn said that if every man, woman and child in this country were put on the panel, it would obviously be to the interest of the general practitioner to keep them well—that was to play his part in preventive medicine. Serious administrative difficulties would arise if hospital wards were thrown open to general practitioners for treatment of their own patients. They would be concerned only with the welfare of their own patients and dual control would undoubtedly produce difficulties.

Dr. Galloway considered that they must cease to work on the basis that the welfare of the patient must be made to fit in to the existing organisation of the medical profession. Much time was lost in the case of people suffering from chronic disease. The general practitioner dealt with acute illness and minor ailments and hospitals dealt with serious acute illness, but chronic sufferers were thrown back on the general practitioner or disposed of in institutions where they were cared for but where little serious attempt was made to deal with the chronic illness itself. Regionalisation schemes were essential in certain fields, but this meant certain small areas retiring from these fields, which those in charge were frequently very loath to do. This must be done, however, if the greatest good was to be done for the greatest number. They must, therefore, re-examine the whole problem anew.

Dr. Sutherland considered that in future developments of medical practice the medical practitioner should play a part of growing importance in ensuring the optimal development of children, and in the maintenance of optimal health and well-being in the whole population, in addition to the prevention and cure of disease. He felt that the general practitioner of the future must be educated to play his part in this aspect of the work, and become, in the truest sense of the word, the family adviser in health as well as in sickness.

On the proposal of Dr. Fraser, seconded by Dr. Gibson, it was decided that a sub-committee should be appointed to draw up and submit for the consideration of the Branch a detailed report upon medical planning. The sub-committee appointed was Dr. Gibson, Dr. Buchan, Dr. Galloway, Dr. Jervis, Dr. Fraser, Dr. Gebbie, and Dr. Sutherland.

An ordinary meeting of the branch was held at Leeds on September 26th, 1941, at 3 p.m. The President was in the chair and was supported by 19 members.

The minutes of the last meeting were taken as read and approved, and were signed.

The Hon. Secretary was instructed to write to the Secretary of the Society asking that the Council should press for an alteration in the Superannuation Acts to ensure that war service before entry into local government service will rank as non-contributory service for superannuation purposes in all branches of local government service.

HOSPITAL RECEPTION OF CASUALTIES

Dr. Benn, the Medical Superintendent of Seacroft Emergency Hospital, then gave an address on arrangements for hospital reception of casualties. Dr. Benn said that the reception room was the focal point in the admission of casualties, but the system could work either through the reception room or direct to the wards after inspection in the ambulances. The advantages of a reception room were that it ensured the rapid release of ambulances. It acted as a reservoir where patients could be retained until personnel was available, and it facilitated sorting, preliminary examination and clerking. The disadvantages of using a reception room were that a considerable staff was required; the patient was subjected to movement and exposure on an open wheeled stretcher; and a minimum of two moves was involved. The disadvantages of examining patients in the ambulance, allocating them to the appropriate wards, and transferring them to these in the same ambulance were that the ambulances were detained for longer periods and guides might be required to assist the drivers in finding the correct wards. The advantages of this alternative procedure, however, were that fewer personnel were required; the medical officers and nursing staff were where they were most wanted—that is, on the wards—fewer stretcher bearers were needed, and the long carry of patients on stretcher trollies was avoided. He had used both methods, and considered the reception room advisable when large numbers of casualties were being admitted. Both methods should be available and used as conditions dictated. When patients were being received all off-duty must be cancelled. Nurses were needed at the time of greatest pressure—that is when the casualties were arriving and for the next forty-eight hours.

Clerking was the least important part of the admission to hospital. He had originally used a somewhat elaborate form in duplicate, which had worked well during exercises but which had been found to take up too much time in practice. He had therefore prepared a simple label filled in as briefly as possible and tied to the patients.

Dr. Benn said that he had lectured his staff on gas and placed an intelligent nurse in charge of the cleansing station; it was her duty to keep it always in readiness

and to instruct the staff in their duties. He understood that twenty minutes was as long as nurses could work comfortably in protective clothing, and that in that time three nurses could cleanse only three parients. Patients would be " debussed " and carried into the undressing room by men in protective clothing. They would then be washed, dried, and taken into the wards allotted for this purpose. He thought it would be advisable to have enough wheeled trolleys to allow of stretchers being placed on them, thus eliminating the lifting and lowering of patients. Hospitals expecting to admit casualties from phosgene or other lung irritant gases should be fitted with a system for the distribution of oxygen to a large number of casualties from one central point.

The President then opened the discussion; at his special request Dr. Gilmour, the officer in charge of the casualty services in Leeds, made some observations from the point of view of the collecting service. He agreed with Dr. Benn that the whole service existed for the well-being of the patients. Clerking must start at the scene of the incident because it was essential to know the patient's name or other information which would help identification. There must be some arrangements to ensure that the ambulances would not saturate any one hospital while others had ample room. There must therefore be effective liaison between the receiving room officer and the ambulance control. If proper arrangements were made the hospital should not be overwhelmed. He thought that if people would keep under cover there should be comparatively few gas casualties. Most gas casualties admitted to hospital would be gravely injured, and he feared many of them would be killed by water. He felt that minor gas casualties must be diverted from the hospital to the nearest cleansing station.

The President thanked Dr. Benn for his address and Dr. Gilmour for his supplementary remarks. He also thanked the Leeds Corporation Hospitals Committee and Dr. Jervis for the excellent hospitality which had been provided.

NORTHERN BRANCH.

President: Dr. James Grant (M.O.H., Gateshead C.B.).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-on-Tyne C.B.).

The Annual Summer Meeting of the Branch was held in Newcastle-upon-Tyne on August 9th. Dr. J. Grant, President, was in the chair, and 14 other members were present. The minutes of the last meeting were read, confirmed, and signed by the chairman.

Dr. George Hurrell, tuberculosis medical officer, Newcastle-upon-Tyne, was nominated President of the Branch for the Session 1941-42, and Dr. Madge Hopper, assistant maternity and child welfare medical officer, Durham County Council, was nominated Vice-President. Dr. J. A. Charles was re-elected as Honorary Secretary and Treasurer for the Session, and also as the Branch representative on the Council of the Society. 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. Drs. E. F. Dawson-Walker and George Hurrell 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 of the Society. The Honorary Secretary was instructed to express to this 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.

The Chairman raised the question of the increase in infectious diseases in the Gateshead area, and asked what the position was in other areas. After a short discussion on the subject it appeared that the increase mentioned by the Chairman had not occurred to any great extent in other areas.

After a general discussion on the memorandum by Dr. George F. Buchan in the July issue of PUBLIC HEALTH, it was decided that Dr. G. A. Dawson (representing public health officers) and Dr. James Hudson (representing general practitioners) should open the discussion on the first section, namely, " Domiciliary Practice, Public Health Practice, and Special Practice," and that Dr. J. A. Charles and Dr. A. E. Raine would open the discussion on the second section, namely, " Hospitals." It was decided that two open discussions should be held on the papers during the session 1941-42, and that a consultant or consultants would be invited to give the views of the consultants on " Special Practice."

HOME COUNTIES BRANCH

President, 1940-41: Dr. E. W. Caryl Thomas (Harrow U.D.).
President, 1941-42: Dr. D. H. Geffen (M.O.H. Enfield U.D.).
Hon. Secretary: Dr. C. Herington (Dagenham M.B.).

A meeting of the Branch was held on September 12th, 1941, with the President and 29 other members present.

The minutes of the meeting held on June 20th were read, confirmed, and signed. The Hon. Secretary reported that Dr. K. E. Tapper, O.B.E., had been awarded the George Medal for gallantry. Hearty congratulations were extended by the Chairman, for which Dr. Tapper thanked the Branch.

After a discussion on the personnel of the Joint Sub-committee of the Home Counties' and Metropolitan Branches to be set up in connection with the B.M.A. Medical Planning Commission, it was resolved that the following should be the nominees of this Branch: Drs. Macaulay, Stott, Tapper, Thomas, Townsend, and Underwood, it being understood that Drs. Buchan and Ferguson were already members of this committee.

DIPHTHERIA IMMUNISATION

A discussion on diphtheria immunisation was opened by Dr. W. B. Stott, Medical Officer of Hellth, Mid-Sussex Combined District. Dr. Stott outlined the scheme in his district and spoke first of the publicity campaign. The scheme was advertised by means of leaflets through the welfare centres and visits by district nurses. Whenever difficulty was experienced in obtaining consents he made personal visits to the homes. The population involved amounted to some 45,000, which did not include a number of evacuees. Out of approximately 7,000 school children 96 per cent. either had been immunised or had consented to undergo this treatment. Dr. Stott did not advocate the use of the preliminary Schick test in young children. He strongly advised the post-Schick test, but considered that the control was unnecessary and was only given when a positive reaction occurred. He now used A.P.T., but was of the opinion that T.A.F. was preferable owing to the fact that it never gave rise to a painful reaction. He was strongly against any compulsory powers being given to local authorities, as these would of necessity possess a " conscience clause " which would nullify any beneficial effects which might otherwise accrue.

A very full discussion ensued, a large proportion of those present taking part. The last speaker was Dr. O'Brien, who gave the meeting the benefit of his extensive experience in this subject. Dr. Stott replied to the various points raised and was thanked by the meeting for opening the discussion.

A further meeting was held on October 17th. There were present the President and 19 members.

The minutes of the meeting held on September 12th were read, confirmed, and signed. Dr. D. H. Geffen was nominated as the representative of the branch on the Committee of the Society.

Central Branch Planning.—The Hon. Treasurer's report was submitted to the branch, and Drs. Bramley and Leader duly certified the accounts for the year just ended. Dr. Tapper was thanked for his services. Dr. Brebner, until recently M.O.H. for Richmond, was proposed as a Life Member of the Society. This was agreed by all present, and the Hon. Secretary was requested to forward the recommendation to the Executive Secretary for submission to the Council of the Society.

Dr. Caryl Thomas then installed the new President, Dr. D. H. Geffen, in the chair, who then delivered his presidential address. Dr. George F. Buchan proposed a vote of thanks to the President. This was seconded by Dr. Adamson, and the President replied. Before the close of the meeting Dr. Underwood voiced the thanks of the branch for the able manner in which Dr. Caryl Thomas had occupied the presidential chair for the past two years.

NORTH-WESTERN BRANCH

A meeting of the Branch was held in the County Hall, Preston, on September 5th, 1941. The President occupied the chair: 29 members were present and apologies for absence were received from 10 members.

The minutes of the last meeting were confirmed. The Hon. Secretary then submitted a letter which he had received from the Acting Executive Secretary requesting that the Branch arrange a meeting to discuss the report by Dr. G. F. Buchan on the B.M.A. Medical Planning Commission. The subject was introduced by the President, who called on Dr. Hall to open the discussion. Dr. Hall gave an interesting and thoughtful paper on the future of the medical services, and the discussion was continued by Drs. Kershaw, Berry, Ashcroft, Roberts, and Sharpe. The resolutions submitted to the meeting and unanimously agreed to are included in the Council Report, printed in this issue.

On the proposal of Dr. Sharpe, seconded by Dr. Lissant Cox, the thanks of the meeting were accorded to Dr. Hall for his interesting address.

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 was held at the Institute of Preventive Medicine, The Parade, Cardiff, on September 26th. The President was in the chair and 18 other members were present.

The Minutes of the last meeting, held on July 18th, 1941, were read by the Hon. Secretary, approved, and signed by the President. Arising out of the minutes, the Secretary brought up the question of the flash process for the pasteurisation of milk.

After a long discussion the following resolution was passed: " While regretting that such a measure was found to be necessary, this meeting felt that it was undesirable to take up any antagonistic attitude at present, but that the matter should certainly be reviewed at the end of the war." The Secretary was instructed to write to this effect to Headquarters.

The Hon. Secretary read a letter from Dr. D. E. Parry Pritchard asking whether any action had been taken following the receipt of Circular 2362 (Wales) from the Welsh Board of Health, which dealt with the transfer of notifications of tuberculosis in respect of evacuated persons who had left the district temporarily as a result of the war. Dr. Pritchard had expressed the view that notifications should be transferred in order that the receiving areas might be in full possession of the relevant information about evacuated persons. The Department, on the other hand, had in their circular expressed the view that temporary change of residence during the war did not constitute a permanent change of residence within the meaning of the regulations, and that notifications in respect of evacuated persons should, therefore, not be transferred to the new area of residence. After hearing the views of Dr. Dan Powell, the Principal Medical Officer of the Welsh National Memorial Association, the meeting resolved: " That the Branch are of opinion that notifications need not be transferred but that full case sheets should be forwarded to the medical officer of health of the receiving area."

It was resolved that the Hon. Secretary, Dr. H. W. Catto, be the representative of the branch on the Medical Planning Committee of the Society.

The meeting listened to a most interesting paper entitled " Industrial Pulmonary Fibrosis, with special reference to Silicosis in Wales," by Dr. T. W. Davies. He was followed by Dr. Gwyn Rocyn Jones, county pathologist for Monmouthshire, who gave an account of 126 cases on which he had performed necropsies. Dr. H. W. Catto, M.O.H., Newport, showed some lantern slides illustrating the microscopical appearances of the lungs in silicosis, and tracing the process from its inception (when dust was first inhaled) until the final complete fibrosis of the lung. Several other speakers took part in the discussion, which was concluded by Dr. Dan Powell, Principal Medical Officer, Welsh National Memorial Association. At the conclusion a hearty vote of thanks was accorded to Dr. T. W. Davies for his paper, which it is hoped to publish in a future issue of PUBLIC HEALTH.

MIDLAND BRANCH

President: Dr. Ethel Cassie.
Hon. Secretary: Dr. R. H. H. Jolly.

The first meeting of the session was held at St. Chad's Hospital, Birmingham, on October 2nd. The retiring President (Dr. C. W. Sharpley) and 32 members were present. The minutes of the meeting held on April 5th were taken as read, and signed.

The following officers and members of Council were elected for the session 1941-42: *President.*—Dr. Ethel Cassie. *President Elect.*—Dr. H. P. Newsholme. *Vice-Presidents.*—Drs. G. A. Auden, A. Massey, H. Paul, E. S. Robinson, C. W. Sharpley. *Elected Members of Council.*—Drs. G. N. Anderson, C. F. Brockington, V. M. Crosse, P. G. Horsbrugh, H. Wyndham Parker, W. S. Walton, A. Hamilton Wood. *Hon. Treasurer.*—Dr. H. Gibbons Ward. *Hon. Secretary.*—Dr. R. H. H. Jolly. *Hon. Auditor.*—Dr. A. Massey. *Representatives on the Council of the Society.*—Dr. H. Gibbons Ward, Dr. R. H. H. Jolly. *Representatives on the Council of the Birmingham Branch of the B.M.A.*—Dr. R. J. Cyriax, Dr. H. Gibbons Ward. *Branch Representative on Tuberculosis Group of the Society.*—Dr. S. Deaner. The Hon. Secretary reported that the Birmingham and Staffordshire Branches of the B.M.A. had respectively nominated Dr. Mary B. Stone and Dr. J. A. M. Clark to serve on the Branch Council of the Society as their representatives during the ensuing session.

Congratulations were offered by the President to the following members for honours and awards for gallantry recently conferred upon them: Dr. A. Massey, C.B.E., Dr. E. Cassie, O.B.E., Dr. P. G. Horsbrugh, George Medal.

Dr. Sharpley then welcomed Dr. Ethel Cassie to the presidential chair and referred to the many valuable services she had carried out for maternity and child welfare in Birmingham. The new president thanked the Branch for the honour it had paid to her in making her its first woman president. She proposed a very cordial vote of thanks to Dr. Sharpley for the manner in which he had kept the Branch together during the two very difficult years he had occupied the President's chair. Dr. Sharpley made a suitable reply. Dr. Cassie then delivered her presidential address on child welfare work in war time. This referred in some detail to the problems and difficulties with which the Maternity and Child Welfare Authorities in Birmingham were confronted on the outbreak of hostilities and during the first two years of war. Dr. Cassie's address is printed in the current issue of PUBLIC HEALTH at page 60.

In confirming many of the observations made in Dr. Cassie's paper, Dr. Newsholme remarked that day nurseries were purely a wartime measure which could not be approved by hygienists as a permanent peace-time arrangement.

Dr. Massey proposed and Dr. Maitland seconded a very hearty vote of thanks for Dr. Cassie's stimulating address. This was carried unanimously.

SOUTHERN BRANCH

President: Col. D. G. Cheyne (Asst. Director of Hygiene, Southern Command).

Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B. and Port).

A meeting of the branch was held in Winchester on October 16th. Dr. I. McLachlan, the President, was in the chair. Twelve members and four visitors were present.

The minutes of the meeting held on April 26th, 1941, having been circulated, were signed by the President, and the Treasurer's report was submitted and approved.

Elections.—It was proposed by Dr. Williamson and seconded by Major Chesney that Dr. E. C. Pern be recommended for election as Life Member of the Society.

It was proposed by Major Chesney and seconded by Dr. Williamson, and resolved unanimously, that Colonel D. G. Cheyne be elected President of the Branch for the session 1941-42, and the existing officers were re-elected to other offices.

Dr. H. C. Maurice Williams reported with regret the fact that Dr. G. McCloskey, late Medical Officer of Health to the Havant and Waterloo Urban District Council, and a member of the branch, was killed as the result of an air raid in Belfast in April last. The Secretary was instructed to convey to Mrs. McCloskey the sympathy of the branch in her bereavement.

Major M. Markowe, the Commanding Officer of the 4th Field Hygiene Section, then gave an interesting address on the work of his section, followed by practical demonstrations.

On the proposition of Dr. Roberts, seconded by Dr. Stewart, Major Markowe was cordially thanked for his interesting address, and for his kindness in giving facilities for the holding of the meeting in Winchester and providing the members with tea.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the health departments of various local authorities.

FLINT C.C.: A.C.M.O.H., Dr. Catharine W. L. Harries.

HANTS C.C.: A.C.M.O.H., Dr. Joan Butterworth.

HUDDERSFIELD C.B.: A.M.O.H., Dr. Eileen M. D. Knox.

MIDDLESBROUGH C.B.: Deputy M.O.H., Dr. Charles L. Elder.

NEWPORT C.B.: Temp. M.O.H., Dr. H. J. Griffiths.

ROTHERHAM C.B.: A.S.M.O., Dr. R. C. Wofinden.

SALOP S.W. COMB. DIST.: M.O.H., Dr. J. Lockhead Gregory (M.O.H., Willenhall U.D.).

ST. HELENS C.B.: Temp. A.M.O.H., Dr. E. J. A. O'Reilly.

TOTTENHAM M.B.: Deputy M.O.H., Dr. B. Broadbent.

YORK C.B.: M.O., M. & C.W., Dr. Katharine C. Rogers.

The Board of Education has issued a circular (1571) on school meals, dealing with arrangements for the supply of food, food required for school dinners, cost, and management. In an appendix are specified the allowances of rationed foods for school canteens registered as catering establishments for public elementary schools, day special schools, nursery schools, secondary schools, and those technical schools serving midday dinners mainly for students under 18.

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Editorial

Health in War-time

To review from time to time the whole field of public health in his area has been the primary function of the Medical Officer of Health since the inception of public health departments. It is customary to crystallise the detailed and formidable record of statistics and operations contained in the Annual Report into an introductory personal statement. The importance of making this statement both comprehensive and illuminating cannot be over-emphasised. At the present time, when national reports are restricted, limited in their circulation, and apt to be long delayed, while at the same time ill-informed pronouncements of an alarmist or too optimistic character easily gain currency, it is all the more essential that the reviews of the Medical Officer of Health should be carefully weighed presentments and fully documented by reference to local observations. Unfortunately annual reports do not reach a large proportion of either the medical profession or the public. When, therefore, the Medical Officer of Health of a city so large as Glasgow, the kernel and much of the substance of industrial Scotland, is offered a public platform, he cannot conceivably make better use of it than to broadcast his conclusions as to the reaction of the health of the people in his area to the circumstances of the time. Sir Alexander Macgregor has made such effective use of the opportunity afforded by his Presidential Address to the Society of Medical Officers of Health as fully to justify the restoration in war-time of this method of celebrating entrance into high office. The address is printed in full at page 81.

While stressing the burden health departments have carried in passive defence and paying well deserved tribute to all ranks of public health workers in this field, Sir Alexander devotes the major part of his address to matters which are less ephemeral. What has been happening to the health of the people in this time of stress? What have we learned, and how are the lessons to be applied in the reconstruction after the war is over? In spite of food restrictions the Ministry of Food has, on the whole, done its work so well that a large sample of school-children in the winter of 1940-41 was found to be rather bigger and heavier than the average for 1939, and there was rather less rickets among young children in 1941 than in 1940, although a fractional increase in some of the poorer and less easily educable families was observed. The danger of infantile scurvy needs watching, but this may be dispelled by the proposed distribution of concentrated fruit juices instead of

tablets of vitamin C. People have learned to make use of milk, herrings, and fresh vegetables to an extent which could hardly have been expected from the results of pre-war propaganda, and porridge is regaining its old place in Scottish cuisine. Increased knowledge of food values and more wholesome habits of feeding should be a permanent gain in the home, and the extension of school meals and of works canteens may well be carried over to peace-time with benefit to the community. In Sir Alexander's view the Ministry of Food or its equivalent should remain in being after the war as an essential health service.

Another lesson we cannot afford to forget is that unemployment is one of the greatest factors in physical and mental deterioration; indeed, it would probably be the most important influence, if it were possible to assume that employment would always carry with it an adequate income. Sir Alexander believes that much of our freedom from expected ill-health, and most of the surprising absence of reported neuroses, are due to the full employment war has restored to us for the first time for twenty years. Here is a gigantic problem which no country has so far solved—or indeed can by itself completely solve—by other means than developing its war or other industries under Government control. One disease, tuberculosis, is tending to repeat its behaviour of twenty-five years ago. The incidence and mortality of respiratory tuberculosis in both males and females of working ages increased in Glasgow in 1940 by about 20 per cent. It is thought that it may be due to longer hours of work, physical overstrain, and ill-spent leisure. While the figures for 1941 so far have been much less alarming, the rise is a danger-signal which ought not to be ignored.

Problems of personal hygiene, both physical and mental, as revealed especially among school-children, are discussed by Sir Alexander. He rightly demurs to the placing of the burden of responsibility for their remedy entirely on the shoulders of health departments. The presence of nits or lice in the heads of 40 per cent. of school-children is a lamentable state of affairs, but the remedy for this should not need to absorb the time of a skilled and expensive staff whose contacts with the persons affected can, in the nature of things, be only occasional. Delinquency, also, is only to a minor extent a matter for the psychiatrist. Note will no doubt be taken of the valuable experiments, described by Sir Alexander, in dealing with these problems in Glasgow through officers whose basic training is in pedagogics and psychology.

Any survey of health services must touch on the future of hospitals, which has so recently been the subject of a Government statement. Sir Alexander agrees that a sound and orderly hospital policy requires regional planning and that the distinction between voluntary and municipal hospitals must go. He wisely points out, however, that the problems are many and complex and that no attempt should be made to solve them all at once. Empiricism as a policy in this matter ought to appeal at least to medical men and women, whose education and habits are more or less scientific.

It may be concluded, then, from Glasgow's experience that the acute infections have not been more rife during the war than might have been expected in the normal course of events, with the prominent exception of meningococcal meningitis, which has behaved exactly as our knowledge of its epidemiology led us to expect. The spread and severity of whooping-cough last winter may have been fostered to some extent by resort to communal shelters. In some respects the health of the people appears to have improved, but cleanliness has probably deteriorated; it is at all events unsatisfactory as measured by the incidence of pediculosis. Tuberculosis shows signs of a recrudescence like that which accompanied and followed the war of 1914-18. There has been a rise in mortality from premature birth, which presumably means an increase in the frequency of premature delivery. Increased resort to institutional confinement, which has been notable during the war, and other changes in hospital organisation indicate some of the directions which post-war reconstruction will probably take.

Control of Diphtheria

In far-off days the medical man was almost helpless in face of a diphtheria epidemic, as the tombstones testify which are occasionally met with in old graveyards and which record a pathetic sequence of deaths of whole families. Behring and Roux, in the 'nineties of the last century, gave us antitoxin, and as the years passed it became customary to jugulate epidemics instantly with this. There still remained several shortcomings or difficulties. First, in from one-third to one-half of the patients, the horse serum containing the antitoxin caused serum sickness with its distressing urticaria and arthralgia. Secondly, the antitoxin disappeared from the circulation within about three weeks and the child again became susceptible to infection. Thirdly, the healthy child might carry in the throat or nose "morphological K.L.B." This difficulty has been partly solved—but only partly. The bacteriologist discovered that, almost without exception, these bacilli were dangerous only if the guinea-pig test identified them as virulent. Holt and Wright* have helpfully described flaws in the usual methods and the precautions necessary. McLeod's identification of the three main types—*mitis*, mostly associated with a mild attack; *gravis*, mostly with severe attacks; and *intermedius* in certain localities also—has marked further advance. The ready growth overnight on a Hoyle tellurite blood plate may even tell that the type is culturally *gravis* and that the guinea-pig test is almost superfluous.

The first difficulty, that of serum disease, was somewhat lightened by the Gibson-Banzhaf type of concentration with ammonium sulphate. This removed much of the rash-causing protein and so led to a reduction in incidence to about 20 per cent. The latest advances we owe to Pope (1938) and to the American patented process of Parfentjev. The partly proteolysed serum contains antitoxin in a less impure form than the older preparations; since its introduction the incidence

* *J. Path. Bact.*, 1940, **51**, 287.

of serum disease has fallen to a low figure—in some reports to 4 per cent. or less. The doctor may therefore use modern antitoxin with but little fear of serum reaction.

The second difficulty—the early disappearance of antitoxin-conferred immunity—still remains, and presumably will do so until all parents have their children actively immunised. Many immunologists have been attracted by the project of combining the complete temporary protection given by serum with the permanent protection of active immunity. The difficulty revealed long ago by animal experiments is that active immunity does not readily develop in the presence of passive immunity. Hence at the end of about three weeks, when in the average subject the protection given by antitoxin has almost faded, the development of immunity is yet sluggish and does not give reasonable safety. The curve of immunity, actual or potential, is rising and cannot be hurried, but at the end of perhaps four weeks it can be heightened by a second injection of suitable prophylactic. It is in this field that eight workers in conjunction with the Emergency Public Health Service have made a most valuable contribution to our knowledge. Dr. Downie* and four others explored the phenomena following the injection of antitoxin as well as toxoid; Dr. Fulton† and four others applied the conclusions of the first group to outbreaks in schools. Downie and his colleagues had about 300 students at their disposal, mostly third-year medical students at Oxford, Cambridge, and Sheffield. For the many carefully analysed immunological points the interested reader will wish to consult the original paper; the broad conclusions are clear. In the course of immunity after active immunisation—*e.g.*, two doses of toxoid separated by a month—there is a gradual progress after the first injection and a sharp rise to a high level of immunity after the second. The giving of antitoxin at the same time as the first prophylactic dose reduces the immunising effect of the first dose. It also retards its sensitising effect, for the curve of immunity after the second dose is more gradual than normal and may reach a slightly lower peak. By the joint method of giving immediate protection with antitoxin and at the same time laying a sound foundation of active immunity with prophlactic, Downie obtained 90 per cent. of conversions from Schick-positive to negative within about eight weeks of the second dose of prophylactic. His students in the "active protection" group—*i.e.*, who received only prophylactic—developed high immunity: 96 per cent. became negative. We may note that this is below the figure of about 98 per cent. often obtained for groups aged 1 to 14. The group of older students must contain many who have resisted "natural immunisation" and also respond poorly to active immunisation. Dr. Fulton, in epidemics of diphtheria in 7 schools with 1,500 pupils on the roll, effectively applied the results got by the first team of workers. Antitoxin, 500 units, was administered to all, and 0·1 c.c. of alum-precipitated toxoid prophylactic (A.P.T.) was given at the same time; 0·3 c.c. of the A.P.T. was injected four weeks later. All those with positive swabs were isolated and were not readmitted for six weeks. The results were conspicuously satisfactory; no attack occurred in anyone who had certainly been through the double course. An unintentional control experiment was provided by some teachers and pupils who for various reasons escaped immunisation. Five cases of diphtheria occurred among them.

With regard to the carrier difficulty referred to earlier, if the use of sulphathiazole snuff proves on wider experience to have no disadvantages, and holds out as much promise as the results of Dr. A. M. Thomas‡ indicate, we shall possess another valuable weapon. Thomas gave 10 or 33 per cent. sulphathiazole snuff to nasal carriers of *Staph. aureus*. Among his patients were twenty nasal carriers of *C. diphtheriae*. After treatment for a week or two, twelve were immediately and finally cleared of diphtheria bacilli.

* *Brit. Med. J.*, 1941, **2**, 717.
† *Ibid.*, 1941, **2**, 759.

Quality of Milk: A Far-reaching Judgment

A judgment which may have a serious effect on future prosecutions for selling milk alleged to be diluted was delivered in the King's Bench Division on November 6th by the Lord Chief Justice (Lord Caldecote), Mr. Justice Humphreys, and Mr. Justice Lewis, in the case of Churcher *v.* Reeves. Samples taken of milk, which was being delivered in Hove, were found to contain only 7·99 per cent. of milk solids other than milk fat instead of the 8·5 per cent. required under the regulations of the Ministry of Agriculture. Evidence was given that according to one test there were just over 2 gallons of added water in a mixture of 86¼ gallons, and in another test a little over 4 gallons of added water. The defence was that the farmer had been able to obtain only 66 per cent. of his original pre-war quantity of dairy cake, which is the chief concentrated food for cows, although his herd was larger than before the war, and in consequence of this deprivation the quantity of milk was reduced and its quality deteriorated. The local bench had accepted this view and dismissed the information, coming to the conclusion that the milk was sold to the purchaser in the same condition as it was drawn from the cow.

The Hove Council, which had undertaken the prosecution, thereupon appealed, basing its case upon the fact that there was a gap of thirteen hours, from five in the afternoon until six on the following morning, during which the afternoon's milk was left in the dairy not constantly under observation, so that there was ample opportunity for any person to tamper with it. They relied on the case of Jenkins *v.* Williams, in which, although there was only a gap of two minutes during the delivery of the milk in the street, a previous Divisional Court (of which Mr. Justice Humphreys was also a member) had held that this constituted an interval during which presumably the water could be added.

The Lord Chief Justice, in saying that in his view the appeal should be dismissed, quoted the case of Hunt *v.* Richardson in 1916, in which it was held that the milk was in the condition in which it came from the cow, and that although an analysis had shown a deficiency, this was due to the manner in which the cows had been fed. His Lordship said that the onus

‡ *Brit. med. J.*, 1941, **2**, 687.

of determining matters of fact must be upon the magistrates, who had accepted the evidence that lack of dairy cake had produced deterioration in the milk. To require it to be shown also that there was no possibility of access by any evil-minded person who would dilute the milk seemed to him to lay down a standard of proof which went a good deal further than was necessary.

> ". . . if the magistrates hear evidence that there has been inadequate food and accept the evidence to that effect and also evidence to the effect that lack of dairy food leads to a deficiency in milk solids other than fat, I see no reason why, apart from any evidence at all as to non-access, they should not come to the conclusion that the milk was genuine milk."

Mr. Justice Humphreys, who agreed that the appeal should be dismissed, said that the onus was upon the respondent to disprove the allegation of the prosecution that the milk sold was not genuine milk, which presumption arose from the facts and conclusions stated on the analyst's certificate. It was the duty of courts of summary jurisdiction to decide the evidence as to facts. The defendant before the local justices must first prove that the milk had not been tampered with by himself or his employees, and that there had been no opportunity for anyone else to tamper with it. All such matters should be present to the minds of the justices. That had evidently been so in the present case, and the Court should not interfere with such a finding when it was shown that the local bench had applied their minds to the real question at issue. His lordship added a few observations on the case of Jenkins *v.* Williams. He said that if a defendant chose to base his defence upon the evidence of what was done to the milk or could have been done to it from the time it came from the cow, his evidence must show that throughout there was no opportunity for anyone else to interfere with it. That was the issue in Jenkins *v.* Williams, and there was no other issue, and that case could not be cited, in Mr. Justice Humphrey's opinion:—

> " as an authority for the proposition that where the defence is that there are natural causes which account for the apparent excess of water in the milk, nevertheless, and after that has been proved, there must in addition be given evidence excluding every possibility, however remote, that someone other than the defendant or his servants may have tampered with the milk."

He added that whether, in the light of the argument which he had heard in the present case, he would have arrived at the same conclusion in the case of Jenkins *v.* Williams was a matter of no interest to anyone, perhaps not even to himself. Mr. Justice Lewis was of the same opinion; he believed that there was some evidence upon which the magistrates could find as they did. The appeal, therefore, was dismissed with costs.

Thus in fact the defence of deficiency in feeding stuffs held good, and the question of tampering with the milk was set aside. But surely there might be other cases in which both factors operated. A farmer might have a milk deficient because of lack of feeding stuffs and also improperly diluted. If a deficiency in feeding stuffs is universal and causes a deterioration in milk, it will apparently be sufficient for any dairyman to urge that as a defence, and the prosecution must fail, even though it were shown that there was ample opportunity for someone to tamper with the milk. It is well that medical officers of health and public analysts should be aware of the defence set up successfully in this case. One thing that should immediately be done, if it has not been done already, is to establish whether a deficiency in certain feeding stuffs has a bearing on the quantity and quality of the milk, and, if so, exactly what is the relation between lack of feeding stuffs and milk deterioration. It appears that the cryoscopic test was not used by the analyst in testing the samples in question. This test is regarded by analysts and has been accepted in courts of summary jurisdiction as proving whether milk is or is not genuine, whereas deficiency in solids not fat is not determinative. This is an argument which it would have been much more interesting to carry to a higher court. Owing to this judgment matters are left in an extremely unsatisfactory position from the point of view of public health.

Typhus

The Ministry of Health, because of the risk that typhus may be introduced into large aggregations of population, have asked a number of the principal towns to organise teams for dealing with an outbreak. The team* is to consist of one medical officer, four nurses, an ambulance driver, and an ambulance attendant. It is suggested that one or more sanitary inspectors and trained disinfectors should also be included, and that the team should be duplicated. Members of the team should be provided with protective clothing and be offered preventive inoculation.

Typhus is compulsorily notifiable, and the medical officer of health must immediately report every case to the Ministry of Health by telegram or telephone. Medical officers of health can obtain the services of one of the medical staff of the Ministry of Health (or, in London, of the L.C.C.) for help in diagnosis. A mobile team from the American Red Cross-Harvard Field Hospital Unit will be available for assistance in diagnosis and control in any part of England and Wales. The Ministry urges Medical Officers of Health to consider at once the provision of hospital accommodation, and state that in practice it will probably be advisable to make arrangements with one of the larger isolation hospitals. The patient should be removed to hospital in a vehicle easy to free from lice and be enveloped in a large sheet. The greatest care should be taken to protect the staff admitting the patient, who should be taken to a special bathroom, stripped, de-loused, and clad in hospital garments by protected attendants before being admitted to the special ward. (The memorandum gives a description and illustrations of the protective clothing.)

Louse-borne typhus fever is an acute infectious disease lasting from twelve to sixteen days. Toxaemia and nervous symptoms are pronounced.† The characteristic maculo-papular rash appears on the fourth or fifth day, *never involves the face*, and may become haemorrhagic. It appears as small red papules in the axillae, on the abdomen, chest, and back, and later spreads to the extremities. For a day or two they fade on pressure, but fail to do so after that and become dull red. The papules closely resemble the rash of typhoid, but do not come out in fresh crops. The onset of the disease is sudden and common initial symptoms are rigors, headache, pains in limb and back, vomiting, and epistaxis. According to Dr. M. D. Mackenzie‡ two constant symptoms at the onset are headache (frontal or occipital) and bronchitis. Delirium begins early, and the patient gradually slips into the " typhoid state," which is usually fully established between the third and fifth day. Terrifying delusions are common, and transient delusions may recur during convalescence.

It is thought that the excreta, as well as the blood, are infective. By about the end of the first week the patient's serum will agglutinate the so-called Proteus X strains (Weil-Felix reaction). Agglutination of Proteus OX 19 seems to be specific for louse-borne (epidemic) typhus and flea-borne (endemic or murine) typhus. The OX 19 suspension issued by the Oxford Standards Laboratory should be used: a strong reaction (observed by naked eye) in a dilution of 1 in 80 or 1 in 100 may be looked upon as positive. At a recent discussion at the Royal Society of Medicine Dr. G. W. M. Findlay said that the rickettsia virus could be isolated by inoculating the patient's blood into guinea-pigs and rats. It was possible to obtain rickettsiae in this way after the first week and not only during it. As to treatment, Findlay pointed out that the sulphonamide drugs had no effect on human typhus, and immune serum was, in the opinion of most observers, useless. More promising results had been obtained with hyperimmune serum. Findlay was not optimistic about the prophylactic use of vaccines.

* Memorandum on Louse-Borne Typhus Fever. Ministry of Health Memo. 252/Med.

† *Brit. med. J.*, 1941, **2**, 886.

‡ *Brit. med. J.*, 1941, **2**, 886.

The Ministry of Food propose to institute a system of priority by which it is hoped to ensure that a fair proportion of the eggs available shall go to those persons who need them most. In devising this scheme the Ministry have been guided by the advice of the Food Rationing (Special Diets) Advisory Committee of the Medical Research Council. This Committee have advised that priority should be granted to children under 6 years of age, to expectant mothers, to nursing mothers, and to certain classes of invalids. The Committee recognise that, while the food value of an egg is small, the psychological effect of including an egg in the diet of a patient whose treatment confines him to a limited number of monotonous dishes far outweighs its nutritive value. (The " Schedule of Illnesses Qualifying for Priority Claims on Eggs," is marked " Confidential. Not to be divulged to the public.")

A pamphlet giving particulars of films dealing with the many aspects of physical recreation and health education, which it is hoped will prove a helpful guide to those arranging film shows in clubs, colleges, youth centres, etc., has been published by the Central Council of Recreative Physical Training, 58, Victoria Street, London, S.W.1, price 9d., post free.

OBITUARY

ELWIN HARRAL THOMAS NASH, M.R.C.P., D.P.H.

We much regret to record the death on November 28th of Dr. Elwin Nash, formerly President of the Society of Medical Officers of Health and Medical Officer of Health for the Borough of Heston and Isleworth.

Elwin Harral Thomas Nash was educated at Manchester and St. Thomas's Hospital, qualifying M.R.C.S., L.R.C.P., in 1896. He took the M.R.C.P. in 1936. He won the Solly medal and prize at St. Thomas's Hospital. He was at one time Senior Assistant Medical Officer of Health for Derby, and Medical Officer of Health and School Medical Officer for Wimbledon. Nash's vigorous personality found expression in many public activities. He was, for example, President of the Medical Officers of Schools Association, a member of the Joint Commission on School Lighting, and a member of the International Medical Society, New York. He was an active supporter of the Society of Medical Officers of Health, and in addition to being its President he was President of the Home Counties Branch and of the Maternity and Child Welfare Group. We are indebted to a colleague for the following appreciation:—

In the passing of Elwin Nash, the public health service has lost a man of outstanding gifts and personality. In his young days at St. Thomas's he achieved fame in the athletic world as a swimmer, a cricketer and a tennis player, and when he was in practice at Accrington he played regularly for the town in Lancashire League cricket. No one who had the privilege of knowing him could doubt his enthusiasm for preventive medicine. Not many would have decided, as he did, to abandon a good private practice and take the risk of achievement in local government service. When I first met him in 1908 he had just completed a term of office as resident medical officer at the Derby Isolation Hospital, where I succeeded him. He had been appointed to the then new office of school medical officer in the same town, and as a colleague I was admitted to the friendship of Mrs. Nash and the four small children. The first part of his service was under the late W. J. Howarth, who subsequently became medical officer of health for the City of London: Howarth was a man of decided views. Nash's next chief was the late A. E. Brindley, one of the gentlest and most beloved men of his day. After eighteen months as school medical officer at Derby Nash was appointed medical officer of health for Wimbledon; he stayed there until 1915, when he was appointed medical superintendent to the newly opened Preston Colony for tuberculous ex-soldiers. Finding himself unable to persuade the Committee of Management to adopt his views, he gave up this post and for a time worked in the school medical department of the L.C.C. He was then appointed medical officer of health to the rapidly expanding Borough of Heston and Isleworth, where his extensive experience in organisation, especially in school medical and infant welfare work, found full scope. In the later years of his work there he threw himself with characteristic ardour into the preparation of *Dr. Nash's Cookery Book*. This involved a great deal of practical

work in buying and preparing various articles of diet, and in this he was helped by generous aid from the Carnegie Trust Fund. Of Dr. Nash's activities in the Society of Medical Officers of Health there is no need to speak at length to readers of PUBLIC HEALTH. His interest in practical matters associated with hygiene in schools was shown by his active membership of the Joint Commission on School Lighting and of a committee which undertook the study of the question of the ideal class-room.

Nash was first and foremost a medical practitioner, and all his views and actions were strongly tinctured by his love for his chosen profession. He held his views strongly and expressed them forcibly. He was not easy to persuade, but gave and took hard knocks with great good humour. No one could doubt his energy, enthusiasm, and sincerity, and those qualities, allied to a considerable knowledge and experience, brought to him not only success but happiness in his work.

WILLIAM JAMES PENFOLD, M.B., C.M., B.HY., D.P.H.

The death of Dr. W. J. Penfold, which occurred at Melbourne on October 27th, will be deeply regretted by his many friends and co-workers in this country.

William James Penfold studied medicine in Edinburgh, Durham, Berlin, and Vienna, and also at the London Hospital. In 1896 he qualified M.B., C.M., Edinburgh, and he took the B.Hy., D.P.H. of Durham in 1908 and the M.R.C.S. and L.R.C.P. in 1909. From 1908 to 1916 he was at the Lister Institute, first as B.M.A. scholar and later as a member of the bacteriological staff. He had previously spent twelve years in general medical practice, but as soon as he made the change he showed himself an original thinker and acute observer in bacteriological work. He made many significant contributions to the study of variation and mutation in bacteria, particularly in connection with the fermentative properties of *B. typhosum* and the coliform bacteria of the intestine. With the help of Harden and others he greatly clarified the laws governing the enzymic mechanisms possessed by the variant forms. Together with the late Dr. E. C. Hort he made contributions to the study of salvarsan fever, salt fever, and experimental fever following the introduction of bacterial pyrogens. During the last war, at the King George Hospital, he collaborated with Professor (now Sir) John Ledingham, in investigations into typhoid, paratyphoid, and dysentery cases from the Dardanelles, and during the epidemic in Salisbury he carried out with Dr. Major Greenwood an inquiry into the possibility of preventive inoculation against meningococcal infection.

In 1916 Dr. Penfold took over the organisation and control of what are now the Commonwealth Serum Laboratories in Melbourne, whose success can be largely attributed to his untiring efforts. Necessarily this work broke the continuity of his researches, but he was able to resume them again when, in 1927, he became Director of the Baker and Shaw Medical Research Institute attached to the Alfred Hospital. With the help of many colleagues and pupils, including his son, H. B. Penfold, he contributed papers on a wide variety of subjects to the *Medical Journal of Australia*. In 1935 he gave the Bancroft Memorial Lecture on medical research in Australia. On his retirement in 1938 he received many tributes for his work in the Commonwealth since 1916.

ALGERNON EDWARD LUKE WEAR, C.M.G., M.D., D.P.H.

Dr. A. E. L. Wear, a past president of the Yorkshire Branch of the Society of Medical Officers of Health and for over thirty years chief medical officer to the Leeds Education Committee, died at his home in Harrogate on November 30th.

Algernon Edward Luke Wear was born at Newcastle-upon-Tyne in 1866. He received his education at Newcastle Royal Grammar School, Durham University, and University College, London. He qualified M.B., B.S., in 1891, took the M.D. of Durham in 1894, and the D.P.H. in 1912. In 1910 he was appointed school medical officer for the city of Leeds. Among other appointments which he held at various times were those of honorary medical officer to the Leeds Maternity Hospital and Public Dispensary, resident medical officer to the Public Dispensary and Ida Hospital, Horsforth, and resident obstetrics officer to the General Infirmary, Leeds. On the formation of the Territorial Force in 1908, Dr. Wear became Lieut.-Colonel, 1st West Riding R.A.M.C. He went to France as commanding officer of No. 7 Casualty Clearing Station, and was mentioned in dispatches. In 1915 he was awarded the C.M.G. and promoted to the rank of Colonel A.M.S. He was the author of *A.B.C. of Child Health*.

JAMES DAVIDSON MACKAY, M.B., CH.B., D.P.H.

We regret to record that Dr. J. D. Mackay died recently at Aberdeen, as the result of injuries received while carrying out duties as A.R.P. medical officer in the north of England.

James Davidson Mackay qualified M.B., Ch.B., Aberdeen, in 1908, and in 1932 took the D.P.H. of the same university. After serving as house-surgeon to the Aberdeen Royal Infirmary, he was for some time assistant medical officer of the city's health department. Later he became deputy M.O.H. to the Kincardine County Council, and from there was appointed M.O.H. for the Borough and Rural District of Bridport, the Borough of Lyme Regis, and the Rural District of Beaminster. He was A.R.P. medical officer of Rotherham Borough.

FRED HUGHES MORISON, M.D., D.P.H.

We regret to record the recent death at Dalston of Dr. F. H. Morison, who was the first county medical officer appointed by the Cumberland County Council.

Fred Hughes Morison qualified M.B., C.M. in 1887, took the D.P.H., R.C.S.I. in 1891, and proceeded to the M.D. of Edinburgh University in 1898. He held the appointment of county medical officer, Cumberland County Council, from 1908 until 1932, when he retired. He was also certifying officer for Cumberland under the Mental Deficiency Acts. Dr. Morison was a member of a well-known medical family in the north of England. He was also a keen golfer and a former captain of the Carlisle and Silloth Club.

THE PUBLIC HEALTH SERVICES IN THE WAR*

By SIR ALEXANDER MACGREGOR, O.B.E., M.D., LL.D., F.R.F.P.S.GLAS., J.P.,

Medical Officer of Health, Glasgow

I am deeply sensible of the high honour which the Society of Medical Officers of Health has conferred on me by appointing me its President. In assuming this high office, I must take this, the first, opportunity of thanking my predecessor, Dr. F. T. H. Wood, for undertaking a second year of office, because I know that he carried on during a very difficult period. I am sure the members of the Society are most grateful to him for this service, as well as for the unrivalled knowledge of public health affairs which he has long placed, and will, I hope, continue to place at their disposal.

I am the third holder of this office to hail from Scotland. Dr. A. K. Chalmers held it in 1913, when I was a junior member of his staff. Since his day there has been almost a revolution in public health thought and practice in both our countries, although there are some differences in our respective powers and in the manner of conducting our affairs. In England and Wales you have your great Public Health Act of 1936, while we in Scotland are still waiting for a similar Act, delayed owing to the war. Perhaps we will improve upon it, on the principle of the game of leap-frog. Now that the whole country is on the eve of further advances in public health, it is gratifying to know that the chiefs of our respective services, Sir Wilson Jameson and Dr. Andrew Davidson, have arranged to co-operate with each other in the consideration of our common problems and to encourage a better two-way traffic of knowledge and ideas than has obtained in the past.

The public health service occupies a highly responsible place in the war effort; it is passing through a period of great activity and is doing its best to meet all the demands made upon it. New functions have been acquired, and many difficult problems have arisen involving changes in method and outlook, so that the service has largely outgrown its former character and scope. At the same time it is gaining a wealth of new experience which will be of the greatest value in the future; indeed, it may be said that the positive health policy which was slowly evolving in pre-war times has begun to assume a much clearer outline. The functions of public health departments in these days group themselves under three main heads. First, there are the new special emergency services working in close association with or grafted on to public health administration. Secondly, there are the normal health activities adapted and expanded to meet conditions arising out of the war—the pre-war problems of health in a new setting. Thirdly, post-war problems are pressing for attention, on which our experience of what is happening now will have an important bearing, because it seems clear that the foundations of future advances in the sphere of public health and social medicine are even now being laid. No one regrets more than I do the curtailment of our opportunities for discussion of our joint affairs, as a result of which I am somewhat out of touch with public health developments in other parts of the country. I shall therefore ask your indulgence if I draw largely on local experience in the following remarks on one or two topics which I have chosen from the three heads I have mentioned.

*Presidential Address to the Society of Medical Officers of Health, November 21st, 1941.

Air Raid Precautions

Medical officers of health and their staffs are deeply engrossed in the immediate concerns of the war. For the past two years local authorities have carried out big and exacting Government programmes for the health and safety of those on the home front. Many new and unaccustomed duties, both executive and advisory, have been undertaken by public health departments. Much of this work is of a purely emergency kind, such as the organisation of the first-aid and casualty service and co-operation with the Government in many other activities incidental to the war effort—for instance, the emergency hospital scheme, recruitment of nurses, the evacuation arrangements (which have thrown special responsibilities on receiving areas), health and sanitation in shelters and rest centres, salvage of foodstuffs, and sanitary measures following air raids. A quite extraordinary amount of time and energy has been expended on these duties by public health officers throughout the country, not without many anxious and difficult moments. I have specially mentioned these aspects of civil defence, because I am sure the Society will wish to pay a warm tribute to all branches of our public health and sanitary staffs for the effective manner in which they have served the community, as well as for the hard work cheerfully undertaken in the conduct of these special war services in addition to their ordinary duties, very often in defiance of all risks and dangers. It has not been easy for them to preserve a due balance between civil defence requirements and those of public health, but they realise, I am sure, that morale in time of war is much heightened by the confidence which the public reposes in both these aspects of their work. Health visitors in particular, from the closeness of their contact with the homes and daily lives of the people, are assisting in no small degree to sustain the spirit of the nation. It is from them that medical officers of health derive much of their insight into the welfare of families, particularly the condition of the children.

The Society will also wish to recognise the indebtedness of the casualty service to medical practitioners throughout the country, who have been eager to take a place in them whenever occasion required. Most of us have had experience of the casualty service in action, and can bear witness to the high courage and resourcefulness under fire shown by the large army of volunteers who have enrolled themselves in this service; their keenness to serve when called upon has been beyond all expectation.

I sometimes wonder whether a way could be found to attract some at least of these volunteers into social work after the war. Many of them would give as valuable service to the community in peace as they are now giving in time of war.

Health and the War

I think it is correct to say that the health of the people has been better than was in fact expected, in spite of the new factors which the war has introduced, such as new dispositions of population, overcrowding, the black-out, hard work, and other influences. It is true that certain wide movements of sickness and mortality have taken place concurrently with the war, though not attributable to it. For instance, a wave of diphtheria has been passing over various parts of the country and its force is not yet spent; an epidemic of whooping-cough of quite unusual magnitude occurred in 1940-41 with severe consequences to infants and young children; outbreaks of paratyphoid fever have become more frequent. During the early months of 1940, and again in 1941, prolonged spells of cold weather increased the incidence and mortality due to pneumonia and bronchitis among the elderly and the very young. Professor R. M. F. Picken (1941), in his striking exposition of the effect of a hard winter in London, relates the kind of experience to which we in Scotland are more accustomed on account of the greater vagaries of our northern climate. It would, I think, be in accord with public health experience of the variations of disease from year to year to conclude that these major trends of sickness had little, if anything, to do with conditions arising out of the war.

On the other hand, present conditions may be regarded as contributing to an increased incidence of tuberculosis, a restless behaviour of cerebrospinal fever, and a "considerable rise in the number of deaths due to premature birth" as recently recorded in Scottish Vital Statistics, which will be referred to later. Tuberculosis of the lungs and, to a much less extent, non-pulmonary tuberculosis have been rising in Glasgow during the past two years, as is also the case elsewhere. On looking closely at the position in Glasgow, we find that notifications of pulmonary tuberculosis during 1940 increased by about 20 per cent. over the 1939 figure, while the death rate rose very much to the same extent. Comparing 1941 with 1940, it is estimated, on the basis of cases notified during the first ten months, that the incidence for this year will be only 8 per cent. in excess of that for 1940, while the death rate will not be greater. Thus the sharp initial rise that took place in 1940 has been followed by a definite slowing down of the rate of increase of pulmonary tuberculosis. This rise relates almost entirely to males between 15 and 45 and to females between 15 and 35 years of age. These are the working ages and the ages when tuberculosis most often declares itself. There are probably one or two reasons for this increase, but the main reason is to be found in the entry of large numbers of young people into employment; the probability is that an infection that would have been resisted in normal times gains the upper hand. Laidlaw and Macfarlane (1941) attribute this rise to a combination of long hours, overtime, strain, and ill-spent leisure.

I may next refer to some disorders in which environmental factors act as predisposing causes. Unemployment is generally recognised to be a fertile source of subnormal health or of actual mental or bodily ill-health. Where social conditions are such that work and wages are plentiful, a reduced incidence of those ill-defined mental and physical disorders that are apt to be engendered by an aimless life may confidently be expected. The evidence available supports this view. If to these social advantages be added a high purpose in life, the general effect is such as to afford an explanation of the fact much commented upon—namely, the surprisingly small incidence of neuroses in spite of conditions that might have been expected to produce them in considerable volume. Present-day conditions have, in fact, greatly reduced the prevalence of these ailments, especially among the male population. What this experience means is that progress towards social security is progress towards better health.

Food and the War

The most outstanding of the health measures that have come into operation are those dealing with the food supply. The Ministry of Food, in spite of great difficulties, has shown the utmost wisdom in its determination to bring within reach of all the staple articles of diet and to make available to those who need it most the right kind of food—as, for instance, milk and the protective foods for young children, and for nursing and expectant mothers. Canteens for industrial workers are a long-overdue health measure and should become permanent; they have an important bearing on the relation between housing and industry. Whatever view may ultimately be taken of communal feeding, I hope that the industrial canteen and the school meal have come to stay. These and other practical provisions, to which should be added the stimulus that has been given to the spread of knowledge of food values and to the teaching of cookery, constitute a group of measures applied at the very source of national health and well-being. As the work that the Ministry of Food is now doing in these ways, which may be described as anticipatory and preventive, is of such immense value to the community, I fervently hope that when peace returns it will be found possible to retain in being the Ministry or its equivalent as an essential health service, and so make permanent what would be in effect the greatest because the most beneficial of all the health services.

Family catering is a responsible business in these days, and it is not easy to apportion a proper share of the available foods to each member of the family. Restrictions due to rationing and price are perhaps most felt in industrial areas, while families with young children have had to make some difficult adjustments. Those of us who are watching closely the effect of food control will have observed a number of changes for the better in food habits. In my experience there is no doubt that the manner in which the

Ministry of Food is handling the food situation is making a deep impression on the attitude of the people to the common articles of diet. The child-welfare service is called upon to advise mothers on the feeding of children and to keep an eye upon household dietaries. In carrying out these duties, the health visitors, who are in a position to report on the food habits of the average householder, have noted the following broad tendencies. The National Milk Scheme has created a definite "milk psychology"; more milk is consumed than ever before, and mothers agree that this is one of the best services that has been rendered to their children. They view with great anxiety the recent cut in supplies, which reduces the amount of non-priority milk available. Porridge has returned to favour in a large way. The nutritious herring, which was for some reason difficult to popularise, is in great demand. A new impetus has been given to the consumption of vegetables and fruit, which appear to have become increasingly popular for their own sake.

It is stated that since the last war the country had increased its consumption of fruit by 90 per cent., of vegetables by 60 per cent., and of milk by 50 per cent. Thus, it may be said that the exigencies of war and the food policy of the Government have accelerated the progress that had been recorded in the consumption of essential foodstuffs. These are solid advances in the national dietary; they represent definite progress towards a more wholesome food régime, a progress that we may hope will never be checked or reversed, because we know what the improved feeding of the pre-war years has already done for the health of the people. We now see going on a great experiment in social medicine, conducted though it is in the hard school of war, leading to the formation of more wholesome feeding habits and to a knowledge of food values aided by persistent propaganda, combined with a national policy which is making the most essential of the foodstuffs available to all in the homes of the people, in canteens, and in schools.

Health in the Schools

Observations on the physical condition of school children are reassuring. Education was at first completely dislocated by the big exodus of children from the cities to the country. When a large percentage of the evacuees subsequently returned school attendance was gradually restored, but under a greatly modified régime. In these circumstances, while general supervision of school children was maintained it was not possible to continue the routine measurements of height and weight—at any rate to an extent that would make them strictly comparable with those of former years. I may, however, mention certain measurements taken in the Glasgow schools between September 1940 and April 1941 of some 6-7,000 boys and the same number of girls at the ages of 5 and 13. All the measurements were an improvement upon those for 1939, particularly in the case of school entrants. Although evacuation and interference with school attendance disturbed the representative nature of these groups, the results may be accepted as implying that school children have lost none of the improved physical condition that has been so marked a feature in recent years.

One or two influences on school children caused by the emergency seem well worth mentioning. First, it was found that absenteeism from school meant absenteeism also from the clinics, so that defects that would normally have been noticed and rectified went undetected and untreated even though a follow-up system was set up. This experience showed very clearly how much the school medical service is dependent for its success on the care and vigilance of the teachers. Secondly, factors that conduce to misdirected energy and juvenile delinquency have been intensified, leading to an increased need for child guidance among other measures advocated to counteract this tendency. Thirdly, it was discovered that more children had verminous infestation of the head than was previously suspected, and that with the aid of a comb and magnifying glass the presence of nits or lice or both could be detected in at least 40 per cent. of school children; in some schools the figure was still higher. This is much the same figure as Kenneth Mellanby (1941) found in his special inquiry in England. Vermin on body clothing—a worse form of infestation that used to be very common—is now relatively infrequent, but the head louse has obtained a fresh lease of life protected by the new feminine styles of hair, among which it can live and multiply as an unnoticed or accepted tenant. When this information was passed on to parents it was received with varied emotions—astonishment, disbelief, resentment, indifference. This discovery is a forcible reminder that standards of cleanliness are still too low. Conditions such as verminous infestation and scabies need not and should not spread to the extent they do. This is surely a matter for parents themselves to deal with, and it is quite wrong that responsibility for low standards of cleanliness should be laid on public health departments.

This recent experience strengthens the view that health and welfare in schools could be further improved by making them a more clearly defined branch of education. In this opinion I may say that the Director of Education in Glasgow, Mr. R. M. Allardyce, and myself are agreed, while the teachers, whose interest has now been fully awakened by social events and by the turmoil of evacuation, are eager to co-operate and to help forward a policy in which they would be active partners not only in health education but also in the care and welfare of their charges. Towards the close of last year the Education Committee in Glasgow decided to try out an important experiment in six of the bigger primary schools by arranging for the senior woman assistant to give her whole time to personal hygiene, with the help of a lay assistant, the duties to include the welfare work of the schools (*i.e.*, clothing, milk, meals, and cleanliness). This experiment has been an unqualified success. It was natural that at the outset of the scheme cleanliness and freedom from vermin should be the first objective, and these teachers, along with their lay helpers, devoted their attention specially

to this problem, interviewing parents, inspecting the children, and enlisting their interest in correct habits and behaviour as only teachers can. Infested heads and dirty clothing were dealt with on the spot. As a result of their work during the first three or four months they were able to report an outstanding improvement in the percentage of children who could be classed as "clean and well cared for," the term "clean" meaning complete freedom from any sign of nits or vermin in the head. In the case of boys, the percentage so classified rose from 55 per cent. to about 80 per cent.; in the case of girls, from 30 per cent. to 65 per cent., a very high standard being adopted. More particularly the incidence of infestation fell as follows: (*a*) children with verminous heads, from 5 to 2 per cent. in the case of boys, and from 14 to 4 per cent. in the case of girls; (*b*) children with nits only in the hair, from 30 to 12 per cent. in the case of boys, and from 50 to 25 per cent. in the case of girls. It is not, of course, intended that this should be the sole function of those taking part in the scheme. Besides giving practical instruction in personal hygiene and assisting actively in its practice, they keep a watchful eye on the general health of the scholars, co-operating with the other teachers and with the school doctors and nurses. They are also responsible for selecting and recommending pupils for free meals and for free boots and clothing. Apart from this experiment, a special short trial course of practical instruction with demonstrations was given to some sixty senior women assistants, so as to acquaint them with the kind of health problems they would be likely to encounter in their work.

A further instance of this teacher-pupil relationship is seen in the problem of child guidance. Much consideration is being given throughout the country to the best methods of administering and staffing this valuable and growing service. In some quarters it is considered that the supervision of children should be carried out at a clinic staffed by medical specialists and specially trained social workers. As this is a controversial topic it may be of interest if I mention the basis of the scheme as operated in Glasgow. Child guidance is regarded as an integral part of the education system, the key workers in it being trained teacher psychologists who also carry out the domiciliary inquiries and home supervision. The medical and psychiatric side is under the control of the Education Health Service, and at each stage of development there is close co-operation and consultation between the education and the health administrations. The aim is to preserve an unbroken link between the school, the child-guidance clinic, and the residential home for more difficult cases, treatment being in the hands of teacher psychologists in co-operation with psychiatrists. This scheme was inaugurated after careful consideration, and it was regarded as fundamental that the staff conducting it should possess a background of teaching experience as well as a training in psychology. Of course, everything depends on careful choice of personnel. From the results that are being obtained I am fully convinced that these arrangements are soundly conceived and are working admirably in practice.

I have dwelt upon these developments because we in Glasgow are quite convinced that we are proceeding here on the right lines. Health education, physical fitness, welfare, care of health, child guidance—the more these measures evolve from within the schools themselves the more successful will be the results. I notice that the Board of Education and the Scottish Education Department are engaged in the preparation of plans to reorganise education after the war. Among these plans I should like to see a definite organisation for the promotion of health, physique, and welfare, at any rate within each of the bigger city schools. I remember hearing Sir William McKechnie, formerly head of the Scottish Education Department, coin a Greek word that meant "teacher, physician, and mentor." I am sure that teachers are eager to play all three parts.

Maternity and Child Welfare

The demand on indoor accommodation for confinement, which was rapidly increasing before the war, has been intensified and is now very difficult to meet. Fear of raids, the black-out, and a shortage of midwives have contributed to the pressure, but I am convinced that women will increasingly prefer to be confined in an institution rather than at home. This tendency is one to be encouraged and provided for, and steps should be taken to include further accommodation for maternity as part of the new hospital policy. As regards the maternity service, the numbers attending the ante-natal clinics have tended to increase rather than to diminish. It may be inferred that what women most desire is ante-natal care associated with indoor provision for the confinement.

Infant life suffered from the two cold spells that occurred in the early months of 1940 and 1941 and from the whooping-cough epidemic in 1940-41; deaths due to pneumonia, bronchitis, and convulsions rose in consequence. This was the general experience according to the statistical returns recently issued for Scotland.* In this publication it is stated that there was a considerable rise in the number of deaths due to premature birth, the increase being from 809 in the first six months of 1940 to 900 during the same period of this year. Dr. Nora I. Wattie (1941) points out that as between the same two periods in Glasgow infant deaths due to premature birth and other congenital causes underwent an increase equivalent to 17 per thousand births. It is probable that most of this rise is to be attributed to psychological causes during pregnancy, such as anxiety or actual shock. As regards other factors, the whooping-cough epidemic caused a sharp rise in infant mortality; the height of this epidemic coincided with a period of air raids in the early months of the year, and there is evidence that communal shelters played some part in its spread and in determining the onset of pneumonia.

Scurvy and the grosser forms of rickets are diseases of the past, but we must be on the watch for their return. Only a handful of cases diagnosed as scurvy were reported to me last year. The child-welfare staff has an uneasy feeling that mothers may not be getting enongh vitamin C for their infants. Accordingly the welfare centres are accustomed to make large issues of vitamin C tablets, though no one likes this kind of test-tube feeding. With regard to rickets, the impressions of the child-welfare staff varied as to its incidence. A detailed survey has therefore been made of the records of over 20,000 children under 2 years of age visited by the health visitors during the first three months of 1939 and 1941. This survey shows (*a*) that the incidence of rickets for the city as a whole was actually smaller during the latter period, *i.e.*, under war-time conditions; (*b*) that there was a fractional increase of mild rickets in certain of the poorer localities. These cases are occurring among families whose standards are low and who learn little or nothing by experience. Cod-liver oil is widely distributed, though not all mothers to whom it is issued actually give it to their children. It may be regarded as a happy circumstance that rickets has been so far kept in check.

Hospitals

The question of hospital provision will emerge as an immediate post-war problem. The Government has recently declared its policy, the object of which is to ensure that "appropriate treatment shall be readily available to every person in need of it." To satisfy this requirement we may presume that much of the new emergency hospital provision will be incorporated in the public health service of the country. With these additions the hospital system will be able in large measure to meet the present unsatisfied demand for more and better treatment facilities. It will be the duty of the major local authorities to secure these advantages for the sick, and for this purpose to co-operate with the voluntary hospitals. At the same time, planning will be necessary in order to ensure that those who require special kinds of treatment will receive it. In practice this means the "region" as the unit area on which to base a sound and orderly hospital policy.

What should be the intention of a hospital service? The report of the Committee on the Scottish Health Services says that "an adequate hospital service is essential for the public health." This dictum implies that a hospital system should take under its wing all forms and stages of sickness and invalidity, providing for them in ways best suited to their needs and without undue delay. This comprehensive definition comprises a number of inter-related problems, among them provision not only for urgent cases, the acute sick, and the illnesses of short duration, but also for the more chronic types of sickness—the latter form a large and important group of patients, who require, it may be, long-continued periods of skilled treatment —greater provision of hospitals of the sanatorium type for more patients than are now treated in this way; provision for the treatment of patients who cannot be nursed at home or who can best be treated in hospital; provision for observation and diagnosis, strongly advocated by medical practitioners; adaptation of the hospital system to the rise and fall of disease and to changing conceptions of treatment. If hospitals are to carry out these curative and preventive functions it will be necessary to end the distinction between voluntary and municipal hospitals whereby treatment in the former is free and charged for in the latter. In my opinion a really effective preventive hospital service cannot be based on a system of payment for services rendered, as regards, at any rate, the great majority of the population.

A hospital system which has these purposes in view and sets out to serve the community in the complete sense of the Government's pronouncement is an integral part of public health. I take it that this is the meaning of the pronouncement, and that there is no intention of regarding the hospital service as a separate administrative entity. Detailed suggestions for a practical scheme cannot, of course, be made at this stage and must await investigations of a technical nature. The problems likely to arise are manifold and complex, and no attempt should be made to solve them all at once; many of them can be solved only in the light of experience. A hospital system cannot follow rigid lines or preconceived ideas; indeed, what is most to be feared is injury to its delicate structure by excessive organising zeal. The first considerations will be (*a*) to relieve many of the existing hospitals from the high pressure under which they work, (*b*) to meet, as far as possible, such needs as are known to exist, and (*c*) to make suitable provision for the more highly specialised forms of treatment.

Conclusion

The war has accelerated the pace of progress of the social and health services of the country. Two big environmental factors of first importance have come into play—attention to nutrition, and the cessation of chronic unemployment. These are the soundest foundations on which to build up the health of the nation. I have said nothing about housing, because everyone knows that housing progress will be vigorously renewed as soon as possible. The provision of a large number of hospital beds for casualties has prepared the way for a progressive hospital policy. In other directions, notably as regards maternity and child welfare and the health of school children, pre-war standards are not good enough. The war has, in fact, as is apparent on all sides, produced a determination to improve on the past. Promising developments are to hand, but the programme is formidable; how much of it can be put into operation after the war, no one can say. But we can certainly look forward to a policy that will have positive health as its aim.

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SPREAD OF STREPTOCOCCAL INFECTIONS IN CUBICLE WARDS

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It has long been the practice in fever hospitals for the same staff to nurse different diseases in adjacent cubicles of an isolation block, and experience has shown that spread of frank infection from one cubicle to another is a very rare event if reasonable precaution is taken. For example, two cruciform cubicle blocks were opened at the end of 1937 at the Bristol City Hospital, Ham Green. These contained thirty and twenty-eight beds respectively—ten double and ten single cubicles in one, and nine double and ten single cubicles in the other. Out of 2,438 patients who passed through them only one patient in each block contracted a second infection—namely, chicken-pox. At times many combinations of infectious diseases were being treated in adjacent cubicles, and the cross-infection rate was only 0·08 per cent. During the same period, the large wards, in which only one disease per ward was treated and the number of other infections inadvertently admitted was very small, there was an average rate of 0·9 per cent.

Cubicle Nursing of Measles

The present investigation was undertaken to ascertain what proportion of measles cases were infected with haemolytic streptococci on admission, and to what extent their more subtle spread from patient to patient was influenced by cubicle nursing. Many observers have shown in recent years that the spread and interchange of different strains of haemolytic streptococci in large wards are very frequent and the cause of many complications, but little information is yet available as to how far this problem is solved by cubicle nursing.

The lay-out of the block in which this investigation was carried out is shown on the plan. Each cubicle opens to the external air at the back, and into a wide verandah at the front. They are divided by glass partitions and are under inspection from the central duty room. A sanitary annexe is attached to the end of each wing. The walls of each cubicle are a different colour. Each cubicle has a built-in, metal, enamelled locker container compartments for bed-pan, urinal, lotion bowl, treatment bowl, and washing bowl. These articles are coloured the same colour as the cubicle—a simple and effective method of preventing their finding their way to the wrong cubicle after being taken away for washing or emptying. As each patient was admitted a swab was taken from the throat and the nose and examined for haemolytic streptococci; this procedure was repeated on the day of discharge. Every member of the staff who had access to the patient was swabbed when first coming to the ward, but this was not repeated. Each patient remained in the same cubicle until his discharge. On a few occasions when the patient was not fetched on the day of his discharge he was put into a clean cubicle until called for. This explains why, on a few occasions, three patients appear in a double cubicle on one day.

Prevention of Spread of Streptococci

Possible means of transference of streptococci and the methods adopted to avert this are:—

1. *Infection from patient to patient by direct contact or droplet infection.*—The fact that the patients were treated in double or single cubicles greatly reduced this risk. In the double cubicles the bed centres are 12 feet apart. Ventilation was as free as possible under black-out conditions.

2. *Infection by fomites generally.*—Every patient had for his exclusive use a towel, face flannel, piece of soap, wash bowl, and sanitary utensils. Mattresses and pillows were steam-disinfected, and the bedstead itself washed with 1 in 20 carbolic after each patient. All eating and drinking utensils were sterilised after each meal by boiling in large sterilisers in the duty room. Exchange of toys and books was prohibited.

3. *Infection by dust.*—The cubicles were designed to prevent any accumulation of dust; they had smooth walls and ceiling panel heating to give a smooth surface. Each time a cubicle was empty it was fumigated with formalin.

4. *Carriage of infection by hands or clothing of attendants.*—A gown was kept in each cubicle for the use of the nurse whenever she attended the patient. Medium thick rubber gloves were worn when washing the patient or giving any treatment involving contact with mucous surfaces. Before the nurse passed to the next patient the gloved hands were well sluiced in strong disinfectant. This was kept in a bowl on the verandah between each cubicle. It was supported by a ring let into the wall high enough to be out of reach of the small patients. The gloves, which prevented infection of the hands, had a smooth surface easily sterilised by a strength of disinfectant which would prove damaging to the unprotected skin. Between seeing each patient the medical officers washed in the basins on the verandah between the cubicles.

5. *Droplet or contact infection from carriers among attendants or visitors.*—To endeavour to control this, every member of the staff, whether known to be a carrier or not, put on his own face-mask before entering the ward. The type of mask worn was the Burney-Yeo inhaler. This consists of a perforated zinc mask lightly padded where it fits the face and kept in position by elastic passing over the ears. The interior is lined by a piece of ordinary hospital lint fastened with paper clips, and is frequently renewed. This mask was tested in the laboratory and shown to be effective in stopping the projection of any organisms on to a cough plate held in front of the mask. Visitors were provided with similar masks.

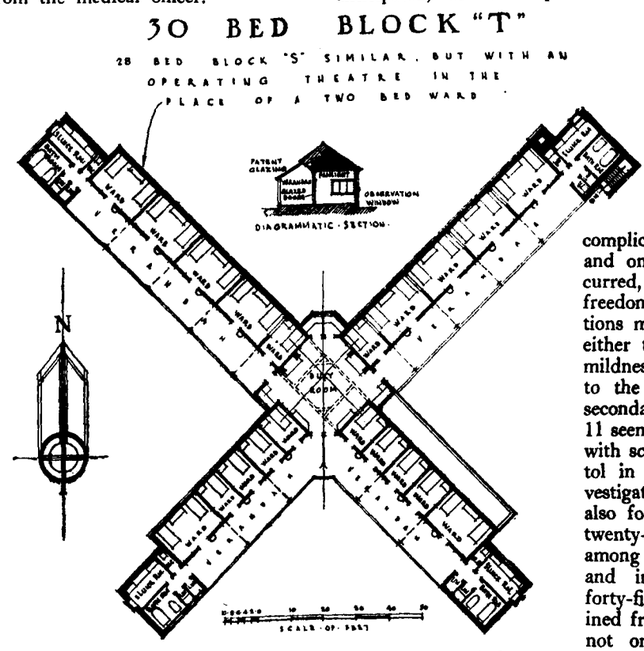
The precautions numbered 1 to 4 have been carried out in all our large wards since 1913. These methods were shown to be very efficient in reducing frank cross-infection.*

* Peters, B. A. PUBLIC HEALTH, 1914, **27**, 296.

Results of Present Investigation

The present investigation was carried out on 75 cases of measles in Bristol at the beginning of 1940.

Haemolytic streptococci were recovered on admission from 10 (13 per cent.). These were: Type 11, three; Type 11 from throat and Type 1 from nose in same patient, one; Type 8, one; Type 4, one; Type 21 (Lancefield), one; Lancefield A untyped, one; Lancefield C untyped, one. Five of these cases were no longer carriers on discharge, but two carriers of Type 11, one of Type 8, and one of Type 4 were still positive. In one, Case 35, Type 3 was found in the throat on admission and Type 12 on discharge. Five carriers were found among forty-two attendants; two Type 2, one Type 11, one Type 12, and one untypeable strain (not Lancefield A, C or G, presumably non-pathogenic) from the medical officer.



The only patients acquiring new infection were ten—namely, one with Type 12, four with Lancefield C (including Type 21), two with Type 1, one with Type 2, one untyped (Case 36) Lancefield A, and one, already recorded, had exchanged Type 3 for Type 12. On studying the dates of admission and discharge of the patients it is evident that in no case could they have contracted the new strain from another patient, as their times in hospital did not coincide. There was a possible exception in Cases 38 and 51 (Type 21), who were in adjacent cubicles for two days. As Case 38 was in bed during that time he was not likely to have infected Case 51, but the possibility cannot be ruled out. It is rather surprising that positive patients in double cubicles did not infect their room-mates, but in no instance is this recorded. Nurse C, a carrier of Type 12, probably infected Nos. 35 and 66. Nurse B, carrier Type 2, possibly infected Case 45. This leaves two cases with Type 1, three with Lancefield C, and one untypeable strain, whose origin cannot be traced. All six cases occurred in one cubicle D.3 (see Table), and it seems impossible to conclude otherwise than that there was some source of persistent infection in this cubicle. Inadequate sterilisation of black-out material seems a possible source, but this cubicle is no different in fittings or design from any other. Infection may have been brought in by visitors. Although they were asked to observe the same precautions as the staff, it is impossible in practice to keep visitors under constant supervision, especially in cubicle blocks. Among these six untraceable cases the organism might have been present in small numbers originally in some patients without having been picked up by the swab. On the other hand, a succession of three infections with Lancefield C, and two with Type 1, suggests the persistence of some depôt of infection after a patient had been removed from the cubicle. The infection rate in this cubicle was 41 per cent.; in all the other cubicles taken together, only 5 per cent. More patients occupied this cubicle than were admitted to any other.

The above record is based on fewer cases than were anticipated, as the expected measles epidemic in Bristol in 1940 was represented by only a comparatively few cases, mostly mild ones. The cases were remarkably free from complications; not one developed any complication in hospital and only one death occurred, in Case 13. This freedom from complications may have been due either to the comparative mildness of the cases or to the low incidence of secondary infection. Type 11 seemed to be associated with scarlet fever in Bristol in the few cases investigated. This type was also found in five out of twenty-four positive cases among staff and patients, and in twenty out of forty-five strains examined from all sources, but not once in those cases infected in hospital.

Our results finally show that 13 per cent. of the patients in this measles outbreak were carriers of haemolytic streptococci on admission, and that 13 per cent. picked up the organism even when nursed in cubicles with the precautions described, but not once did the spread occur from patient to patient. The carrier incidence among the staff was 12 per cent. By a curious coincidence all the carriers among the staff were on night duty. It would appear that either the masks used by the staff were not completely effective, or else that during the night period, when supervision of the staff is less complete, some breach of technique may have occurred. Inadequate ventilation during black-out would contribute to infection at night.

Comparison with the Open Ward

If these results are compared with those obtained in the open ward a striking difference is apparent. H. L. de Waal,* by means of daily swabs in scarlet fever wards, showed that 69 per cent. of patients were infected in the ward with a new type of streptococcus. If only those infections which would be apparent as a result of taking one swab on admission and another before discharge are counted, he would still have been able to show a change of type in about 30 per cent. of patients. The importance of preventing such cross-infection is made more evident by the fact that, of the cases he examined showing complications, 61·5 per cent. of these complications were due to infection with a fresh type of haemolytic streptococcus, and in patients who had been two weeks resident in hospital 90 per cent. of complications were due to new types of streptococci.

TABLE

Cubicle		Total cases admitted	Cases non-infected throughout	Infected cases: No. admitted	Infected cases: No. discharged	No. infected in cubicle	No. of cases possibly infected by known carriers
D.1	...	8	7	1	1	0	—
D.2	...	13	10	3	1	0	—
D.3	...	17	8	4	7	7	2
D.4	...	14	11	1	3	2	1
D.5	...	10	10	0	0	0	—
C.4	...	5	3	1	1	1	1
B.5	...	2	2	0	0	0	—
C.5	...	2	2	0	0	0	—
A.5	...	2	2	0	0	0	—
A.1	...	2	1	1	0	0	—
Total	...	75	56	11	13	10	4

The types of streptococci identified were as follows:—20 strains Type 11; 7 strains Type 1; 4 strains each Types 2, 12 and 21; 3 of Type 8; 2 of Type 3; 1 of Type 4; and 7 strains untyped.

Our series of cases, and the number of swabs taken, were very much smaller than those in H. L. de Waal's paper, but the technique adopted† was essentially the same. It seems evident that the cubicle system of nursing prevents the spread of infection from patient to patient, and that this fact, by cutting down complications, is likely materially to lessen the length of stay in hospital.

We wish to acknowledge our indebtedness to the Colston Research Grants' Committee for a grant towards expenses to the Preventive Medicine Department, University of Bristol.

* *J. Hgy., Camb.*, 1940, **40**, 172.

† *Note on technique adopted.*—All strains giving haemolysis were tested first for a soluble haemolysin, and, if positive, the Lancefield type was determined. The Griffith type was determined after the necessary subcultures in serum broth, but only eleven type antisera were available. (These were supplied by the late Dr. Griffith.) It is possible that an occasional type determination may be due to cross-agglutination of the strain, which in reality belonged to a related type whose antiserum was not available. This in no way invalidated any of the conclusions or results presented. Strains agglutinating with more than one type serum are designated "untyped."

PERSPECTIVE*

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The incongruity of the world to-day, in which all the discoveries of modern science that can and have increased the scope of each individual's life are now organised to terrify and destroy the individual, will produce a profound change in the mental outlook of those who survive the present dangers. Their attitude will be one of questioning and doubt, with resulting anxious unrest. Some, by concentrating on unworldly things, will achieve the peace of mind for which they yearn; but the majority, and particularly those with the bold and active disposition of youth, will unconsciously seek to allay their bewilderment by identifying themselves with some plan for curing the evils which surround them, thereby finding for their mental energies an outlet much more satisfying than a state of hesitant inaction. This phenomenon, which is not new, is inevitable, and therefore it is important that reforming energy should be directed into prepared channels.

To-day, in many different spheres of activity, there exist planning commissions, all preparing statements for submission to the country after the war. If these plans are to receive the support necessary for their fulfilment, they must deal with problems that affect or are of interest to large numbers of people; for the public, in their reforming activities, will be interested in matters which are their daily concern.

The M.O.H. in Planning

In the course of our duties as Medical Officers of Health we become well aware of the many grave defects in the conditions under which large numbers of the population live. We can, if we desire, render a valuable service to the country by indicating clearly what these defects are, and by suggesting means whereby they can be overcome. It is desirable that this information should be available in a form in which it can be seen in its correct perspective, neither magnified, nor diminished, nor distorted. At this very moment the medical profession is devoting its energy to planning and reporting. While it is impossible to forecast its findings, it is reasonable to predict that its interests are mainly in the reorganisation of the methods by which its skill is made available to the public. This subject is unlikely to arouse a high degree of public interest, particularly among the majority who enjoy good health. It is unwise of us to expect the profession to take any appreciable interest in many matters which, though of considerable concern to a medical officer of health, are not primarily the concern of clinicians. If our evidence, and suggestions on the conditions which affect daily the lives of the people, are left to the consideration of the profession as a whole, it seems certain that they will be so submerged in the larger report that the degree of their importance and applicability will be greatly obscured. Also, it is unwise to leave the collection and presentation of the facts to the zealous reformer who, however good his intentions, may not be entirely familiar with the facts, and who is inclined to present

* Presidential address to Yorkshire Branch, October, 1941.

them in such a way that they support the particular line of action that he is pledged to follow. It is equally unwise to entrust the presentation of the evidence to distinguished individual spokesmen, for however confident or even competent they are, they cannot have personal knowledge of all the existing problems; they would minimise the importance of some matters, and magnify the importance of others. We must be prepared as a body to collect and pool all our available information, classify it, and, most important of all, draw conclusions from it in forms readily comprehensible to those who are interested in such matters, but who lack special and detailed knowledge.

There are many such essential matters which, if they do not receive our special attention, cannot hope to receive from any other group of informed people the consideration that they so urgently require. Although all of them are known to none of us, some of them are known to all of us. From experience which during the past ten years has brought me into contact with people and their homes in three different towns of medium size, certain defective conditions stand out clearly.

Cleanliness and Housing

The population in urban areas is much more verminous than is generally realised, and recent investigations probably have even surprised many medical officers of health. After making every allowance for the damage that can be done by a small group of chronic offenders in spreading the condition, it is obvious that a substantial proportion of the population lacks the essentials for the maintenance of personal cleanliness in a congested population—namely, soap, hot water, and the desire to be clean. Through no fault of their own many of them lack easily available hot water. The Housing Act informs us that "sanitary defects" include, among other things, "absence of adequate and readily accessible water supply or sanitary accommodation or of other conveniences." Most of us will agree that when we have classed as "other conveniences" proper cooking facilities, a boiler for washing clothes, and a ventilated food store, we have gone as far as is safe with housing committees and county court judges and possibly with Ministry of Health inspectors. He would be a bold man who questioned the fitness of a house mainly on the grounds that it lacked a bathroom or even a proper supply of hot water. On the other hand it would be interesting to know how many people think it is reasonable to accuse people of preferring to be personally dirty, when keeping clean involves boiling water in a kettle, clearing the living room to make space for the zinc bath, drawing the curtains, sending the children to the pictures, and locking the door. Many of us, in talking to the occupants of these dwellings, hesitate to assure them that cleanliness is next to godliness when we know in fact that it is next to impossible. As there are many towns in which the proportion of bathless houses approaches 50 per cent., the position must be regarded as extremely unsatisfactory.

While it is acknowledged that a large section of the population has to overcome many difficulties in maintaining a decent standard of personal cleanliness, it is also realised that a small section of the community when given decent houses, with baths and hot water supply, still makes little effort to keep clean. In our highly urbanised community, where contact with such people cannot be avoided, we attempt to control the problem by excluding the children from school until they are clean, or by delousing them at public cleansing centres, or, if necessary, by prosecuting the parents. This system seems designed to ensure that cleansing centres shall be necessary for generations to come, for there is nothing constructive about it. Although pressure and prosecution may control temporarily the menace with which these people threaten the rest of the community, they will not teach them to regard cleanliness itself as a desirable goal; as we know, it is usual for these people to relapse as soon as pressure is relaxed. Manifestly we are wasting time, energy, and money in hoping for lasting results from the coercion of people who themselves do not object to being verminous; and we can hope for permanent improvement only by developing in their children the desire to keep themselves clean, which certainly cannot be achieved in the presence of parents whose co-operation is lacking.

Well-to-do parents, whose homes appear to offer every facility for bringing up children under ideal conditions, find that they benefit from education away from home in boarding schools. How much more would such a custom benefit the health, habits, and general outlook of those children whose homes and parents are unsatisfactory? One cannot help reflecting simultaneously that there are now few towns which have not got in their surrounding rural districts extensive and elaborate military buildings, erected on a scale and at a cost which no government department would contemplate in peacetime or the Board of Education at any time. When no longer required for war purposes these buildings could be used as residential schools. In them the least favoured section of our school population could spend not weeks (as in existing camp schools), but years in learning to live in a way that would be of enduring benefit to them. Such a measure would reduce greatly the proportion of the community whose habits and standards are a constant hindrance to social progress.

Size of Family and Poverty

There is another matter which must trouble the mind of every medical officer of health who is neither impervious to reason nor devoid of imagination. Every day we deal with scales of income, and if we collect and classify the information the findings that result are very disturbing. In Dewsbury, during December, 1939, when the town was enjoying a long-awaited period of relative prosperity, 33 per cent. of babies attending infant welfare centres—representing 27 per cent. of all the babies in the town—came from families with weekly incomes of less than 10 shillings a head. During December, 1940, when not only wages but also the cost of living had risen, 18·5 per cent. of the babies attending the centres, representing 17 per cent. of all babies in the town, came from families with similar incomes. A very brief examination of the evidence shows that the unsatisfactory state of the family exchequer is due

very often to the presence in the family of young children, who, unfortunately, are those most likely to suffer permanent harm from the poverty which their presence entails. This relationship between poverty and the presence of young children is such a commonplace that, although we rarely comment on it, we recognise the importance of having an unusual proportion of accommodation for large families when planning to rehouse the poor who have gravitated to the slums. Nevertheless, many of our electorate and of their representatives appear to be unaware of, or refuse to acknowledge, this fundamental fact. It is certainly stupid and possibly neglectful of us to devote so much time, thought, and energy to organising schemes to prevent manifest malnutrition among children, and so little to informing the country of the fact that the poorer families cannot hope to feed and clothe their children adequately without State assistance, any more than they can hope to educate them. One presumes that individual medical officers of health refrain from the repeated comment for which this absurd *state of affairs* calls, lest they should be thought to display a political interest. We appear to have succumbed to the belief that such matters should be discussed only by politicians, who, although they may gain the attention of their readers or listeners, do not always have either the necessary knowledge or the desire to present it.

Still-Birth Rate

Our perspective, and that of the country generally, seems to be at fault when dealing with avoidable wastage of young life. The lowering of the infant mortality rate is hailed as proof of our triumphant progress, while the still-birth rate—obviously equally *important* as an indication of our ability to save life—receives relatively scant attention; the death of a child shortly before its birth is as great a loss to the community as its death shortly after birth. It is unnecessary to be long in a town with a high still-birth rate to suspect that there is a definite relationship between still-births and the employment in industry of expectant mothers. This suspicion is greatly strengthened by collecting a list of towns with persistently high still-birth rates. In the decade preceding 1939, the Lancashire cotton towns and the Yorkshire woollen towns, where the employment in industry of married women is usual, figured with disturbing prominence among towns with high still-birth rates. The matter is of such importance that it is the duty of somebody to ascertain whether this apparent relationship can be definitely established, and, if it is, to bring to the public notice the price that has to be paid for the employment of married women in industry. No group is more fitted to undertake this responsibility than medical officers of health.

A pamphlet has been issued by the Ministry of Home Security giving guidance to all holders of radium on the precautions which should be taken to prevent dispersal of radium through enemy action. Copies of the pamphlet may be obtained on application to the Publications Branch, Ministry of Home Security, *Horseferry House*, London, S.W.1.

NEW DEAL FOR DENTISTRY

A Reply to Mr. B. R. Townend

by

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I have been reading Mr. B. R. Townend's paper on "A New Deal for Dentistry," published in the July number of Public Health. As an honorary dental surgeon of the Royal Dental Hospital of London, and as a member of the teaching staff of the dental school attached to it, may I offer my observations?

On any day in this hospital there is a cross-section of age-groups exhibiting the dental needs of the community and the benefits and defects of our dental social service. In the school, which trains the new generations of dental surgeons, we can study the advantages and disadvantages of the present-day curriculum. Those who have enjoyed this dual experience over the past twenty years must realise the failure of the present system to apply our knowledge to the best advantage.

Dental Prosthetists

Mr. Townend is right when he says that the number of dental surgeons is too few, but his suggestion that the remedy lies in making dentistry an autonomous profession separate from medicine surely cannot be the answer. It seems to me that his own paper is a plea to the contrary, for he says that dentistry "combines in its practice medicine, art, and mechanics . . . ", and that "a dentist of to-day must have a fairly extensive knowledge of medicine. . . ." At the beginning of his paper he refers to "dentistry" as the Cinderella of medicine. I have put the word dentistry in quotation marks because it seems to me that this word provides the clue to the misfortune. As commonly used, "dentistry" embraces the craft of the artificial plate-maker as well as the practice of medicine, surgery, and pathology in connection with the teeth and their supporting structures.

We might as reasonably speak of "ophthalmistry as meaning spectacle-making and ophthalmic surgery combined. Is the community the worse for having its opticians and its ophthalmic surgeons separate? Would people's eyes be better looked after if these two were combined into a single autonomous profession with their own "College of Ophthalmistry"? Yet Mr. Townend cries, "Dentistry must carve out a niche for itself. It must rid itself of its parasitic tendencies." And he deplores the fact that the College of Dentists (founded in 1857) did not survive. Surely a better "new deal for dentistry" is to separate it into its two major components. Let dental surgeons be done with plate-making, let them be fully qualified in medicine and surgery, and let them devote the time they now spend in adapting artificial dentures to dental prophylaxis and to the better understanding and management of the wide range of ailments in which the teeth are suspected of complicity. Let us foster a new and honourable calling of dental prosthetists, whose skill shall be tested by compulsory examination.

The L.D.S. and the Memorialists

Mr. Townend regrets that the L.D.S. examination was initiated (as it was in 1859) under the aegis of the Royal College of Surgeons. But surely it is right that this should have been so, for all the major advances in odontology since then have been in biological channels, the most important being the recognition of the interrelation between dental and general health. The question to be determined is whether this diploma has not now become a hindrance to the urgently needed expansion of the communal dental service.

Previously to 1859 dental practice had been in a chaotic state. There was neither education nor disciplinary control, and quacks and charlatans abounded. There were, however, a considerable number of honest, conscientious craftsmen practising *sine curriculo*, and there was a small but important number of surgeons, Members and Fellows of the Royal College of Surgeons, who elected to practise dental surgery. These men founded in 1857 the Odontological Society of London (which in 1907 became one of the founder sections of the Royal Society of Medicine), and later banded themselves into the Association of Surgeons Practising Dentistry (a society which existed for a few years at another critical period when the Dental Act of 1878 was being framed). It was they, too, who founded in 1858 the Royal Dental Hospital and its School of Dental Surgery. They were led by such men as Samuel Cartwright (Senior), F.R.S., Edwin Saunders, F.R.C.S., Samuel Cartwright (Junior), F.R.C.S., Thomas A. Rogers, M.R.C.S., Alfred Coleman, M.R.C.S. (F.R.C.S. by examination 1868), and John Tomes, F.R.S., F.R.C.S., whose lectures in dental physiology are classic. These dental surgeons, who were known as the "Memorialists," because of the number of petitions for compulsory dental education which they made to the Royal College of Surgeons and to Parliament from 1843 to 1859, opposed the scheme for the founding of the College of Dentists in 1857, and eventually, in 1859, they successfully appealed for the granting of an examination in Dental Surgery (L.D.S.). As Frank Coleman* writes: "This appeal was, no doubt, favourably influenced by the fact that a hospital and a school had already been established, a well-designed curriculum planned, and a staff of lecturers chosen from the leading men of the profession. . . . The examiners appointed by the College of Surgeons were Arnott and Lawrence for the general subjects, and Thomas Bell, Arnold Rogers, and John Tomes for the dental subjects."

In considering the curriculum which had been designed, it must be remembered that the majority of the practitioners of dentistry at this date were essentially craftsmen—*i.e.*, makers of artificial dentures. During 5 to 7 years' apprenticeship they were taught the art of making and adapting artificial teeth. Dental mechanics and metallurgy therefore had to be included in the new curriculum, which was ambitiously planned. Like medicine, four years were allotted to the study of dental surgery, and speaking of it in 1881 John Tomes says that it was felt

> "that the prevailing medical education was, as a question of degrees, not in excess of what should be required of the dentist; but that while it fell short to the extent of two-fifths of the whole in the direction of strictly dental knowledge, it exceeded by two-fifths in special medical knowledge, the amount which could be reasonably asked of well-educated dental practitioners. This opinion was fully expressed in a memorial, addressed to the English College of Surgeons, in the following terms: 'The memorialists do not suggest an education and examination inferior to that required of the medical practitioner; but propose a certain difference in kind only, not a difference in degree —an education and examination specially adapted to the requirements of the dental surgeon, as distinguished from that fitted for the general surgeon.'"

It will be seen that the L.D.S. diploma was a compromise between the craft of the dental mechanist and the science of dental surgery. Its curriculum combined two years in a prosthetic laboratory with a further two years of clinical teaching, which included appropriate teaching in general pathology and surgery as well as the special dental subjects.

Past and Modern Trends

The curriculum is substantially the same to-day, but in the eighty years which have since elapsed the practice of both the prosthetic and the clinical sides of dentistry have changed. In the first half of the nineteenth century, for example, artificial dentures were constructed of plates carved from a solid block of ivory on which natural teeth (and later porcelain teeth) were mounted. Vulcanite had not make its appearance, and high skill was required to carve this ivory plate so as to secure a sufficiently accurate fit. Other plates were made of gold, and the dentist made his alloys, rolled his own gold sheet, and drew his wire in his own workshop.

Porcelain teeth made their appearance here in 1837, and vulcanite in 1853. Gradually the adaptation of the denture base material and the working of it became both more accurate and easier, calling for more mechanical aids and less craftsmanship. The trend has been for the newer discoveries in the prosthetic side of dentistry, such as improved denture base materials, spring-tempered alloys for clasps, formulae for more realistic porcelain, and so forth, to be carried out in the research laboratories of the big industrial firms. Several of the newer processes require special apparatus, and firms who make a particular material send demonstrators to teach the method of using their product. Craftsmanship is being supplanted by mechanical methods. In former days no dentist could exist without his own mechanical (*i.e.*, prosthetic) laboratory in which he worked along with his mechanics and apprentices. To-day there is a large number of successful dental surgeons whose mechanical work is carried out—as it is in the Forces—in independent mechanical laboratories. There is an increasing number of dental surgeons who have never themselves made an artificial plate since the day they qualified.

As to the clinical side, the trend has been not merely towards general surgery and surgical pathology but towards general medicine as well. Not only have surgical procedures in connection with the teeth been refined by the application of the best criteria in general surgery—as, for example, the importance of operating in a clean field and the more gentle excision of a difficult tooth rather than its rougher evulsion with forceps—but the dental surgeon is charged more and more to see that the mouth of a patient in his care is not responsible for deterioration in the patient's health. His knowledge of general medicine and medical pathology must be sufficient to enable him to talk with the doctor on a common level. The curriculum for the L.D.S. examination, which, as I have said, has not materially changed since its inception, does not provide for this.

Suggested Reforms

The number of dental surgeons is too few and the cost of dental education too high. The public cannot obtain the services it needs: the dental surgeons complain that their status is not commensurate with their worth or the cost of their training (which exceeds that of

* *Med. Press Circ.*, 5257, 113.

medicine). This cannot be remedied by whittling down the present curriculum or by instituting higher diplomas. The sure way is to separate dentistry into its two components, surgery and prosthesis, and to create two sets of practitioners—the fully qualified surgeons and the appliance makers. This would bring dentistry into line with orthopaedics, ophthalmology, and plastic surgery. We do not expect the orthopaedic surgeon to fit the artificial limb, and we do not expect the artificial limb maker to be a quasi-surgeon or comparative anatomist. The same applies to the care of the eyes. In plastic surgery, and in the application of radium to the oral cavity, general surgeons frequently instruct the dental prosthetic assistant directly. He carries out the work and fits the appliance according to the surgeon's instructions. The training of dental prosthetists would be much shorter and consequently less expensive than for dental surgeons. Prosthetists would be controlled, as the opticians are now controlled, by a suitably constituted Board. Much, if not all, of their training could be carried out in technical schools. It would be necessary to scrap the present L.D.S. examination; but, as has been explained, this was a diploma of convenience and it is now anachronous.

Another observation is that little use has been made of the provision in the Dental Act of 1921, enabling trained dental nurses to be employed by public authorities for such prophylactic measures as scaling and polishing the teeth and charting the presence of carious cavities, The trend of modern dental surgery is towards prevention and we know that the incidence of both dental caries and gingivitis can be much diminished by hygienic measures carried out by the patient under adequate supervision. The main reason for not encouraging the employment of dental nurses seems to be the fear that this would be the thin end of a wedge of unqualified practice, and that these nurses would wish to do more ambitious work and so circumvent the rigid requirements of the Act. It must be remembered, however, that at the time the Act was framed in 1921 unqualified practice had become rife, and the framers of the Act were apprehensive of loop-holes for quackery. In twenty years we have passed beyond this stage and can recognise the advantages of employing women—or men—in the same way as applies to massage and medical electricity.

Fundamental changes cannot be made easily and least of all can they be made by the profession. A mixed Commission should now be set up to hear witnesses and make a report, so that when the war is over and large numbers of ex-Service men and women are being absorbed into civilian life again the machinery will be ready to help them to play their part in this most pressing need of the social service.

MEDICAL WAR RELIEF FUND

In September, 1940, the Medical War Relief Fund was inaugurated to provide temporary assistance for British medical practitioners and their dependants who find themselves in financial straits as a direct result of war conditions. At the end of that month the first appeal for subscriptions was published in the medical Press. The response, both from individual practitioners and from medical organisations, has been most encouraging, and by the end of September, 1941, the contributions to the Fund had reached the total of approximately £84,000. To all who have subscribed so generously the Committee of the Fund wishes to express sincere thanks. It will not be considered invidious to refer, in particular, to the splendid help received from medical practitioners overseas who have not forgotten the needs of their colleagues in the home country. A cable has recently been received from the British Medical Association in Australia, intimating a donation of £4,500 (Australian) contributed by members in that country. This is additional to the total of £34,000 already received. The Malaya Branch of the B.M.A. has contributed more than £300, and a first contribution from the Canadian Medical Association, consisting entirely of subscriptions collected from doctors in British Columbia, amounts to nearly £350. Other generous donations have been received from organisations in Australia, Canada, Hong Kong and Uganda, as well as from individual practitioners in various parts of the Empire.

REMUNERATION OF M.O.S OF FIRST-AID POSTS AND MOBILE UNITS

The following revised scale, agreed on between the Ministry of Health and the Central Medical War Committee, will operate from January 1st, 1942: (*a*) for an attendance for a period not exceeding half an hour, 10s. 6d.; (*b*) for an attendance for a period exceeding half an hour but not exceeding one hour, £1 1s.; (*c*) for an attendance for a period exceeding one hour, £1 1s., plus 10s. 6d. for each additional hour or part of an hour. These payments are not subject to the maximum of £3 3s. per day operating under the existing arrangements. Notice of the change should be given as soon as possible to all medical practitioners attached to the Scheme-making Authority's First-Aid Posts or Mobile Units.

A matter not dealt with in previous instructions issued to scheme-making authorities is that of the payment to be made to doctors called to their first-aid posts to attend civil defence workers injured in the course of their duties. It has been decided that payment in these cases shall be on the same basis as for air-raid casualties, and the scale above mentioned will, therefore, apply.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the health departments of various local authorities.

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

BURTON-ON-TRENT C.B.: M.O.H., Dr. W. Alcock (C.M.O.H., Westmorland C.C.).
LANCS C.C.: A.M.O.H., Dr. Hazel I. Ashford.
MERTON & MORDEN U.D.: A.M.O.H., Dr. Evelyn B. G. Ewen (A.M.O., L.C.C.).
SOUTHAMPTON C.B.: Deputy M.O.H., Dr. W. P. Cargill (A.M.O.H., Manchester C.B.).
STIRLING C.C.: A.M.O.H., Dr. H. J. Fraser.
STOCKTON-ON-TEES M.B.: M.O.H., Dr. John Landon (Deputy M.O.H., Tottenham M.B.).

Professor F. C. Bartlett, F.R.S. (Professor of Experimental Psychology in the University of Cambridge) has been appointed a member of the Medical Research Council in the vacancy caused by the death last July of Professor A. J. Clark, F.R.S.

BOOK REVIEW

A Handbook for Industrial Nurses. By MARION M. WEST, S.R.N., S.C.M. With a foreword by Sir DAVID MUNRO, K.C.B. London: Edward Arnold & Co. 1941. pp. 134. Price 8s. 6d. net.

Miss West's book covers a large field in an informative and concise manner and can be thoroughly recommended both to trained nurses in industry and to the untrained girls who to-day call themselves industrial nurses. Where medical men are likely to quarrel with the author is in the scope of duties that she assigns to an industrial nurse. On page 27 the list of duties, as suggested by a committee of the College of Nursing, is quoted. A number of the items are likely to be challenged—for instance, "to see and advise all workers returning after absence"; or "to maintain contact with absentee workers by home visiting." In the author's defence, it can be justly urged that the need for medical guidance and instruction is often emphasised.

Miss West advises that in every medical case the temperature, pulse and respiration should be taken and recorded, but this may not always be easy in a busy surgery. Much of the advice given is sound commonsense—for instance, that the nurse should make herself thoroughly acquainted with the processes of manufacture, and that she should see that she is introduced properly to key members of the personnel, such as foremen and managers. There is some sound advice, too, on how she should conduct herself with regard to the confidences that she may receive, and in the difficult controversial matters that are constantly arising within an industrial organisation. She is well advised to have her relationship with the welfare department clearly defined.

This book might well be read by industrial doctors as well as by nurses, and it would not come amiss to others interested in the workers' health—such as labour managers, welfare personnel, and members of health or safety committees.

In consequence of the passing of the National Health Insurance, Contributory Pensions and Workmen's Compensation Act, 1941, the following changes will operate from January 5th, 1942. (1) Non-manual workers will be compulsorily insured unless their remuneration exceeds £420 per annum (instead of £250 as hitherto). This brings health and pensions insurance into line with unemployment insurance. (2) The rate of the weekly health insurance contribution will be increased by 2d., of which 1d. is to be borne by the employer and 1d. by the worker. The effect on the combined health and pensions insurance contribution will be to raise it to 2s. in the case of a man and to 1s. 7d. in the case of a woman. Of these contributions the worker's share will normally be 1s. for a man and 10d. for a woman. (3) The ordinary rates of sickness and disablement benefit will each be increased by 3s. a week.

In view of the general interest in the use of sulphaguanidine (sulphanilylguanidine) for the treatment of bacillary dysentery and its proposed application in the surgery of the colon and rectum to reduce the number of coliform organisms, Burroughs Wellcome & Co. inform us that, subject to priority demands, Tabloid sulphaguanidine 0·5 gm. is available to the medical profession.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

INTER-GROUP COMMITTEE

Chairman: Dr. Ernest Ward.
Hon. Secretary: Dr. H. Stanley Banks, Park Hospital, S.E. 13.

A meeting was held at B.M.A. House, Tavistock Square, on November 20th, 1941, when the following were present: Drs. E. Ward (*in the chair*), Katherine M. Hirst, Violet Russell, R. L. Midgley, H. Stanley Banks, and Mr. Gordon Taylor. The minutes of the meeting held on November 17th, 1938, were read and signed. Dr. Ward was elected chairman and Dr. H. Stanley Banks hon. secretary for the session 1941-42.

School Medical Services Group.—Dr. Ward reported that Dr. Adam could not attend meetings and was therefore unable to take her seat on the Council as the extra representative of the Group. Further, Dr. Puddicombe had intimated that he was due to retire from the service in March, 1942. Dr. Ward said that, in these circumstances, he would ask the Council of the Society to appoint Dr. H. Stanley Banks in place of Dr. L. Adam to the Council as a departmental officer under Article 19d. It was resolved that, until written application from the School Medical Services Group for extra representation on the Council of the Society was received by the hon. secretary of the Inter-Group Committee, no representative of that Group would be nominated for a seat on the Council by the Inter-Group Committee. Dr. Ward was authorised to write to Drs. Adam and Puddicombe to suggest that a further effort should be made to revive the School Medical Services Group.

Expenses for Attending Group Executive Meetings.—Dr. Ward undertook to raise this matter again with the Treasurer of the Society. It was reported that former negotiations had been going on favourably when the outbreak of war ended them for the time.

Medical Planning.—The following resolutions were proposed by Dr. Ward and seconded by Dr. Hirst, and carried unanimously:—

(*a*) That in the opinion of the Inter-Group Committee, the following Groups should be represented on the Medical Planning Committee appointed by the Council of the Society: Maternity and Child Welfare, Fevers, Tuberculosis, and Dental.

(*b*) That each of these Groups should appoint its own representative.

Date of Next Meeting.—It was remitted to the president and hon. secretary to convene the next meeting on a suitable date in November, 1942.

LUNCH TO SIR ALEXANDER MACGREGOR

The Scottish Branch of the Society celebrated the elevation of its former president, Sir Alexander MacGregor, to the rank of knighthood by a complimentary luncheon in Edinburgh on November 29th, Dr. McMichael, of Paisley, the new president of the branch, presiding. The proceedings were graced by the presence of Lord Provost Darling, who was in sparkling form and described himself as a gate-crasher at this "MacGregor's gathering." He admitted he had weighty respect for Sir Alexander, with whom he had had encounters in various Scottish committees. Beneath the sparkle there were as usual some shrewd comments. He wondered, for example, if the time had not now come for Scotland to do something, by making conditions more comparable with the lures of the South, to keep some

of her more brilliant sons at home. Dr. McMichael, in giving the toast of "The Guest," referred to the considerable services rendered over a long period to public health in Scotland by Sir Alexander, whom he had first met on a short leet for a Scottish appointment in which neither had any luck. He also spoke of the warm regard and affection felt everywhere for him, and of his golf, which was apparently not on a par with his other attainments. He concluded his speech by presenting a cheque to Sir Alexander on behalf of the members. In acknowledging this and the toast, Sir Alexander wondered how he was going to expend the cheque in these days of short supply, especially as he had been warned that he must bring no more furniture into his house. He related one encounter with the Lord Provost in which he got the better of him, although it turned out later that he, Sir Alexander, was wrong, and also a curious experience he once had in appearing as an unsuccessful candidate for the medical officership of a London borough. In more serious vein he addressed himself to the younger members present, and pressed on them the necessity for hard work and for studying the psychology of individual members of their committees, varying their approach accordingly. He also made the interesting confession that if he had his professional life to live over again he would not wish it to be different. Again in lighter vein, he referred to certain advantages attaching to a title—for example, he now had no difficulty in getting a sleeper in the middle part of the coach or a room in a hotel. The proceedings were brought to a close by the Chief Medical Officer of the Department of Health, Dr. Andrew Davidson, publicly congratulating his former chief on his well-deserved honour.

BRANCH AND GROUP MEETINGS

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Virginia Saunders-Jacobs.
Hon. Secretary: Dr. Katherine M. Hirst.
Hon. Assistant Secretary: Dr. Violet Russell.

The first meeting of the session was held on October 4th at Tavistock House South, and was attended by 57 members and guests, many of whom met socially at a light luncheon before the meeting.

The President of the Group, Dr. E. Virginia Saunders-Jacobs, was in the chair. In her opening address, she said she hoped that the Group would continue to fulfil the following threefold functions: firstly, to act as a club where colleagues could meet to exchange views and consult with specialists in various relevant subjects; secondly, to be the consultative medical body on all matters appertaining to maternity and child welfare; lastly, to guard the interests of its members and to maintain the prestige of this branch of the profession.

Dr. Wilfrid Sheldon, Physician to Out-Patients, Hospital for Sick Children, Great Ormond Street, then read an interesting paper on the effect of war conditions on young children.

Children and the War

The war, he said, had divided children into three groups: those staying behind in the evacuation areas, those evacuated into reception areas, and those normally resident in reception areas. He was glad to observe that billeting problems were gradually sorting themselves out: children who were unsuitable for evacuation had returned home, whilst unsuitable foster-parents had, by one means or another, got rid of their evacuees. With regard to the evacuation areas, it was surprising that he could put forward only two points where there might possibly be an indication of some impairment of health due to the war. He had an impression that premature births were increasing and there was no doubt that there was more nutritional anaemia in infants, and especially among the toddlers in the towns. A striking fact was the absence of signs of the deficiency diseases (rickets and scurvy) among all three groups of children. Even routine X-ray examinations in hospital failed to show signs of rickets. He thought that this must be the result of the increased care to supply additional vitamins to young children during the war and it was a most encouraging result. Dr. Sheldon preferred cod-liver oil, except in cases where there was fat intolerance, to halibut-liver oil or other vitamin D concentrates, as it was impossible to give an overdose of vitamin D with cod-liver oil. He thought that medical officers should watch for the lassitude and failure to gain weight which were evidence of hypervitaminosis D. Concentrated preparations should rarely be given in larger doses than five drops a day. Regarding vitamin C, there were many possible substitutes for orange juice: tomato juice, grape juice, potato cream, blackcurrant purée, or pure ascorbic acid. Tuberculosis, both human and bovine, appeared to be on the increase; this disease caused 14 per cent. of the deaths at his hospital. He stressed the extreme importance of co-operation between tuberculosis departments and billeting officers. Pediculosis capitis was no longer common, but scabies seemed very rife. The "behaviour disorders," especially enuresis, were largely connected with unsuitable billets, which could cause considerable psychological disturbance. Psychological injury from air raids was largely dependent upon the behaviour of those adults in charge of the children; in various residential institutions the effect of raids on the children has been negligible, because those in charge kept a calm attitude.

Dr. Sheldon praised the wisdom of the Government's milk scheme and stressed the value of national dried milk, which deserved universal support. He considered that a pint of milk a day was sufficient for young children; extra quantities encouraged flabby anaemic children. He regretted the enforced absence of eggs in the present-day children's diet and pointed out the importance of giving children their full meat ration. Cheese was perfectly suitable for children over 18 months of age when given early in the day. Wholemeal and wheatmeal bread should be recommended. Whilst acknowledging that carrots were a useful source of vitamin A, Dr. Sheldon did not think it wise to give raw carrots to children as intestinal irritation often resulted.

Dr. Violet Russell (A.M.O.H., Kensington) described the measures which a representative London borough had taken to counteract the dangers to children inherent in war conditions. Casualties had been almost negligible. A certain number of nervous conditions had resulted from air raids, principally among the 3-5 year old group; the parents of these children had been persuaded to send them to the country. Out of 2,000 examinations of children attending the welfare centres evacuation had been recommended on medical grounds in fifty-nine cases, but only in twenty-five had the machinery of compulsory evacuation been employed and only in one had the parents withheld their consent. The nutrition of the children had tended to improve during the war, thanks to the measures taken both by the Government and by the Borough Council for their protection. Free supplies of vitamin preparations were distributed from the welfare

centres. The evacuation scheme had improved the health both of the children who had gone away and of those who had remained at home. There was lessened overcrowding, less risk of infection with the school-children away, and better maternal care.

Dr. Helen Buck (A.M.O.H., Kensington) described the routine medical examination of all children sleeping in the public shelters in Kensington which had been carried out during the early months of 1941. The results appeared to show little or no deterioration in health among the children.

Dr. Katherine Scott (A.M.O.H., Warwickshire) gave an account of the conditions in Warwickshire, representing a reception area which had given a home to children from all parts of the country. She described the condition of 2,000 London evacuees who were transferred to her area after having spent nine months on the coast as "a very fine lot from both a health and cleanliness point of view." She referred to the value of medical reports sent with the children. Attendances at the welfare centres had greatly increased—sometimes doubled. A need which had arisen was for more residential nurseries where children could be left while their mothers were in maternity homes. The nervous conditions caused by air raids which were seen in some toddlers when they arrived soon disappeared in the country; children had a wonderful resilience. The nutrition of the evacuated children had not deteriorated in any way during the war and had in many cases improved. Though there had been a considerable increase in measles and whooping-cough in 1940 compared with the previous year, the position was summarised by this sentence in Dr. Hamilton Wood's annual report: "Deaths from the seven principal infectious diseases are the lowest ever recorded in the county."

Dr. Isaac Rose (M.O., St. Helen Hospital, Barnsley) spoke on the health of the children in Barnsley during the war. Although X-rays had shown no signs of scurvy, he thought that the lack of fresh fruit had resulted in a mild and subclinical form of the disease, manifesting itself in fretful children with spongy gums and sores which were long in healing. Some of the Barnsley schools were giving vitamin C and D preparations to 50 per cent. of the children, the others being kept as controls. The result of this experiment was not yet manifest. Infectious disease has been low, but scabies and infective skin diseases have increased. The psychological effects of the war on children had happily been slight and due usually to parental anxiety. An increase had been noted in the incidence of tonsillar and adenoid sepsis, particularly among the children evacuated from coastal areas into the town. In accordance with Dr. Sheldon's experience, a slight but definite increase in the incidence of tuberculosis had been noted.

Dr. Helen Mackay was of the opinion that anaemia in infants had increased during the war years and attributed this to less iron being given than in pre-war days. Much less of the dried milks with incorporated iron were given than formerly. She had not noticed the increase in the number of premature infants mentioned by Dr. Sheldon. Dr. Denis Pirrie (D.M.O.H., Lambeth) supported Dr. Sheldon's plea for a more extended diet for children. Dr. Brodie (Dep. Sen. M.O., Ministry of Health), Dr. Mary Love (A.M.O.H., Bexley), and Dr. Agnes Nicoll also took part in the discussion.

After Dr. Sheldon had answered the questions raised, a vote of thanks for his excellent paper was proposed by Dr. Dorothy Taylor (Senior M.O., Ministry of Health), seconded by Dr. Hilda Halliday (A.M.O.H., Somerset), and carried with acclamation.

DENTAL OFFICERS' GROUP

Yorkshire Sub-Group

President: B. R. Townend, L.D.S. (Senior Dental Officer, Yorks, W.R.).
Hon. Secretary: Miss R. Sclare, L.D.S. (Dental Officer, Yorks, W.R.).

A meeting of the Dental Officers' Sub-Group of the Yorkshire Branch of the Society was held at Wakefield on October 25th. Mr. S. G. Cubitt, L.D.S., Dental Officer, Wakefield, the retiring President, occupied the chair. Twelve members and three visitors were present.

The minutes of the previous meeting were read and confirmed. The President then gave a short valedictory address in which he expressed doubt about the comfortable Victorian belief in the inevitability of progress, and stressed the need to be prepared for post-war developments. He then installed the new President, Mr. B. R. Townend, in the chair.

Mr. Townend chose as the title of his presidential address "The Science and Art of Keeping Alive." He traced the development of public health throughout the ages. In primitive times, when disease and death were believed to be the result of evil influences, public health was in the hands of magicians and priests, because they were thought to possess some control over these influences. But in spite of these irrational beliefs, few races failed to observe a number of rational beliefs. Mr. Townend gave as examples of this the elaborate sanitary and hygienic arrangements of the ancient cities of Mesopotamia and the Indus Valley, and referred to the health rules of the ancient Hebrews. To the Greeks he attributed the extension of the boundaries of medicine for the advancement of humanity, and remarked upon the surprising modern concepts found in the writings of Hippocrates. The Dark Ages in Europe were a period of retrogression, and the lamp of knowledge was kept burning only by the Arabian scholars; but even so, the credit for the organisation of hospitals and sick-nursing during this period belongs to Christianity. After describing the breakdown of the crude public health organisations as a result of the waves of epidemics which swept Europe during the Middle Ages, Mr. Townend passed on to the period of the Renaissance and its influence on public health. He drew attention to the fact that half of the structures of the body are named after anatomists of this period—Vesalius, Fallopius, Highmore, etc. During the seventeenth century great advances were made in the study of anatomy and physiology—for example, Harvey's discovery of the circulation of the blood. A new interest was shown in vital statistics, which now play such a large part in the social and economic relations of medicine. It was also the age of herbals, of Gerard, Culpepper, Parkinson, and others.

Referring to the eighteenth century as the Golden Age alike of successful practitioners and quacks, a period of palaces and back streets, Mr. Townend described how barriers between ranks and classes began to be broken down as a result of the development of a great social democratic movement following the political evolutions of France and America, which resulted in a corresponding social amelioration. He referred to the part played in the evolution of democracy by the evangelical revival, out of which arose humanistic study and attempt to control disease. He made some pertinent comments on the work and Commission Report of Edwin Chadwick, which was presented in 1842 and which altered the character of public health from a humanitarian to a humanistic movement. Finally, Mr. Townend made mention of the growth and study of bacteriology, which caused new concepts to be formed, and deplored the fact

that public health leaders were no longer sociologists, economists, and philosophers, at least by training. While not denying that modern public health had made great and wonderful advances in the control of disease, he wondered whether the bacteriological concept was not to some extent a side branch rather than a direct advance in the art of keeping alive. He hoped that, as health and happiness were so closely associated and interdependent, the future would see a closer parallelism between those two branches of the study of mankind—medical and social science.

YORKSHIRE BRANCH

President: Dr. J. F. Galloway (M.O.H., Dewsbury I C.B.).
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

The Branch held the inaugural meeting of the 1941-42 session at Leeds on October 31st, 1941; 17 members were present. The minutes of the last meeting were taken as read, approved, and signed.

Dr. Nicolas Gebbie, the retiring President, invested Dr. J. F. Galloway with the President's badge of office and installed him in the chair.

It was decided that the nominee of the Branch to the Central Medical Planning Committee of the Society of Medical Officers of Health should be Dr. R. Sutherland.

The President gave his presidential address, for which he was heartily thanked on the proposal of Dr. McIntosh, supported by Dr. Gibson. It is printed elsewhere in this issue.

The meeting was preceded by the annual luncheon of the Branch at the Great Northern Station Hotel, Leeds. The retiring president, Dr. Nicolas Gebbie, presided, and 54 members and guests were present. Councillor H. Leggett, Chairman of the Health Committee of the City and County of Kingston-upon-Hull, proposed the health of "the Society of Medical Officers of Health." After speaking of the valuable contribution which the members of the public health service had made to the common weal, he paid special tribute to the excellent work which had been done by Dr. Gebbie in Hull. In replying to the toast, Dr. John Buchan, M.O.H., Bradford, said that he sometimes wondered if local authorities realised their indebtedness to the medical profession for many things now recognised as essential. In introducing new measures, however, the M.O.H. must plan his campaign step by step. People must be persuaded to do things for themselves and much educational work must be carried out before any improvement could be achieved. Hull was now in the forefront in public health, a fact which reflected credit on the retiring president, Dr. Gebbie. Dr. D. D. Payne, M.O.H., Harrogate, proposed the health of the guests, and Mr. Leslie Emerson, Education Officer, County Borough of Dewsbury, replied. Colonel H. Collinson, Group Officer E.M.S., who also replied for the guests, said that the war had brought the medical officer of health into much closer contact with members of the medical profession generally, and he spoke appreciatively of the way in which medical officers of health were carrying out an enormous amount of additional work. After the war he looked forward to an effective association between voluntary and municipal hospitals, and he hoped that municipal hospitals would take an increasing part in the education of medical students in University centres.

Dr. J. J. Jervis, M.O.H., Leeds, proposed the health of the retiring president. In reply, Dr. Gebbie thanked the members of the Branch Council and the Secretary for their loyal help during the year. Proposing the toast, "The Incoming President," Dr. G. H. Pearce expressed the hope that Dr. Galloway would have a successful and prosperous year of office. Dr. Galloway suitably replied.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

The annual meeting of the Branch was held at Newcastle-upon-Tyne on October 25th, 1941. The retiring president, Dr. James Grant, and the president-elect, Dr. G. Hurrell, together with nineteen other members, were present.

The minutes of the meeting held on August 9th were read, confirmed, and signed by the chairman. The members were informed that Dr. James Hudson had been re-elected to serve on the Northern Branch Council of the Society of Medical Officers of Health for the session 1941-42.

The annual report of Council, 1940-41, was read by the Hon. Secretary, and was unanimously adopted. The Council of the Branch was then elected, and Dr. James Hudson was appointed the British Medical Association representative.

Dr. Grant, in asking Dr. Hurrell to take over the presidency for the coming session, trusted that he would have an even more successful year than his own. Dr. Hurrell, thanking Dr. Grant for his services during the past session, pointed out that the increased membership and well-attended meetings were in no small measure due to Dr. Grant. Dr. G. Hurrell than delivered his presidential address on "The Diagnosis of Pulmonary Tuberculosis." On the motion of Dr. W. H. Dickinson, the President was accorded a hearty vote of thanks.

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Editorial

The Spread of Poliomyelitis

Although there is evidence that poliomyelitis was present in the Mediterranean region more than 3,000 years ago, the first record of an epidemic of the disease is that by Badham[1] in 1835, from Worksop in Nottinghamshire. This report is said to have aroused the interest of Jacob von Heine[2] in Germany, who in 1840 gave the first clear description of the acute disease. Fifty years later Medin[3] in Sweden distinguished the bulbar, ataxic, encephalitic, and polyneuritic types, in addition to the spinal form, while a few years later the importance of abortive cases in spreading the disease was recognised in America. It is rather curious that the first outbreak of poliomyelitis should have been described in this country, where the disease cannot be looked upon as a major health problem. Nevertheless, a few cases continue to occur either in rural districts or in semi-closed communities such as schools: within the last few months there have been outbreaks in the counties of Buckingham and Berkshire. In the absence of precise knowledge of the epidemiology of poliomyelitis it is impossible to be certain that a major epidemic will not occur in this country. During the summer of 1941 a devastating outbreak was present in Canada, and epidemic proportions are not infrequently reached in France, the Scandinavian countries, the U.S.A., and Australia. No special climatic conditions appear to be essential for the spread of poliomyelitis, and, although the majority of epidemics have occurred in the summer and autumn, winter outbreaks have been recorded even beyond the arctic circle. Again, although 50 to 90 per cent. of the cases occur in children under five years of age, they constitute from 9 to 12 per cent. of the population only; in some outbreaks the number of adults may be as high as 15 to 30 per cent.

It is now recognised that there are a number of different strains of poliomyelitis virus, one or two of which can be adapted to cotton rats and white mice. Despite the extensive knowledge that we now possess of poliomyelitis, there is still uncertainty about the way in which it is transmitted from one person to another. Until recently it was generally believed to be solely transmitted as a droplet infection, the portal of entry being the olfactory mucosa and the virus passing up the olfactory nerves to the central nervous system. This view was based largely on experiments with rhesus monkeys, which are most readily infected by intranasal instillation of the virus, and by the finding of the virus in the nasal washings of patients suffering from the disease. There were, however, certain difficulties in believing that the nasal mucosa was the normal

portal of entry in man. Poliomyelitis is most common at the time when other known droplet infections are at their lowest ebb, and it has been shown that in the U.S.A. the peak of poliomyelitis occurs at the same time as that of typhoid. In man the paralysis is usually segmental in type, and is most common in the lumbar region of the cord, and in the cervical and bulbar enlargements, pathological lesions being localised in these areas and absent from other parts of the central nervous system. Also, if the virus habitually enters by the olfactory mucosa, it is difficult to explain the absence in man of lesions not only in the olfactory bulbs but in the thalamic region of the brain; these do not occur even in cases with bulbar paralysis, or in the spinothalamic tract, which should be involved in the passage of virus to the lumbar enlargement. When, in rhesus monkeys, the first and thirteenth cranial nerves are disconnected from the brain and virus is injected intravenously, the animals still develop symptoms. This shows that an intact olfactory tract is not essential for the production of poliomyelitis.

If the olfactory mucosa is not the normal portal of entry in man, and in view of the fact that to reach the central nervous system it must pass centripetally by the axis cylinders of peripheral nerves, it is pertinent to inquire at what other points the virus may gain entrance. In the skin the nerve-endings are protected by the thick horny layer of the epidermis. As a result infection through the skin occurs only in traumatised areas or when, in monkeys, the virus is injected intradermally. The effects of trauma in facilitating the contact of virus and nerve endings are especially noticeable in the tonsillo-pharyngeal area. Helms[4], for instance, has been able to collect the histories of eighty-two cases of poliomyelitis developing in from seven to twenty-two days after tonsillectomy and adenoidectomy; of these, no fewer than 66, or 80 per cent., had bulbar paralysis, thus indicating a direct spread along the nerve fibres supplying the tonsillo-pharyngeal region. Obviously, when poliomyelitis is prevalent the risk of operations for tonsils and adenoids should be most carefully weighed. The importance of the tonsillo-pharyngeal region as a portal of entry has recently been emphasised by Faber and Silverberg[5]. In experiments on rhesus and cynomologus monkeys they blockaded the nasal mucosa with zinc sulphate solution and then subjected them to a spray containing active poliomyelitis virus. After spraying for three hours two rhesus and two cynomologus developed symptoms. In the case of the cynomologus monkeys the symptoms were of bulbar origin, in the rhesus monkeys there was development of leg paralysis. Since rhesus monkeys are difficult to infect by feeding poliomyelitis virus the portal of entry may have been the tonsillar area or possibly the lungs, the olfactory mucosa being out of action. In the intestinal tract of man, apart from trauma, there is a possibility that the poliomyelitis virus may come into direct contact with nerve endings, for in the intestine there is no protecting epidermal layer. If, however, the virus is placed in the intestine of rhesus monkeys poliomyelitis does not develop unless the intestines are mechanically dilated, when infection readily occurs. This is presumably because in normal circumstances the virus is swept out of the intestine by rapid peristalsis, while when the intestines are dilated there is time for virus to come into contact with non-medullated nerves and to be absorbed by axis fibres.

The frequency of paralysis involving the lumbar cord in man would be satisfactorily explained if virus entered by the alimentary tract, but it is not quite clear by what route the virus would pass from the intestine to the cord. Toomey[6] believes that it is by the sympathetic nerves and the somatic nerves of those segments that lack white rami communicantes. Spread to the cervical area would be along the sympathetic collateral chain to the other segments that lack white rami communicantes. The isolation of virus from the coeliac ganglion of patients suffering from bulbar symptoms suggests that the sympathetic nerves constitute the main path by which the infective agent passes to the central nervous system. Further evidence which suggests that the intestinal tract is the most important portal of entry is the conveyance of the infection to monkeys and chimpanzees by contaminated food, and the finding of the virus in the faeces of patients not only in the acute stages but during convalescence. Recent investigations (cf. Top and Vaughan[7]) have shown that the virus may be present also in the stools of apparently healthy persons. It was formerly thought that familial infection was rare, but it is now realised that while many members of a family may harbour the virus in their stools only one or two may develop symptoms, the others having inapparent infections. The presence of abortive or inapparent cases with virus in the stools explains the occurrence of institutional outbreaks such as that recorded by Silverman[8] in Syracuse, New York State, at a time when there were no other cases in the city. In a recent outbreak in Cook County, Illinois virus was isolated from the stools of eight out of 38 healthy contacts. These included two healthy children who had come in contact with adult members of their family suffering from poliomyelitis (Piszczek *et al.*)[9]. In view of the frequency with which the poliomyelitis virus can be isolated from the faeces it is not surprising that it should have been possible to obtain it also from the sewage derived from buildings in which cases of poliomyelitis are being nursed. To complete the analogy with typhoid, Paul, Trask, Bishop, Melnick, and Casey[10] have recently been able to isolate the virus of poliomyelitis from flies captured in the neighbourhood of infected cases in Connecticut and Alabama, thus confirming the experiments carried out in 1911 by Flexner and Clark,[11] who found that house flies contaminated artificially with the virus could act as carriers for several days. These newer findings explain satisfactorily why, in a study of epidemics such as that in Detroit in 1939, a considerable proportion of the earlier cases appear to have been in direct contact with one another, while later in the outbreak no such close association was discernible. At first, therefore, a single carrier or a person with inapparent disease may infect his associates by direct contact possibly by infected droplets from the naso-pharynx or contamination of food; later, with contamination of sewage and of flies, the cases become much more widespread.

In the absence of any means of immunising against poliomyelitis, it would seem clear that every case should be treated, from the point of view of infectivity,

exactly as if it were one of typhoid. In the past, far too few efforts have been made to guard against the possible contamination of food, fingers, and flies by the virus of poliomyelitis in the faeces.

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Age- and Sex-Distribution of Chronic Typhoid Carriers

For many years the Health Department of New York State has had a system of ascertainment and control of typhoid carriers which has given them exceptional experience of the handling of this problem. That they are not entirely satisfied that it is effective in reducing the incidence of the disease—since most carriers are not detected until they have already done damage—has already been the subject of comment.* It does, however, give food for interesting epidemiological inquiry. In New York State, as elsewhere, the high proportion of carriers who are elderly women has been noted, but some doubt has been felt as to whether this was due to the greater liability of such women to become carriers, or whether the female's association with cookery and housewifery made her more likely to be discovered during the investigation of other cases, or whether the elderliness of carriers was an aftermath of a much higher incidence of typhoid at the time when they were young. The first of these hypotheses could obviously be tested by following up known acute cases of typhoid of both sexes and all ages and finding how many entered the carrier state. This has been done and is the subject of an interesting note by Dr. W. R. Ames.† The figures cover ten years ended December 31st, 1939, during which period 3,750 cases occurred; of these, 434 patients died and 122 were not followed up, leaving 3,194, of whom 93, or 2·9 per cent., became carriers. The age- and sex-analysis is contained in a table of which the following is an abbreviation:—

Age of Contracting Typhoid	Cases			Carriers			Carrier-Case Ratio		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0–	355	285	640	3	—	3	0·8	—	0·5
10–	498	418	916	2	—	2	0·4	—	0·2
20–	347	244	591	7	4	11	2·0	1·6	1·9
30–	216	202	418	8	14	22	3·7	6·9	5·3
40–	178	127	305	7	19	26	3·9	15·0	8·5
50–	112	82	194	8	12	20	7·1	14·6	10·3
60–	65	65	130	3	6	9	4·6	9·2	6·9
All ages ...	1,771	1,423	3,194	38	55	93	2·1	3·9	2·9

In both sexes the probability of becoming a carrier increases with age. A female is nearly twice as likely as a male to harbour the infection after recovery, and the probability is relatively greater after 40 years of age. These large figures confirm statistically the experience of individual clinicians and epidemiologists. The age-distribution of known carriers is therefore not entirely a consequence of the falling incidence of the disease, nor is the preponderance of female carriers due to accidents of detection. It will be observed, incidentally, that in New York State typhoid is less common in females at practically every age than in males. The incidence-rate for each age and sex is not given, but, although there is a very slight excess of males in New York State, the preponderance of male cases of typhoid is too great to be explained in this way.

The efficacy of cholecystectomy in eradicating the carrier state is a matter which must constantly be in the minds of public health administrators. In a recent instance‡ this operation was performed, but subsequent examinations of the faeces gave an almost pure growth of *E. typhi*. There is no record of any further investigations with a view to determining where the organism continues to be harboured in this case.

Diagnosis of Diphtheria

The Emergency Public Health Laboratory Service (E.P.H.L.S.) has recently started the practice of printing its monthly *Bulletin* so that copies may be distributed more widely than has previously been possible. Among other items in the January issue is a memorandum on the interpretation of laboratory findings in the diagnosis of diphtheria. This was drawn up in response to a request by a medical officer of health for a concise statement on the matter which could be issued for the guidance of general practitioners. The memorandum has been prepared with some care, and has been approved by the heads of all the constituent and associated laboratories of the Emergency Public Health Laboratory Service. Only a limited number of reprints of the memorandum are likely to be available owing to the shortage of paper, and medical officers of health who wish to apply for reprints are advised to get into touch with the nearest E.P.H.L.

An explanation is given of the significance of the results furnished by those laboratories which no longer depend solely on a simple Loeffler slope for the detection of diphtheria bacilli. The new methods for the

* *Public Health*, 1940, **53**, 167.
† New York State Department of Health: *Health News*, 1941, **18**, 171.
‡ *Monthly Bulletin of the Emergency Public Health Laboratory Service*, December, 1941, p. 6.

most part make use of selective culture media containing tellurite. Not only do these media inhibit the growth of many naso-pharyngeal organisms and make the detection of diphtheria bacilli more easy, but by their use and other cultural tests the three types of diphtheria bacilli—*gravis*, *intermedius* and *mitis*—can be distinguished. Tellurite media are much superior to Loeffler medium in isolating diphtheria bacilli from contacts, carriers and convalescents.

Although diphtheria bacilli are more readily detected by means of tellurite media, it still takes time to do this. The memorandum therefore stresses what has been so often stressed before—namely, that the doctor should never wait for the laboratory report before administering antitoxin if there is clinical evidence that the patient is suffering from diphtheria. In most cases a positive report can be given within eighteen to twenty-four hours of receipt of the swab, but a negative report on the first day may on occasion have to be revised on the second, as colonies may not develop until then. This is more especially the case in connection with swabs from convalescents, contacts and carriers. As diphtheria bacilli from contacts and carriers may be avirulent, a virulence test may sometimes be required, and a final report on this may not be available for a week after the swab has been taken. A report on the type of bacillus can often be given in twenty-four hours, but a further one to three days may be required for confirmation.

The memorandum goes on to point out that although the more toxic cases of diphtheria are generally due to infection with the *gravis* and *intermedius* types, severe, and sometimes fatal, infections may follow an attack by the *mitis* type. *Gravis* and *intermedius* infections are more often characterised by paresis and cardiac weakness, and *mitis* infections by laryngeal complications. *Gravis* and *intermedius* types are nearly always virulent; some strains of the *mitis* type are avirulent, and a virulence test may therefore be necessary when these are isolated from contacts and carriers.

The memorandum emphasises the importance of care in taking the swab, and suggests that this should not be delegated to the non-medical staff unless it is certain that they will do it efficiently. Except in suspected cases of faucial diphtheria, separate swabs should be taken from both nose and throat, and also from the ear if there is a discharge. The throat swab should not touch the tongue and should be rubbed thoroughly over the membrane or the tonsillar region. The nose swab should be inserted along the floor of the nasal cavity as far back as possible. If antiseptics have been used as a paint or gargle a swab may give a misleading negative result. Doctors are asked to state on the application form (*a*) whether the swab is from the nose, throat or ear, and (*b*) whether it is from a suspected case, a convalescent, contact, or suspected carrier, as laboratory procedure and interpretation of results are guided by the type of case the laboratory worker is asked to investigate. Cases should not be regarded as free from infection until three consecutive swabs taken at three-day intervals are returned as negative on tellurite medium.

This useful memorandum, of which the above is a full summary, is preceded by a short note on diphtheria prophylaxis in which it is stated that certain batches of a particular product of A.P.T. issued during the early days of the immunising campaign proved to be of low antigenic potency. Since this was brought to light the issue of this product was suspended in March, 1941, and steps were also taken to recover supplies already distributed. It is thought that children inoculated with A.P.T. issued by the E.P.H.L.S. since that date are satisfactorily immunized against diphtheria.

OBITUARY

LESLIE WINTER DRYLAND, M.R.C.S., D.P.H.

We regret to record the death on December 28th of Dr. L. W. Dryland, Knight of the Order of St. John of Jerusalem and Deputy Lieutenant for the County of Northampton.

Leslie Winter Dryland, who was a Fellow of the Society of Medical Officers of Health, was born at Kettering in 1868. He was educated at Uppingham School, at Bristol, and St. Bartholomew's Hospital, qualifying M.R.C.S., L.R.C.P. in 1891 and taking the D.P.H. in 1904. His first appointment was that of house-surgeon to the Derbyshire Royal Infirmary, and he served from 1892 to 1895 as junior and senior house-surgeon at the Northampton General Hospital. He became a partner in a firm of four doctors practising in Kettering, Medical Officer of Health to the Rural District Council, and Senior Honorary Medical Officer to the Kettering and District General Hospital. He was well known throughout the district for his useful and unstinted work, especially in connection with surgery.

H. CARRIÈRE, M.D.

We announce with regret the death of Dr. H. Carrière at Berne on December 24th, 1941. Dr. Carrière was the late Director of the Federal Service of Public Health and for many years had represented Switzerland on the Permanent Committee of the International Office of Public Health, Paris. He was President of the Finance Committee and had been Senior Delegate since the death of H.E. M. Camille Barrère.

THE LATE DR. E. H. T. NASH

To the Editor of PUBLIC HEALTH

SIR,—The excellent obituary notice of the late Dr. Nash in your January issue makes no mention of his interest in dental affairs. It was through his efforts that the very modern clinic building was erected in Heston and Isleworth, where a team of dentists deals with school, infant welfare, maternity, and tuberculosis work. He was also responsible for establishing there the first orthodontic school clinic in this country, where treatment is carried out under the supervision of a consultant orthodontist. Nash's interest in this branch of dentistry caused him to become a member of the British Society for the Study of Orthodontics.

During his Presidential year he represented the S.M.O.H. at the annual meeting of the B.D.A. in Newcastle.

Yours faithfully,

London, W.3. SYDNEY B. NEWTON.
January 16th.

INDUSTRIAL PULMONARY FIBROSIS WITH SPECIAL REFERENCE TO SILICOSIS IN WALES*

By T. W. DAVIES, M.B., B.CH., B.SC., D.P.H.,
Tuberculosis Physician, Swansea Union Area, Welsh National Memorial Association.

Lung disease and industry have long been associated, and the occurrence of well-defined disease as the result of working under certain industrial conditions is now clearly established. Among the most important are those due to the inhalation of certain dusts which cause the most widespread and serious of all occupational diseases. Historically it is also the oldest, and Collis in his Milroy lectures (1915) related much of interest in this connection. Observers from the earliest times have noted the definite risk to health which might arise in a community engaged in a dusty occupation, and the proneness of workers in these dusty trades and occupations to develop tuberculosis. The realisation of the mortality from the disease was widespread, but neither the entity of the disease nor its causal agent was determined: thus the various names distinguishing what was essentially the same disease as it occurred in coal-miners, stone-cutters, gold-miners, grinders, and cotton and other textile workers. The dusts responsible were those of coal, metal, stone, pottery, and of various textiles.

Zenker, in 1866, suggested the term pneumonoconiosis to describe the pulmonary fibrosis produced by inhaled dust, and the contraction of this—pneumoconiosis—is used to-day. Many of the older terms describing the disease were discarded when it was recognised that the more serious of the industrial pulmonary fibroses were caused by dust containing silica in the free form, SiO_2, on the one hand, and the inhalation of asbestos dust on the other. Hence the terms silicosis and asbestosis.

Silica (SiO_2) is the main constituent of many rocks such as quartz, sandstone, ganister, flint and chert. Asbestosis is a "silicatosis"; the fibrous materials known as asbestos are hydrated silicates, the silica being combined with various metallic bases, especially magnesium and iron. The number of workers exposed to asbestos in manufacturing processes, however, is relatively small compared with the number of workers exposed to free silica dust. Although the consumption of asbestos in the country has increased enormously, and new uses for it are constantly being found, Wales has as yet no indutsry in which this material is employed.

Workmen's Compensation

Silicosis and asbestosis are covered by the Workmen's Compensation Act. These two diseases were not included among diseases scheduled under the Workmen's Compensation Act, such as lead poisoning or anthrax, but power was obtained by the Workmen's Compensation Silicosis Act, 1918 (incorporated in section 47 of the Workmen's Compensation Act, 1925) to deal with silicosis by special schemes. It was extended by the Workmen's Compensation (Silicosis and Asbestosis) Act, 1930, to enable schemes to be made for asbestosis. Section 47 of the 1925 Act and that of 1930 form the foundation of compensation for these diseases.

The legal definition of the conditions covered by the Act are "silicosis"; "fibrosis of the lungs due to asbestos dust"; "either of these diseases accompanied by tuberculosis." The Secretary of State is empowered to provide a scheme for the payment of compensation. The Act also outlines the provisions for medical examinations, and these are laid down in the Silicosis and Asbestosis (Medical Arrangements Scheme) 1931. A medical board is appointed with panels consisting of two members.

Industries Involved

The following industries or processes have been included in the scheme:

1. *Refractories Industry*.—These industries form a small group engaged in the getting of silica rock or ganister, and in the manufacture of silica bricks or silica cement. Initial examinations carried out by or for the Medical Board have been applied to this industry and since 1919 the workers have been periodically examined and if necessary radiographed. A worker is suspended if he is found to be suffering from silicosis or silicosis accompanied by tuberculosis. Candidates for the industry are not admitted if evidence of present or past tuberculosis is found, or if a certain prescribed standard of physique is not attained. In this industry in 1940, 529 initial examinations were made and 44 workers were suspended: 1,379 periodic and 130 X-ray examinations were carried out; one worker was suspended due to silicosis and one owing to tuberculosis.

2. *Sandstone Industry*.—The processes specified are occupations involved in getting or manipulation of sandstone in any quarry or mine or at premises worked in conjunction with a quarry or mine. This scheme does not apply if the sandstone contains less than 50 per cent. silica (free or combined). Initial and periodic examinations have also been applied to this industry since 1928. During 1940, 167 initial examinations were made, and 20 workers suspended; 1,179 periodic and 155 X-ray examinations were carried out; 7 workers were suspended on account of silicosis; no cases of tuberculosis were found.

3. *Various Industries Scheme*.—In this are included coal mines, the pottery industry, ironstone mines, lead mines, dressing of granite stone, slate mines, and underground workmen in tin mines. Initial and periodic examinations have been applied to the pottery industry only since 1931. In 1940 there were 233 initial examinations with 17 suspensions; 1,510 periodic and 219 X-ray examinations were made; 29 workmen were suspended owing to silicosis and 2 for tuberculosis.

4. *Asbestos Industry*.—The scheme was applied in 1931 to workmen employed in specified occupations in the preparation of asbestos for manufacture; processes in the manufacture of asbestos textiles and of insulation slabs; in the making and repairing of asbestos mattresses, and the sawing and grinding of asbestos in the dry state. Initial and periodic examinations are applied to this industry and the scheme was started in 1931. The Silicosis Medical Board carried out, in 1940, 1,132 initial, 1,595 periodic, and 104 X-ray examinations; 83 entrants were suspended, but no cases either of silicosis or of tuberculosis were discovered either in the initial examinations or during the periodic ones.

The foregoing is a brief description of the industries which are responsible for industrial pulmonary fibrosis

* Paper read at a meeting of the Welsh Branch of the Society of Medical Officers of Health, September 26th, 1941.

in Great Britain. Of these, only coal mining in the North and South Wales Coalfields and slate quarrying and slate mining in Caernarvonshire and Merionethshire trouble us to any great extent in Wales. Other industries in Wales of less importance in which the workers are exposed to injurious mineral dusts include silica brick making in Denbighshire, Carmarthenshire, and certain other parts of Wales; silica flour grinding in Flintshire; granite quarrying and working in Caernarvonshire, and quarrying for building stone, road metal, and other purposes, scattered throughout the country. All these industries have influenced unfavourably the Welsh mortality rates from respiratory diseases. The incidence of silicosis continues to be serious, and in Wales occurs chiefly in the coalfields of South Wales and in the slate mines of Merionethshire.

Factors in Silicosis

The general conception of silicosis to-day is that of a disease in which two factors may be associated: (1) silica dust, which is the essential factor, at least for the initiation of the silicotic process, and may be the only factor present throughout the disease; (2) infection by the tubercle bacillus, which is responsible in many cases for the development of the disease to a disabling degree and its termination in death.

For silicosis to be produced the dust must be inhaled, and in order to be inhaled it must float easily in the air. It should be remembered that mixed dusts are often encountered and a modified effect may result.

The reaction of the lung tissue to the dust results in fibrosis which ultimately replaces the lung tissue. The extent of lung tissue involved will depend on the concentration of silica dust in the atmosphere, the size distribution of the particles, the period of time over which exposure has taken place, and, presumably, the condition of the air passages of the workers. Healthy lungs can cope with appreciable quantities of dust without disabling effects. It has been shown that the incidence of silicosis and asbestosis varies directly with the concentration of the dust in the air breathed and the length of exposure thereto. Below certain low concentrations no evident harm occurs to the healthy person.

The use of mechanically compressed air drills, used in coal mines with the object of following the seam of coal and for enlarging actual working space, has enormously increased the amount of dust. American and South African investigators have also stressed this as an adverse factor influencing the incidence of the disease. Driving of "hard headings" by these means results in the exposure not only of the drillers but also of the workers in the vicinity to an intense concentration of dust, often of a highly siliceous nature.

The protective mechanism of the lungs is efficient unless it is constantly overwhelmed over a long period by the presence in the air of particles less than 10 microns in length. Over 90 per cent. of mineral particles found in lungs are less than 5 microns in diameter. With silica dust the dangerous particle size ranges up to 10 microns; with asbestos dust the dangerous range extends to 200 microns. In order, therefore, to produce silicosis the dust must be in the form of minute particles, so small as to be invisible to the eye, except that in a beam of sunlight they may appear as a cloud-like smoke.

Length of Exposure Period

The length of exposure determining the onset and maturation of the disease varies in the different industries. Cases of acute silicosis have been reported in workers in the manufacture of abrasive soaps (MacDonald and others, 1930) and in lead miners by Thomas (1937). In the coal industry early changes are seen after ten to fifteen years' exposure, but the disease takes from upwards of twenty to thirty years to produce serious disability. Even so, two cases of silico-tuberculosis with short exposure periods have been observed.

1. Collier's boy, aged 19. Exposure period, three years. Seen March, 1938. Unemployed two years at the time. X-ray: extensive infiltration of practically whole of both lungs; lesion coalesced in upper zones. Sputum positive. Died May, 1938. Pathologist's report on lungs: silico-tuberculosis.

2. Miner, aged 19. Exposure period, three years. Seen January 16th, 1940, after brisk haemoptysis. Admitted to hospital. Sputum positive, January, 1940. X-ray: nodulation throughout both lungs with coalescence in right upper zone.

The exposure period when serious disease manifests itself in the slate mining industry of Merionethshire compares with that of the coal industry. Among the cases in slate quarry miners investigated by me in 1937 (Davies, 1939), nineteen years' exposure as a miner was the shortest period which resulted in advanced disease.

Changes in Lung

Exposure to silica in the uncombined state produces a nodular fibrosis. With a dust cloud of moderate concentration the disease develops slowly and the nodules of fibrous tissue appear in the lungs. This classical form occurs in metal grinders, in sandstone and pottery workers. When, however, the dust contains a very high proportion of free silica and is in a fine state of division the disease tends to develop rapidly. The nodular form is still retained by the fibrosis, the nodules developing at the usual sites, but the fibrotic changes occur also in other parts of the lung structure. Flint grinding, sand blasting, and abrasive soap manufacture give rise to this form of disease. Further, when the dust of free silica is inhaled mixed with certain other kinds of dust in important amount, the arrangement and distribution of the resulting fibrous tissue may be modified, as seen in coal miners and slate miners.

Many are the theories enunciated, some the result of experiment, to account for the changes produced in the lungs. Early investigators considered that the fibrosis was due to mechanical means. The minute particles of silica, because of their hardness and irregular outline, set up an irritative process in the lungs. This theory has been superseded by the work of Kettle and Gye (1922), who formed the opinion that silica acted by chemical means. Silica became dissolved in the tissue fluid into silicic acid. More recently Professor W. R. Jones has stated that silicosis is produced by sericite, a hydrated aluminium silicate. Further work on this extremely intricate question is being carried out; as might be expected, the inhalation of other dusts in conjunction with silica may profoundly affect the latter's solubility.

Tuberculosis and Silicosis

The second factor in the general conception of the disease mentioned previously was infection by the tubercle bacillus. It is well known that silicosis is often complicated by tuberculosis and that silicosis predisposes

the silicotic to tuberculosis. Sutherland (1940) gives the deaths certified by the Silicosis Medical Board as due to silicosis and silicosis accompanied by tuberculosis for the period 1932-39 as 600 and 797 respectively in all the industries. In the coal-mining industry the reverse was the case, the figures being 261 by silicosis and 173 by silicosis accompanied by tuberculosis. Although there is a low mortality from tuberculosis among coal miners, the mortality among the anthracite workers of South Wales is higher than in workers in the other parts of the same coalfield. Explanations for this low mortality in coal miners have been given by Cummins and Weatherall (1931), who believed that finely divided coal dust is capable of adsorbing the active principle of the tubercle bacillus. Cummins (1934) has shown that coal dust has an action on the toxins of the tubercle bacillus.

That tuberculosis does exist often unsuspected among coal miners has been shown by Enid Williams (1933) and by Sen (1937). Personal observations of coal miners from the anthracite area confirm these findings that, although tubercle bacilli may not be present in the sputum, infective silicosis is more prevalent than hitherto suspected. In a high percentage of Grade 3 silicosis the absence of super-added tuberculosis cannot be excluded. The pathologists, however, do not agree with the above view.

Amor (1941) maintains that the cricket-ball mass so common in South Wales anthracite miners has a tuberculous basis for the following reasons: (1) It is uncommon to find tubercle bacilli in the sputum, except when these shadows are developing or have fully developed. (2) The pathological structure of those in which the sputum is positive is identical with the type in which the sputum is negative. (3) Cavity formation occurs within the hardened dense mass and tubercle bacilli may be found in the walls even when the sputum is negative. (4) The presence of these masses is invariably associated with a toxic condition of the patient. Simple silicosis is not as a rule associated with toxic manifestations. (5) The family history of men in this stage of silicosis often shows active tuberculosis in other members of the family. This last would imply that the condition is the result of exogenous infection from the home. It is difficult to accept reasons (4) and (5). It is granted that the onset of infective disease can be judged by the deterioration in the condition of the patient, such as loss of weight, increased dyspnoea, rapid pulse, etc., all of which are manifestations of a toxic condition. Cricket-ball masses, however, are often present and unaccompanied by toxic symptoms. Cases of pulmonary tuberculosis do occur in the families of silicotics, but not more so than in the families of non-silicotics, and the inference would be that when they do occur the infection is spread by the silicotic with infective disease, and not by the tuberculous to the silicotic.

Even if coal dust tends to inhibit the tuberculous process, according to Cummings (1935) there seems to be no evidence that the tubercle bacillus of the silicotics differs in any way from that infecting the population round about.

The tubercle bacillus is not easy to find in the sputum of silicotics. The figures of the Silicosis Medical Board in South Wales show that of 1,151 coal miners seen by them during 1939-40, only in 4·1 per cent. of cases was the sputum found positive. Among the quarry miners of Blaenau Ffestiniog, tubercle bacilli were found in 12·5 per cent. of 117 cases investigated. The finding of the tubercle bacillus is the only proof of a tuberculous focus in either the sputum or the tissue.

Silicosis in S. Wales Coalfields

Ninety per cent. of the total certified cases of silicosis occur in the South Wales coalfields, and 50 per cent. of these are from the anthracite area. During 1940, 469 certificates of disablement were granted by the Silicosis Medical Board in Great Britain in the coal mining industry, and, of these, 434 were granted in the Welsh coalfields, mostly in South Wales: 266 total certificates were awarded—237 for silicosis, and 29 for silico-tuberculosis; 269 partial certificates were granted, 418 applications refused; 78 death claims were accepted, and of these, 43 were for silicosis and 35 for silico-tuberculosis.

This preponderance of cases in the South Wales coalfield and especially the anthracite area has been the subject of much discussion. Tattersall (1926) drew attention to the fact that silicosis did occur in coal miners, especially in those men who were engaged in driving hard headings. Professor Cummins was the first to describe it pathologically. Fisher has stated that the silica content of the dust in British coal mines may rise to 60 per cent. It is believed that on the average it is much lower than this, and figures showing dust containing between 10 and 20 per cent. of free silica are more usual.

Hard-heading workers were originally thought to be the only ones who developed silicosis, but in the anthracite area there are fewer headings driven through hard rock. The radiological study carried out by the members of the Association's Medical Staff (Powell and Davies, 1940) showed that lung fibrosis indistinguishable from that of silicosis is to be found not merely in coal miners employed on "hard headings" but in a large proportion of middle-aged coal miners working at the coal face only. Amor (1941) examined 800 coal miners clinically and radiologically, and of the last 50 cases of proved silicosis seen by him only one hard-heading worker was found to develop the disease. This is also the experience of others in the anthracite area. While the ratio of hard-heading workers to colliers is low, it is certainly true to say that the incidence of the disease falls most heavily upon the actual collier.

The high incidence in the anthracite area was discussed by the South Wales Institute of Engineers in May, 1936. Professor T. D. Jones, dealing with the difference in the conditions in the anthracite miners and other mines in the coalfields, pointed out two that were outstanding: (1) more explosives were used during the working shifts on the coalfield; (2) spakes* were in

* In collieries access is sometimes given by means of slants and not by shafts. The men are conveyed in a "spake", a special train composed of flat trolleys fitted with wooden seats placed at right angles to the length of the trolley and consequently also to the slant. The distance travelled varies, but is always over half a mile and takes about 20 minutes. The men sit facing the bottom of the slant, and as the spake usually runs in the main intake airway, they travel with their backs against the wind as they are brought to the surface. In winter the temperature change experienced is over 40° F. The men are also subjected to high wind or air velocities in addition to the change of temperature.

common use. There appear to be two sources of free silica in the dust present in coal mines. In some pits it is found in the layer of inferior coal lying between the coal and the roof. In others it is in the rock or stone which the collier has to rip in order to get at the coal. This rock or stone is shale, clod, clift, and sandstone. As yet there is no definite opinion as to the high incidence in the anthracite area, and it is hoped that the report of the Joint Committee of the Home Office and Medical Research Council, to be published shortly, may throw some light on it.

Silicosis among Slate Workers and Coal Trimmers

Quarry mining is found in many parts of Merionethshire, but chiefly in Blaenau Ffestiniog. Unlike the open quarries of Caernarvonshire, the slate has to be mined. The industry employs about 2,000 men and the incidence of silicosis among them is serious. Some of the worst cases I have seen occurred in this group of workers. The incidence of silico-tuberculosis proved by the presence of tubercle bacilli in the sputum is much higher than among coal miners. Of 117 cases investigated by me (Davies, 1939) silico-tuberculosis or massive silicosis was found in 35. Stage 1 and Stage 2 silicosis was found in 38 cases. Among these cases the sputum was positive in 12·5 per cent. New radiological features, not described before in this country, were observed. Massive enlargement of the mediastinal glands was seen, and these have a dappled appearance to which the name "egg shell calcification" was given.

During the past year or so, since the industry became scheduled under the Compensation Scheme, claims have been made and *post-mortem* examinations carried out. The lungs are under investigation by Professor Tytler. He reports that the most interesting features of these lungs is the very high silica content—12 per cent. and 10 per cent. of dry lung in two cases. These values are on a level with the highest ever recorded, but for various reasons it seems probable that they are largely due to silicates rather than free silica. The slate of Blaenau Ffestiniog contains only about 30 per cent. of free silica, much less than some stones which are relatively innocuous, but the dust is obviously productive of extensive lesions. These probably result from prolonged exposure to high dust concentration in underground mining.

I am glad to feel that the result of the investigation secured the extension of the benefits of the Compensation Scheme to this long-suffering class of worker. Claims under the Scheme are now being made, and, in 1940, eight total certificates and one partial were granted for silicosis, and one death claim was accepted.

Collis and Gilchrist (1928) described radiological appearances like those of silicosis occurring among coal trimmers at Cardiff Docks. These findings were contrary to the investigation carried out by the Industrial Diseases Committee of the Medical Research Council (1934) on a group of coal trimmers from the Swansea Docks where anthracite is exported. The Committee were unable to find in this series any evidence that inhalation of anthracite or other coal dust had caused fibrosis of the lungs. From time to time I have had coal trimmers from the Swansea Dock referred to me for examination, and I have been unable to find any evidence of fibrosis.

Gough (1940) published the results of the *post-mortem* examinations of coal-trimmers on the Cardiff Docks. There were twelve in number. All showed evidence of pneumoconiosis and five had died of this disease. The pulmonary fibrosis was of two types—massive and nodular. The general conclusion is that inhalation of Welsh steam coal-dust for many years leads to serious and sometimes fatal lung fibrosis. This supports the findings of Collis and Gilchrist.

(*To be concluded.*)

POST-WAR MEDICAL PLANNING

By Professor R. H. Parry, M.D., B.S., M.R.C.P., D.P.H.,
Medical Officer of Health, Bristol.

In recent months much has been said and written about the future of the medical profession. Among those taking part in the discussion in the medical journals it has not been difficult to discern the idealist. As always, he is entirely unaware of the practical difficulties to be met in instituting and operating "ideal" schemes. Among the most violent participants in the discussion are, not unnaturally, members of the profession whose future activities and livelihood depend upon the continuance of the present system. We can only guess what the actual consumers—the general public, the most concerned of all the parties—think about the problem, but we are well aware that they are watching us with great interest. At any moment, through the Government, they may take an active part in deciding the future of the medical system in this country. Let us remember this, and be neither bullied nor persuaded to take other than the course directed by facts and common sense.

In the main, the discussion in the medical press has been whether or not there shall be a full-time salaried State medical service. If a full-time salaried service is introduced, one wonders to what extent the profession will fall under the control of lay administration. This danger should warn the profession that a preparatory period is necessary to put our own house in order and to encourage in every possible way the training of medical administrators who will at least have some knowledge of our point of view and our difficulties. It is not my purpose here to discuss the relative merits of a full-time salaried service and the present system, but rather to show that there are other deficiencies in our present organisation which cannot be remedied merely by instituting a full-time salaried service. In fact, such deficiencies must be remedied even if a full-time service is instituted and the treatment should not be further delayed. Even if such a State service becomes operative one can hardly believe that private practice will, in the first instance at least, be completely ousted. In the past the Government's policy has always been to provide an alternative service and the State service would obviously be an alternative to medical practice as it now exists.

It is not outside the scope of future planning to consider carefully a better selection of candidates for the profession—educational tests have already eliminated many of the dull and backward, but mere scholastic attainment does not mean suitability for the profession. Surely there should be a period of probation during early student days, and much sentiment with regard to the future of the candidate is quite unnecessary when one remembers the damage that can be done both to the profession and to the patient by an unsatisfactory doctor. An attempt is made hereunder to suggest improvements in response to criticisms often made regarding the three main branches of medical practice.

Private Practice

A frequent complaint made by patients concerns the financial arrangements between themselves and their family doctor. Many supporters of a full-time salaried service make this complaint their chief argument in favour of their views. It may well be that the difficulty is brought about by the fact that doctors vary their fees according to the means of their patients. In many instances the trouble would disappear, and the risk of exploitation of the patient by unscrupulous practitioners would be less likely, if every doctor had a definite scale of fees known to his patients. On the other hand, from the practitioner's point of view, why should he, as he so often has to do, give his services to the poor people at his own expense? Is not this matter a communal responsibility? Further, patients living at a distance from his surgery cost him in both time and money a good deal more than patients living near, and it is frequently impossible for him to recover the total cost of his services.

To keep practitioners up to date in their knowledge there should be available far more facilities for post-graduate training. The standard of medical practice would also be raised by the stimulation resulting from greater use of *post-mortem* examinations and for private expert enquiries into the cause of death.

We expect far too much from our general practitioners, who at the present time are working under great disadvantages. They have not the full opportunity even to exercise their own abilities, and other medical skill and facilities are not freely available to their patients—for example, the assistance of the laboratory, a most necessary help to a practitioner in making his diagnosis. A domiciliary clinical pathological service and an adequate domiciliary nursing service are both essential to a good medical practice, and it is suggested that such should be free State services. Other expert advice required by the practitioner should also be available, including X-rays and consultative clinics. There is a great opportunity offered to provide such services under the Cancer Act, for any disease as yet undiagnosed may be cancer and this should therefore be eliminated before a diagnosis can be made. Consultative clinics can be established under the Cancer Act for cases referred by general practitioners for diagnosis, and these can be established in special health centres or in out-patient departments of hospitals.

Frequently, the general practitioner has considerable difficulty in obtaining admission for his cases into hospital for treatment even when diagnosis has been made. It is often such a difficult matter that although no one knows better the value of such institutions he is discouraged from recommending a case for admission for diagnosis. The trouble for many years has been partly due to shortage of hospital beds, but in addition we must ensure that admission to hospital depends less upon the good will of the consultant and more upon the urgency for diagnosis or treatment.

In fact, there is little inducement to-day for the general practitioner to take a scientific outlook in regard to the welfare of his patient, unless he himself carries considerable influence with his consultant colleagues or is in a financial position to provide the necessary services.

Public Service

One is not convinced that general practitioners would at once become perfect if they were made full-time servants of the State. We who have been employed in the public health service for many years know its weaknesses, and when we are talking of medical planning we should put forward our suggestions for improving our own service as well.

Such suggestions are the following:

There is little scope, except perhaps in the services of the bigger local authorities like the London County Council, for a clinician to earn a good living as a full-time officer, at least as compared with general or consultant practice. If we are to get the most ambitious of our younger brethren into the service there must be created a service for full-time clinical officers which gives them ample opportunity for professional advancement and reasonable remuneration. To-day, if a doctor in the service wishes to obtain the highest rank he must relinquish clinical work and take on administrative duties.

There is no opportunity given for the special training of administrative medical officers, unless they are fortunate enough to find themselves as understudies. This is unfair to a large number of young public health doctors, and it also limits the choice of medical officers to the highest administrative posts. It does not follow at all that the doctor with the highest medical qualifications is the most suitable man as chief administrator of a local authority. But at all times such a person will have a high standing in the profession, and it will always count with many local authorities. He should, however, have a period of training, or possess administrative qualifications, before he occupies a high position as an administrator. We cannot lay too much stress upon the importance of the medical administrator: the Poor Law service killed itself by ignoring the expert administrator and by becoming a prey to the lay administrator who failed to see the wood for the trees. Administration became the "be all and end all" in the heyday of the old guardians. May we be saved from a local civil service of lay administrators. If we do not want this to happen in the future of medical service, we must select suitable doctors from amongst our best young men and train them in administration—there is scope for such persons not only in the public health service, but also as medical superintendents in municipal and, I sincerely hope, also in the voluntary hospitals of the future.

The work of doctors in the public health services, in big cities especially, is apt to become at times most monotonous, nor does it give scope to an ambitious

young doctor. We have tried in Bristol to remedy this by combining school, maternity and child welfare, and public health. We hope in the near future to proceed a step further and give part-time hospital appointments to holders of such posts. For example, in the development of paediatrics in our city, I am convinced that the best training is received by our maternity and child welfare medical officers, but they are not in touch with the treatment of the sick child in hospital; therefore their training is incomplete. On the other hand, the so-called "children's specialist" in hospital is all too frequently completely ignorant of the upbringing of the normal child, which must be the basis of all sound clinical knowledge.

Hospital and Institutional Services

There are certain weaknesses in our hospital services at the present time. Perhaps the greatest is the lack of co-operation between the local authorities and the *voluntary hospitals*, and between the voluntary hospitals themselves. Co-ordination on the lines suggested by the Nuffield Trust appears to some of us to be the only solution, but I do not want to spend any time in a discussion of this matter, because the policy of the Nuffield Provincial Hospitals Trust is available in print.

Local authorities have the power to provide hospital service for all their inhabitants, irrespective of class. The voluntary hospital, while giving urgent treatment, is under no obligation to provide such a service except to the poor. Too much stress cannot be laid upon this difference, and the fact must be remembered when local authorities contract out any service to a voluntary hospital. The local authority should retain the right to purchase that service on behalf of those outside the scope of the voluntary hospitals' responsibility. In this way all patients would contract for their treatment through local authorities if they so desired. This is of the utmost importance, and if followed I can see the time when exploitation by consultants will be impossible and unsatisfactory nursing homes will die a natural death. When this fact is appreciated all patients of municipal and voluntary hospitals will register themselves for treatment through the local authority, and consultants will be properly remunerated for all their services—in municipal and voluntary hospitals.

The question of private pay beds and pay blocks requires careful consideration. Should not the best possible conditions be given to every patient in our hospitals? Pay blocks and private pay beds convey the idea that money can buy something better, and in actual fact it does, for the best nurses are frequently allocated to take care of such cases. The introduction of class distinction into our hospitals would be a retrograde step. Pay blocks have the additional disadvantage that they break up the conception of continuity of treatment, and, in fact, they become nothing better than nursing homes.

The right of admitting cases into hospital should not become the privilege of the consultant, although he will often be in the best position to say whether or not the case is urgent. There is need in all areas for the centralisation of all applications for hospital treatment. The assessment of urgency can only be done by a medical administrator in close touch with the doctors recommending the case.

There is need for considerable modification of our present classification of hospital patients. Continuity of treatment from the beginning to the end of the illness means that not only the specialist but also the nursing and all other staff concerned in the treatment shall follow up the case. Such a policy means the development within hospitals of special units for the treatment of special diseases and the modification of our ideas of acute and chronic hospitals.

Much has been said for and against medical superintendents and the general methods of administration of both municipal and voluntary hospitals. Let us remember that we can over-standardise, and while I am definitely in favour of a medical superintendent rather than a lay administrator, I know how impossible the position would be if an unsuitable medical superintendent was appointed, and how difficult it would be to get rid of such a person. So much depends upon personalities, and whenever that is the case standardisation should not be insisted upon.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the health departments of various local authorities.

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

BARNSLEY C.B.: Senior D.O., Mr. R. Chase, L.D.S. (Dental Surgeon, Essex C.C.).

BURNLEY C.B.: A.M.O. M. & C.W., Dr. Joyce M. Scholefield. Salary £600, rising to £700.

EVESHAM M.B. & R.D.: M.O.H., Dr. J. J. Murray (M.O.H., Darlaston U.D.).

MANCHESTER C.B.: M.O.H., Dr. C. Metcalfe Brown (M.O.H., Middlesbrough C.B.). Salary £2,000 p.a.

MANCHESTER C.B.: A.M.O.H., Dr. J. F. Swan (A.M.O.H., Renfrewshire C.C.).

SHEFFIELD C.B.: A.M.O. M. & C.W., Dr. Minnie Atkin (A.M.O.H., Dudley C.B.).

In the House of Commons on December 11th, Captain G. S. Elliston asked if the Minister of Health proposed to intervene on behalf of the medical officer of health for Dudley, who had been suspended for the duration of the war because he had registered as a conscientious objector, as permitted by the Military Service Act. Mr. Brown said the appointment, dismissal, or suspension of the medical officer of health of a county borough did not require his approval. He had no authority to intervene between the council and their officer in this matter.

The National Baby Welfare Council has recently issued leaflets on the importance of breast feeding, and on the care of milk in the home. It hopes also to have ready shortly a leaflet on droplet infection and the baby. The leaflets (2s. per 100) can be obtained from the Council at 29, Gordon Square, London, W.C.1.

BOOK REVIEW

Law for the Medical Practitioner. By D. HARCOURT KITCHIN, of the South Eastern Circuit, Barrister-at-Law. London: Eyre & Spottiswoode. 1941. Pp. vii + 376. Price 15s. net.

This is a book for all medical practitioners; it is not devoted to those aspects of the law which are of special interest to members of the public health service, or to students of public health. It covers ground, however, which harbours pitfalls for all of us, as a summary of the subject-matter will indicate. It starts with a brief but very clear account of English law and law courts. (Scottish law and procedure, which are different, are not dealt with, although Scottish judgments are quoted.) Succeeding chapters describe the duties and rights of medical practitioners; the constitution, powers and procedure of the General Medical Council; the liability of medical practitioners or those who employ them or those who assist them for acts of negligence; the giving of evidence; the law of libel and slander; the complicated law relating to persons of unsound mind and mental defectives; legal duties and questions which may arise in connection with death; divorce and nullity of marriage; abortion and bastardy; venereal disease; legal matters relating to anaesthesia; the numerous questions which may arise on the business side of medicine; the making of wills; and the organisation of medical defence. Under each heading the subjects are dealt with concisely and judicially, and point is given to the account by numerous quotations from judgments. The author makes it perfectly clear when he is expressing his own opinions, and these are not the least interesting parts of the text. Public health officers are not free from any of the legal dangers here explained, and this book should prove a useful addition to their libraries.

CORRESPONDENCE

PLANNING FOR CHILD HEALTH

To the Editor of PUBLIC HEALTH

SIR,—It is becoming increasingly evident that our present knowledge of the factors affecting child health and our present means for improving and maintaining child health are inadequate and inco-ordinate. It has been suggested that the time is now ripe for the formation of a Planning Group in this branch of applied medicine. The object of such a group would be to study child health and explore the possibilities of improving the general health and welfare of children, with particular regard to social and environmental factors, nutrition and the better organisation and co-ordination of agencies for child care. Such a group would be organised on regional lines in order to facilitate the meeting of members for discussion, and would have a central organisation to correlate and co-ordinate the findings and the suggestions of the sub-groups. Membership would not be confined to the medical personnel of the Health Services, but would be open to all persons actively concerned with or interested in the objects of the Group, including private medical practitioners, dentists, teachers, nurses and students.

The first five of the undersigned have kindly consented to act as temporary Regional Secretaries for the South-East (including London), the North-East, the North-West, the South-West and the Midlands respectively. Persons interested should communicate with the secretary of the appropriate region, who will supply further particulars. Dr. Kershaw has agreed to act in addition as temporary General Secretary of the Group. We are, etc.,

W. R. DUNSTAN. Stanton, Lewes, Sussex M.O.H., Lewes.
J. A. FRASER. County Hall, Northallerton, Yorks County M.O.H., Yorks, North Riding.
JOHN D. KERSHAW. Town Hall, Accrington, Lancs, M.O.H., Accrington.
JOHN LISHMAN. Medical Dept., 4, Barnfield Crescent, Exeter. Deputy C.M.O.H., Devon.
E. H. WILKINS. 11, Vesey Road, Wylde Green, Birmingham. Assistant S.M.O., Birmingham.
G. A. AUDEN. Professor of Public Health, Birmingham University.
F. LE GROS CLARK. Secretary, Children's Nutrition Council.
ERIC C. DOWNER, M.O.H., Tipton.
L. MEREDITH DAVIES. County M.O.H., Devon.
W. J. DOYLE. M.O.H., Exmouth U.D. and St. Thomas R.D.
MARY FISHER. Assistant M.O.H., Oxford City.
MARY L. GILCHRIST. Assistant M.O.H., Leyton.
J. MADDISON. M.O.H., Twickenham.
D. E. MASON. Chief Dental Officer, Notts C.C.
E. H. MARCUS MILLIGAN. M.O.H., Glossop.
W. LINDESAY NEUSTATTER.
J. F. PILBEAM. Senior Dental Officer, Middlesex C.C.
ERIC PRITCHARD.
MAITLAND RADFORD. M.O.H., St. Pancras.
R. SUTHERLAND. M.O.H., Brighouse.
C. DOSWELL WALLIS.
J. GREENWOOD WILSON. M.O.H., Cardiff.

Note.—The undersigned, as the originators of the proposed Planning Group, wish to add the following amplification of the above letter, which serves also as an explanation of the circumstances in which the Group was conceived. We have taken as our basic principles four primary points:—

1. That the planning of Child Health Services must be an essential part of post-war planning.
2. That the present is the time to consider such planning, always provided that our plans make due allowance for possible wide social and economic changes occurring after or arising out of the war.
3. That health in the fullest sense is concerned with more than mere freedom from physical and mental disease and that in studying and planning for it the medical profession must seek the co-operation of non-medical agencies and individuals.
4. That the health of an individual must be considered in full relation to his social, cultural and economic background and that planning for health must involve some planning of this background.

The above letter was drawn up by us as a general statement of aims and objects and circulated to a number of persons who were likely to be interested in

the proposed group. It is published over the signatures of those who are prepared to accept it as a basis for the formation of the group.

JOHN D. KERSHAW.
JOHN LISHMAN.
E. H. WILKINS.

QUALITY OF MILK

To the Editor of PUBLIC HEALTH

SIR,—My attention has been drawn to the interesting article on page 77 of the January number of PUBLIC HEALTH. I notice, however, that your article assumes that the freezing point test was not used by the analyst in testing the samples in question. In the report of Churcher *v.* Reeves in the *Weekly Notes* dated November 29th, 1941, which is a publication of The Incorporated Council of Law Reporting for England and Wales, it was stated: "freezing tests showed an excess of water of about 4 gallons."

In this connection I would like to draw your attention to an article which appeared in *The Justice of the Peace and Local Government Review*, January 10th, 1942, on page 15. My personal opinion is that if the freezing test is a scientifically accurate guide it is high time that statutory acknowledgment be given to it in this country, as I believe has been done in some others.

Yours faithfully,
H. A. H. WALTER, M.A., LL.B., CANTAB.,
Assistant Solicitor.

Boston, Lincs.
January 15th.

NEW DEAL FOR DENTISTRY

To the Editor of PUBLIC HEALTH

SIR,—I am very gratified that my paper, "A New Deal For Dentistry," published in the July number of PUBLIC HEALTH, has aroused some criticism. More so I am pleased that this criticism has come from a man whose name stands high in the dental profession, Mr. Bowdler Henry. It is also gratifying to read that he agrees with my plea for the urgency of expansion of the communal dental service because, whatever way this may be achieved, it is the idea which inspired me to write the paper in the first place.

Mr. Bowdler Henry seems to confuse, or at least to connect, autonomy with separation. Autonomy means self government, which is a very different thing from separation. The links between dentistry and medicine are close and should be closer, but it is my considered opinion that, short of insisting on a full medical qualification for every dentist and dentistry to be practised as a specialty of medicine, which I do not think practicable, autonomy of control of the profession would so raise its status that closer liaison with the medical profession would inevitably follow. I think this has happened in America, where the dental profession has been autonomous from the commencement. I also think that when the Dentists (1921) Act was framed the idea of ultimate self-government was envisaged. In the Report of the Departmental Committee on the Dentists Act, 1878, which sat in 1918-19, we find the following passage:—

"We are not in the present circumstances in favour of *immediately* severing the control of the dental profession from the General Medical Council. We recommend that the control of the dental profession shall be kept within the orbit of the General Medical Council *for the present*, but that as much self government of the profession by dentists should be effected as is practicable, and we are of the opinion that the public should be represented on the controlling body by laymen." (The italics are mine.)

We all know what those present circumstances were. The country was flooded with unqualified practitioners and their numbers were growing like wild fire. That difficulty has lessened, and in a few years by the natural course of events will disappear, but I do not think that the high hopes and brave dreams which the passing of the 1921 Act raised in the heart of the dental profession have been forthcoming, and I think that one of the reasons for the non-fulfilment has been the invidious position in which the dental profession has found itself.

I also feel that a layman, or even an ill-informed doctor, reading Mr. Bowdler Henry's paper, would imagine that dentistry consists only of extraction of teeth and the provision of artificial dentures. I am well aware that under the National Health Insurance Act dentistry has descended to this low level for the bulk of the working-class population, but surely our ideals should be higher than this. In our present state of ignorance as to the aetiology of dental disease such treatment will continue to be necessary, but under a well-planned state scheme with appropriate education this type of treatment should be replaced to a considerable extent by conservative dentistry. I accept and agree with Mr. Bowdler Henry's ideas of a profession of dental prosthetists. There is no doubt in my mind that the peddling of artificial dentures with its large profits and quick returns has been, and still is, a strong deterrent to dentistry's taking its proper place in the healing art. I would even go further and suggest the possibility that people having less academic and more technical training might well undertake some of the simpler and more routine procedures of conservative dentistry, though I can foresee a storm of protest at such an idea, but I still think that the organisation of such a scheme will be better in the hands of the dental profession working in close co-operation with the medical profession.

Finally, let me say that I wholeheartedly agree with Mr. Bowdler Henry's suggestion of a mixed commission to consider and report on the whole question. It seems the obvious, logical and democratic first step to solution.

Yours faithfully,
B. R. TOWNEND, L.D.S.

Wakefield,
January 19th, 1942.

Dr. James Fenton, Medical Officer of Health of the Royal Borough of Kensington, and a Past-President of the Society of Medical Officers of Health, has been elected President of the Medical Defence Union.

TUBERCULOSIS

In Circular 2526 (issued on November 29th, 1941) the Minister of Health expresses his concern at the increase in the incidence of tuberculosis in 1940 over that for 1939, as revealed by the statistics of mortality, in contrast with the general decline which has been experienced since 1919. The increase has been most noticeable among young women between the ages of 15 and 25, the death-rate per million from respiratory tuberculosis in this group having risen from 762 in 1939 to 881 in 1940, compared with a rise in the death-rate at all ages for both sexes from 535 to 587. More recent figures for the first quarter of 1941 show a slight decline compared with those for the corresponding quarter of 1940; but it is clearly of the first importance under war-time conditions (the circular states) that both the preventive and curative action taken by local authorities under their tuberculosis arrangements should be fully maintained. As has been already announced in the House of Commons, the Medical Research Council has at the invitation of the Minister arranged for an immediate enquiry into the causes of the rise in incidence, and in the light of that enquiry the Minister may have further suggestions for preventive action at a later date. Pending the result of the enquiry, he wishes to draw the attention of local authorities to the following considerations and to request them to take any necessary steps as soon as possible.

Care and After-Care.—Arrangements for the care and after-care of tuberculous patients and their families are an essential adjunct to the treatment service. Assistance of various kinds may be necessary if treatment at an early stage is to be secured, if the stay in an institution is to be continued until discharge is medically justified, and if the risk of a break-down on return to normal daily life is to be avoided. In his Annual Report for 1935 the Chief Medical Officer drew attention to the importance of care work, and indicated the steps which can usefully be taken in the interests of patients and their families (pages 77-81). The Minister urges Authorities to review their present arrangements for care and after-care, and wherever necessary to improve and extend those arrangements, whether directly through the tuberculosis staff of the health department or indirectly through the organisation of care committees in areas where such a committee could usefully render assistance.

In-Patient Accommodation.—The problem of providing sufficient beds for residential treatment has, as the Minister is aware, been a difficulty in some districts. The Minister has under constant review the accommodation included in the Emergency Hospital Scheme, and it is from time to time found possible to release a number of additional beds for the treatment of tuberculosis. Accommodation cannot of course be made available in the area of every authority concerned, and co-operative arrangements with neighbouring authorities may be necessary. If any authority is in need of more beds either for hospital or sanatorium treatment, the medical officer of health should take up the question with the Principal Regional Medical Officer, who has been instructed to give all the assistance in his power.

Nursing and Domestic Staff.—In many districts the problem of providing adequate nursing and domestic staff has been even more acute than that of accommodation. A number of institutions are at present under-staffed, and in a few cases this difficulty has led to the closing of wards. Additional accommodation will not, therefore, solve the problem unless additional staff also can be secured. The closing of this gap must, therefore, be a matter of concern both to the Minister and to each authority affected. The Minister has already been in communication with the Minister of Labour and National Service, who has recognised nursing and domestic works in hospitals, including sanatoria and tuberculosis hospitals, as of the highest national importance. Steps have been taken to bring this fact to the notice both of those who are in such employment at the present time and of women registering under the Registration of Employment Order. The Minister has in Circular 2340 suggested that local authorities should reconsider the salaries paid to their nursing staffs in the light of the revised rates payable in the Civil Nursing Reserve. If the authority have difficulty in obtaining either nursing or domestic staff for tuberculosis hospitals or sanatoria they should satisfy themselves that the rates of salary and conditions of service are satisfactory, with a view to counteracting any possible prejudice against work in a tuberculosis institution.

The authority should also consider whether the conditions of service in their sanatorium or tuberculosis hospitals should be reviewed in the light of the memorandum "Tuberculosis among Nurses" issued by the Joint Tuberculosis Council in 1937 (obtainable from the Secretary, Joint Tuberculosis Council, Preston Hall Sanatorium, Aylesford, nr. Maidstone, Kent, price 6d., post free). The Minister desires to make it clear that the recommendation in paragraph 28 of Circular 2383 of May 28th, that nursing auxiliaries under the age of 21 should not be allocated to nursing patients in sanatoria, does not apply to the nursing of non-pulmonary tuberculosis if nursing auxiliaries are willing to undertake this type of work and volunteer. Medical superintendents and matrons of tuberculosis institutions who have not already done so should be encouraged to explore the possibilities of employing suitable ex-patients as trained nurses and assistant nurses, as nursing auxiliaries and as domestics. The Minister understands that most medical officers of health have reviewed the staffs of all hospitals under the control of the Council and have encouraged suitable nurses (with or without special experience in sanatoria or infectious diseases hospitals) or nursing auxiliaries (whether or not they are members of the Civil Nursing Reserve), who can be spared or who can be replaced by local recruiting or from the Civil Nursing Reserve, to transfer to a sanatorium or tuberculosis hospital where their services are essential or can be fully utilised. To help this procedure, local emergency organisations should ascertain from the immobile members of the Civil Nursing Reserve on their registers who have had experience in tuberculosis whether they are prepared to undertake this work provided that they can be spared from their present duties (if they are in employment). The Minister is instructing the Regional Nursing Officer to do the same for mobile members of the reserve and to advise medical officers of health of the names of any members who are thereby made available for tuberculosis work.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1940

In Circular 2559 the Minister of Health refers to the above Regulations and to Circulars 2139 of September 23rd, 1940, and 2254 of January 17th last. He is informed by the Ministry of Labour and National Service that it is now necessary to secure information in accordance with the Regulations about men in additional age groups who are likely to be called up for military service and who have a tuberculous history. The information should be furnished on Form T.147 in accordance with the procedure laid down in the Regulations and Circular 2139. Accordingly, for the purposes of Regulations 3 and 4 of the above-mentioned Regulations, the Minister hereby requires the appropriate

Medical Officers of Health to send forthwith, as directed by the Regulations, the necessary particulars in respect of all male registered persons born in the years 1923 and 1924, and to comply in other respects with the Regulations as affecting these age groups.

EMERGENCY HOSPITAL SCHEME

REDUCTION IN MEDICAL STAFF

The Minister of Health (Circular 2553) has received, and accepted in principle, a recommendation from the Medical Personnel (Priority) Committee, presided over by Mr. Geoffrey Shakespeare, M.P., Parliamentary Under-Secretary for the Dominions, that the Central Medical War Committee should be instructed to revise, in consultation with bodies responsible for hospital services, the medical establishments of civilian hospitals (other than mental hospitals) with a view to reducing the numbers of medical officers holding A, B2, and B1 posts. The aim is to reduce the all-over strength as at August 1st, 1941, of whole-time medical officers in hospitals by 10 per cent. in the Provinces and 15 per cent. in London (including the London Sectors). Provision is made for a smaller reduction in teaching hospitals.

The Minister, while regarding the proposed cut as unavoidable owing to the present demands on medical man power for service in H.M. Forces, recognises that it is not practicable to apply it to the medical establishment of each hospital individually, and he has therefore arranged for his Hospital Officers and Group Officers, and other medical officers concerned, to draw up schemes for groups of hospitals in consultation with representatives of the Central Medical War Committee and with the hospital authorities affected. The object of these schemes is to reduce to a minimum any detriment to the efficiency of the hospitals as a whole. When the schemes have been completed, it is intended that the Central Medical War Committee will notify each hospital of the reduction (if any) in its establishment, and request that the names of the officers to be released in consequence of the reduction may be supplied to the Committee so that steps can be taken for the recruitment to the Forces of those who are liable to such recruitment.

The lowering of the numerical standard of staffing in hospitals calls for the maximum degree of co-operation between hospitals in times of pressure. The Minister has accordingly instructed his medical officers in each civil defence region to work out plans whereby hospitals which are heavily pressed owing to air attack or an exceptional incidence of sickness in the locality could count on relief from other hospitals. The Minister referred in paragraphs 7 and 8 of Circular 2323 to the importance of applying the principle of mobility of staff and he is aware that arrangements for mutual assistance have already been made between some hospitals, but he hopes that such arrangements will now be general and on a clearly defined basis. The Minister has in mind the allocation of specified officers in each hospital for temporary transfer to another hospital in case of need. The period of transfer would usually be for quite a short period, perhaps for no more than seven days. The scheme should not be restricted to purely local transfers or to internal transfers within regions—the reinforcement of peripheral hospitals of Liverpool, for example, by those of Birmingham or of Newcastle Hospitals by those of Leeds might quite well have to be arranged—and should provide for several alternative sources of reinforcement.

The class and number of personnel whom it is possible to release will naturally vary according to the circumstances of the hospital and the gravity of the emergency, but it is important that the arrangements should not be restricted to medical personnel of any particular grade or grades and should include the transfer of nursing as well as medical staff. Since the transfers will be for very short periods only and the arrangements will be reciprocal, financial adjustments between the lending and receiving hospitals should be unnecessary.

Steps are being taken, the circular goes on to state, to empower the appropriate National Service Officers acting under the authority of the Minister of Labour and National Service to give formal directions under the Defence Regulations, if necessary, to enforce the transfer of individual members of medical and nursing staff when the occasion for such a transfer arises, but the Minister anticipates that it will only be necessary to resort to these powers in very exceptional cases.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Virginia Saunders-Jacobs.
Hon. Secretary: Dr. Katherine N. Hirst.
Hon. Assistant Secretary: Dr. Violet Russell.

The second meeting of the session was held on November 1st, the President of the Group occupying the chair.

The President explained that the question of changes in the organisation of the medical services had been under discussion for many years. The outbreak of war, with its consequent disturbance of the routine medical services, had afforded an opportunity to discuss their alteration in the coming days of peace. It was the duty of the Group to consider the future of maternity and child welfare.

Medical Planning

A talk on medical planning for the future was then given by Mr. Somerville Hastings, who explained that, although a member of the Medical Planning Commission, he was not expressing the views of that body. He hoped that a State medical service would come in the future. Free medical treatment was best on principle. He could not approve a scheme whereby a doctor would see patients free of charge for part of his time and receive payment from the patients whom he saw outside these hours. Such an arrangement would favour the idea that better attention might be obtained by paying for it. He considered that preventive medicine could not be divorced from treatment. Disease must be diagnosed in its earliest stages and for this the services of the general practitioner were necessary. In formulating a plan for a State medical service, the present local government areas would need to be reconsidered, many being much too small for efficient participation in such a scheme. Mr. Somerville Hastings would like to see ten or twelve large regions established in England and Wales. Each of these would have a popularly elected local government body and would form a health committee with appropriate subcommittees for (*a*) hospital services, (*b*) home medical service, (*c*) personal medical services (school, maternity, tuberculosis, etc.), and (*d*) environmental services. Each region would be divided into units of about 100,000 population, in the centre of which would be a hospital of 600 to 1,000 beds, and an associated health centre for specialist consultations, from which consultants would visit cases in the home if required by the family doctor. Spaced around there would be subsidiary health centres, staffed by groups of doctors, from which the district nurses and health visitors would also work. In the transition period Mr. Hastings would have all the clinical health services, including the school medical service and the medical section of National Health Insurance, taken over by the public health committees in each area. Whilst anxious to safeguard the interests of existing insurance practitioners, he would oppose the extension of the panel system. Such practices should not be bought and sold, but the most suitable doctor should be appointed to carry out the work. He would like to see the institution of specialist consultation clinics by local authorities made compulsory and the law amended to permit these specialists to be called out to the patient's home by the family doctor at the expense of the local authority. An important measure for the provision of good health services by the local authorities was to make the Acts of Parliament dealing with the personal health services compulsory instead of merely permissive.

Mr. Hastings welcomed the announced survey of the hospital service. It was desirable to get rid of the competition between the voluntary and municipal hospitals; after a space of years all hospitals would probably come under the control of committees composed of elected representatives of the community. In his view this was the proper solution.

Maternity and Child Welfare

Dr. Marjorie Back (A.M.O.H., Middlesex C.C.) gave a lucid survey of the place of maternity and child welfare work in medical planning. Dr. Back said that it would not be difficult to combine a national maternity and child welfare service in the excellent scheme just outlined by Mr. Somerville Hastings. It was very desirable that the meeting should have a practical outcome and that the future of the maternity and child welfare movement should be assured. The Maternity and Child Welfare Act gave the authorities a wide charter, but was it wide enough? Should the work still be limited to the care of expectant and nursing mothers, or should it be expanded to take in all women of child-bearing age? Should the ban on domiciliary medical service be removed? Dr. Beck agreed with Mr. Somerville Hastings in hoping that the permissive character of the Act would be made compulsory. The aim of any maternity and child welfare scheme should be to teach the art of parent-craft and to provide the means whereby the knowledge could be put into practice. The present powers of the local authorities were not fully utilised, but that should not prevent them from looking forward to possible alterations or extensions. The B.M.A. scheme for a general medical service for the nation, published in 1938, put forward a general practitioner service through an extension of the N.H.I. scheme and a reorganisation of the public assistance domiciliary service. Dr. Back agreed with Mr. Somerville Hastings in disliking a national scheme which included only a section of the population. It would seem better to make a family doctor available to all in the community in the same way as elementary education was provided for every child.

The Ministry of Health Report in 1920 did not deal with maternity and child welfare in detail, but at that time maternity and child welfare schemes were only just coming into force. The Report envisaged a scheme not unlike that of Mr. Hastings but carried out by general practitioners instead of wholetime medical officers. Into such a scheme it would not be difficult to institute an effective maternity and child welfare service much on the present lines. Other possibilities might arise. The end of the war might see a complete State medical service in a socialised state. Another possibility was that the result of the increased hospitalisation of mothers during the war emergency would create after the war a public demand for institutional confinement.

Dr. Back drew attention to the overcrowding of centres and to the employment of personnel without adequate specialised knowledge or whose knowledge had become out of date; this problem might be dealt with by more refresher courses. The inability of mothers to carry out advice owing to poverty and bad housing conditions was a social and economic problem but nevertheless demanded a solution. The removal of the children in the 2 to 5 year old group from the maternity and child welfare scheme when they were admitted to nursery schools was a pity, and the counter-suggestion that all medical care of school children should be removed from the Board of Education and given to the Ministry of Health deserved consideration. Dr. Back stressed the importance of the training of health visitors and pleaded for a closer liaison between the educational and treatment services, represented by the clinic doctor and the general practitioner.

Many people took part in the subsequent discussion. Among them Dr. Maitland Radford paid a tribute to the administrative ability shown in the scheme of Mr. Somerville Hastings.

MIDLAND BRANCH

President: Dr. Ethel Cassie, O.B.E. (Senior A.M.O., M. & C.W., Birmingham).
Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton C.B.).

The second meeting of the session was held at Birmingham on November 6th, 1941, at 3 p.m. The minutes of the previous meeting were read and confirmed.

The Hon. Treasurer, Dr. Gibbons Ward, presented the balance sheet for 1940-41 and the annual statement of accounts. These were received and adopted.

It was unanimously agreed that Dr. J. Cowie, on his retirement from the post of Medical Officer of Health, Burton-on-Trent, should be recommended for fully-paid life membership of the Society. Dr. Cowie joined the Society in 1914 and was President of the Midland Branch in 1915.

Medical Planning

Dr. A. Massey, in a discussion on "Medical Planning," said that the two alternative methods of dealing with the problem were by means of a root-and-branch reform, or by way of the evolution of existing services. As the present system was wasteful of man power and restricted the equipment and amenities available, he thought that the domiciliary practice of the future should be conducted from a district health centre, and that it should provide an increased scientific interest to those engaged in it. These health centres might be linked up with school medical work and with tuberculosis and V.D. clinics. He pointed out that an increasing proportion of the income of the general practitioner was derived from public funds, and this meant a greater control over his services. This increase in the public service of the doctor might be brought about by an extension of the scope of National Health Insurance work, or there might be an out-and-out national medical service. He considered that the new industrial medical service was being built on wrong lines and that it should be linked with the general public health services.

Dr. A. Beauchamp, Hon. Secretary of the Birmingham Division of the B.M.A., after admitting that a large proportion of general practitioners would prefer a State medical service to existing conditions, enumerated some of the faults and advantages of the present system of private and panel practice. He then outlined the following scheme as an alternative to a State medical service. Practice areas of a suitable size should be defined in all urban areas, each with its own primary health centre at which the equipment would be adequate but not elaborate. From this centre all general practitioners' services, the school medical service, the maternity and child welfare service, immunisation, public assistance medical service, and industrial medicine would be conducted. Each centre would be linked with a district hospital, and all the medical officers attached to the centre would be members of the staff. They would be entitled to call in consultants as necessary. Groups of primary health centres would be linked with a secondary health centre, which would deal mainly with cases of tuberculosis, venereal disease, and mental defects and disorders. Existing general hospitals, voluntary and municipal, would continue, but their out-patient work would be diminished by the above scheme. Dr. Beauchamp proposed to liquidate general practices by means of deferred annuities and to pay doctors a fixed salary. Everybody would be entitled to attend the health centres, but they would be charged a fee graduated in accordance with their means.

The third speaker was Mr. Fauset Welsh, F.R.C.S., who called for a spirit of devotion and not of greed. The difficulty was to combine freedom to the individual doctor or hospital with a reasonable amount of order. Regional planning, as well as national planning, was necessary for the future treatment of the sick.

Dr. Cassie emphasised the value of teaching hospitals, and thought it would be an advantage to include municipal hospitals in teaching schemes. She considered that medical degrees should be national and not regional. A lively discussion followed, and in replying Dr. Massey said that at this stage broad principles alone could be considered.

EASTERN BRANCH

President: Dr. V. F. Soothill (M.O.H., Norwich C.B.).

Hon. Secretary: Dr. J. W. Hunter (M.O.H. & S.M.O., Ipswich C.B.).

A meeting of the Eastern Branch was held at Scole on November 1st, 1941, at 3 p.m.

The minutes of the previous meeting were submitted and signed by the chairman.

It was agreed that the Branch should forward to the Acting Executive Secretary of the Society observations on Medical Planning, and the Hon. Secretary was requested to represent the Branch on the Central Committee. It was suggested that when any Agenda was circulated in regard to the Central Committee the Branch should have an opportunity of discussing this before the Central meeting. Several points were brought forward in regard to post-war medical planning.

A discussion on the various aspects of the control, prevention and treatment of scabies followed. In this connection it was resolved to forward to the Council a resolution stating that the Eastern Branch advocates that all facilities—for example, cinema, wireless, Press, etc.—should be used for propaganda on a national basis directed by the Ministry of Health.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).

Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the Branch was held at Newcastle-upon-Tyne on November 22nd, 1941.

The minutes of the annual meeting were read, confirmed, and signed by the chairman.

The Hon. Secretary informed the members that he had received from the Hon. Secretary of the County Borough M.Os.H. Group copies of correspondence which had passed between him and the Hon. Secretary of the Association of County Medical Officers of Health regarding the activities of the Nuffield Trust. This matter had been raised at the Council Meeting on November 21st, and it was felt that the Nuffield Trust activities would begin to diminish as and when the Ministry of Health stated more clearly the Government's views on the subject of hospital re-organisation after the war.

Dr. Grant was nominated to serve as the representative of the Northern Branch on the Medical Planning Committee of the Society

Dr. A. E. W. McLachlan then delivered an address on the present position as regards venereal disease.

YORKSHIRE BRANCH

President: Dr. J. F. Galloway (M.O.H., Dewsbury C.B.).

Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

An ordinary meeting of the Branch was held at Leeds on November 28th at 2.30 p.m.

A letter was read from the Secretary of the Yorkshire Council for Further Education inviting the Branch to nominate a representative to serve upon the County Advisory Committee on Food Education. The Secretary was nominated as the Branch's representative.

After consideration of a letter from Dr. D. D. Payne, Medical Officer of Health, Harrogate, it was resolved that the Secretary should write to the Secretary of the Society asking that the Society should inform the British Medical Association that it wishes to dissociate itself from a resolution which was passed at a special conference of representatives of Home Divisions of the British Medical Association held at the B.M.A. House on September 11th and 12th. The resolution concerned was as follows :—

> 14. *Medical Planning.* Proposed by North Staffs (A. V. Campbell), and resolved (by 68 to 65): That in the opinion of this meeting all representatives of the Ministry of Health and Ministry of Labour be excluded from all meetings of the Medical Planning Commission until the ultimate meeting of the Commission at which the final findings of the Commission will be discussed.

It was also decided that the resolution passed at the same B.M.A. meeting urging the employment of part-time instead of whole-time medical officers wherever practicable in the various local government services should be referred for consideration to the Medical Planning Sub-Committee of the Branch.

Dr. Dick, Medical Superintendent of St. James' Hospital, described to the meeting the new extensions to the hospital. He then conducted the members through the new wing.

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Contents

Editorial

International Health

The activities of the International Health Division of the Rockefeller Foundation are described in three annual publications—the Report of the Rockefeller Foundation as a whole, the President's Review, and the present report*, which deals with the technical side of the work of the International Health Division, with references to its research work in the medical press. The greater part of the work of the International Health Division is related to the control and investigation of specific diseases or deficiencies through field work supplemented by laboratory research. A considerable part of this laboratory work is centred in the Division's laboratory in New York City. Other laboratories, through which the Division collaborates with health departments of other countries, are located in Rio de Janeiro, Brazil, and in Bogotá, Colombia. The distinguishing character of this work is that it is supported by field research studies of a varied sort carried out in the natural environment of the disease in whatever part of the world that disease may occur. The conditions specially investigated in the field during 1940 were influenza, yellow fever, and malaria. On yellow fever, work was carried out in eight countries; on malaria, in thirteen. In addition to its programme on the control of special diseases the International Health Division gives aid to State and local health services in various countries, either through direct financial grants or by lending the services of staff members.

Considerable progress can be recorded in the study of influenza. When a virus was first isolated in 1933 by Smith, Andrewes, and Laidlaw, it was thought that the aetiology of epidemic influenza had been successfully established. From 1936 onwards, however, it became apparent that in many epidemics of what clinically was influenza the original virus could not be obtained from the throat washings of typical cases, while no increase in antibodies against the virus could be demonstrated in convalescent sera. By agreement between workers in America and in this country it was arranged that all strains of the virus originally isolated in Great Britain in 1933 should thereafter be termed influenza A virus; if other "influenza viruses" were isolated from patients they should be labelled influenza B, influenza C, etc., to correspond with the diseases influenza A, B, C, etc. In February and March, 1940, an epidemic of acute respiratory disease

* The Rockefeller Foundation International Health Division Annual Report, 1940. pp. 247. 12 illustrations.

resembling influenza occurred at Irvington, New York, and from throat washings a virus was recovered which, though pathogenic for ferrets and mice, was immunologically quite distinct from influenza A virus. Influenza B virus, as it then became known, has now been isolated in a number of epidemics, but curiously enough it is often found associated with influenza A virus, even in a single institutional outbreak. At the same time many persons from the same epidemic with influenza-like symptoms show no evidence of infection with either influenza virus A or B.

It is obvious that the full story of the aetiology of epidemic influenza has not yet been revealed. Despite the hiatus in our knowledge, however, progress has to be recorded in immunisation against influenza A virus. It has been found that vaccines prepared from the tissues of ferrets infected with both influenza A virus and a strain of canine distemper virus are capable not only of inducing neutralising antibodies in ferrets but also of rendering the ferrets quite immune to the intranasal inoculation of influenza A virus. Chick embryo tissues infected with both influenza A virus and a strain of canine distemper virus were injected into groups of human beings and were shown to increase the concentration of antibodies rather more than one hundred times, and for as long as five months after inoculation. Up to the present, significant figures have not been obtained to prove the value of this complex vaccine in man and its advantages over a vaccine containing the influenza A virus alone. Over half a million doses of the complex vaccine have, however, been sent to Great Britain for trial here.

In investigations on yellow fever the most interesting events are the discovery that in Colombia in South America marsupials, in the shape of opossums, appear to play some part in maintaining yellow fever in the absence of clinical cases in man. Reference is also made to the epidemic in 1940 in the Anglo-Egyptian Sudan, accounts of which are now appearing in this country.

Despite the fact that only ninety years ago 5 per cent. of all the cases admitted into a great London hospital suffered from malaria, it is not easy in this country to realise that malaria is still one of the greatest killing diseases of the world. If this scourge is to be overcome new techniques must be applied to a study of the metabolism of the malaria parasite. In this connection the use of the Warburg apparatus is of great value, for the influence of various compounds on the respiration of the plasmodia can be adequately studied at the same time as experiments are being made on the action of chemotherapeutic drugs. Thus, while sulphanilamide is active both in curing rhesus monkeys of infections due to *Plasmodium knowlesi* and in destroying the parasites *in vitro*, prontosil is found to be active only *in vivo*. In the treatment of general paralysis of the insane it has been found of advantage to induce infection with small numbers of trophozoites, the reaction being less exhausting and the therapeutic response better than when heavy doses of parasites are used.

In addition to laboratory studies, investigations have been carried out in the field. In British Guiana the malaria problem is very complicated because the cultivated area of sugar and rice plantations occupies a strip of country five to ten miles wide along the coast and below the sea level at high tide. The cultivated ground is protected by a sea wall which continues up the rivers as far as cultivation extends. Beyond the cultivated strip of land are "water conservancies" or large swamps from which water is carried through canals to the sugar cane and rice fields. Because of the nature of the crops and the low level of the land drainage measures cannot be used against anophelines, and because of the extensive water surfaces Paris green is too expensive. Curiously enough certain places in Guiana are free from malaria and from anopheline breeding, although to all appearances they differ in no way from other places where anopheline breeding takes place. The control of *Anopheles gambiae* in Brazil is now rapidly being crowned with success, though during 1941, while a search for new areas of infestation was being continued, a sentinel service had to be maintained in the controlled territory.

Work is also being carried out under the auspices of the Rockefeller Foundation on many other diseases typhus, tuberculosis, syphilis, rabies and on nutritional deficiencies. Although the activities of the International Health Division of the Rockefeller Foundation have naturally shown some curtailment during 1940, they can still be described as international in the best sense of the word, because they are available for all who believe in the international future of the world.

Health in the Punjab

The 1939 report on public health in the Punjab has just been received.* In ordinary circumstances a health report covering a period nearly two years past might well be considered to have lost interest even to the most enthusiastic health officer. But we are not living in ordinary times, and the details in the report of an important investigation into the nutritional state of a famine-stricken population, in particular, have a special interest. Owing to total failure of the rains for two successive years the districts of Hissar, Rohtak and Gurgaon, which frequently suffer from a shortage of rain, experienced intense and prolonged famine conditions. Notwithstanding a scale of relief higher than that authorised by the Punjab Famine Code, investigation into the diets and state of nutrition of a group of typical families showed that vitamin A was gravely inadequate and vitamins C and D were entirely lacking. In Hissar district, no less than 71 per cent. of the individuals examined were "subnormal physically"; 1 per cent. showed active rickets; 6 per cent. complained of night blindness, and between 25 and 65 per cent. showed other early signs of food deficiency. Towards the end of 1939 the population as a whole showed deterioration of health, the minor effects of qualitative food deficiency were much more readily detectable, and fully developed scurvy had made its appearance. The total population affected numbered

* Report on the Public Health Administration of the Punjab for the Year 1939. Lahore: The Superintendent, Government Printing, 1941. pp. 173 + 12 pp. appendix. Price 12 annas.

nearly 2½ million persons, and the general effect on their health was gauged by the mortality figures of Hissar district, which were 20,910 in 1937; 28,505 in 1938; and 37,767 in 1939. The problem facing the public health department was how to maintain the state of nutrition of this large population at a proper level and how to ward off disease—at a minimum of cost.

In the first place the whole area was divided into a series of health circles, each in charge of a doctor—a circle including the villages within five miles of a central dispensary. Additional health staff comprised an expert nutrition officer, three medical officers of health, fifty-one sub-assistant-surgeons (of whom nine were experienced medical officers of health, thirty-three sanitary inspectors, twenty-one dispensers, and eighteen vaccinators. Secondly, general preventive measures included the chlorination of water supplies, sanitation of camp areas and the lines of work, the inoculation of nearly 200,000 persons with cholera vaccine, and the vaccination of 250,000 persons against smallpox. Specific measures against deficiency disease included supplies of green vegetables—as far as limited supplies made possible—to those engaged in relief work, and all persons found with definite A and D vitamin deficiency were given cod-liver oil. In addition, 1 oz. of germinated gram pulse per head was distributed free twice a week. This gram contains vitamins A, B, and particularly C. Further, Indian gooseberry was used for the treatment and prevention of scurvy.

The results of this preventive campaign were more than satisfactory. Within six months the numbers of sick admitted to hospitals decreased by 50 per cent.; scurvy dropped rapidly and completely disappeared in just over three months; night blindness was considerably reduced, though not so dramatically as in the case of other deficiency diseases; smallpox cases were negligible (for India); cholera was absent during the whole of 1939 and up to July, 1940; dysentery cases were few, and there was a reduction of nearly 6,000 deaths in the first half of 1940 (the third year of the famine) as compared with the same period of 1939. The Director of Public Health considers it justifiable to conclude that by the measures he adopted the major epidemic and deficiency diseases were brought under control, even although at the end of June, 1940, general health conditions were still extremely unstable. This story is one which will appeal to every medical officer of health in the Empire; it is one from which each of us may profit.

If space permitted, it would have been well worth while to add details of the Co-operative Health Bureaux which Lieut.-Colonel C. M. Nicol, the Director of Public Health, has been able to start in several rural centres. These institutions, which are evolved, paid for, and run by the villagers themselves, aim at all measures pertaining to hygiene, health and treatment of the sick in the groups of villages which support them. During the three years they have been working they have shown their worth in both curative and preventive directions. A further noteworthy point is that during 1939, for the first time since 1898, when plague broke out in the Punjab, not a single case was recorded in the Province.

The whole report indicates determination, enthusiasm and successful effort in many different directions and constitutes a record of which any public health worker might well be proud.

Some Tuberculosis Figures

The annual or other reports of medical officers of health to their respective councils are not easily co-ordinated documents. Some are precise and detailed; others, less so. Some include comments and observations; others give only the skeleton of statistics. In giving statistics, some furnish figures for previous years as well as for the year under review; others offer no such basis for comparison. The size of the authority seems to bear no relation to the circumstance of the report.

It is a fascinating but rather disappointing task to reduce these reports to a common denominator on a given subject—for example, tuberculosis. It would be interesting to extract from this cross-section of public health experience the position with regard to the incidence and mortality of tuberculosis in the second year of war. One of the most important reports in this special field is that of the Central Tuberculosis Officer for Lancashire (Dr. Lissant Cox). It is termed an interim report, which only means that the full report is deferred until the end of the war. There was in Lancashire in 1940 an increase of 105 in the number of new cases of tuberculosis as compared with 1939; the death-rate also went up to 0·46 per thousand of population from 0·44. Staffordshire shows a different picture. In the area of that county council the number of new cases of pulmonary tuberculosis in 1940 was 581, and of non-pulmonary 190, a distinct fall in the number as compared with the previous year, and continuing the decline in the number of primary notifications which has taken place during the last decade. The death-rate from pulmonary tuberculosis in the urban districts of Staffordshire was 0·51, the lowest figure yet recorded. The figures for this county show that approximately one death occurred among seventeen cases, comparing favourably with the expert opinion that for every death there are at least ten persons suffering from the disease. In Durham county, on the other hand, for which we have the report of the medical officer for the quarter ending September, 1941, the death-rate for pulmonary tuberculosis was 0·58 per thousand as compared with 0·49 in the corresponding quarter of 1940.

In his report for Lancashire Dr. Cox remarks that there is again a greater prevalence of pulmonary tuberculosis among males than among females. In his county, for every 100 deaths of females there were 149 deaths of males, and a similar proportion held good in notifications. The same applies to Staffordshire, where for every 100 deaths of females there were 137 male deaths. On the other hand, in Durham, for the third quarter of 1941, the number of deaths was equal for the sexes, and in the Welsh borough of Llanelly the female deaths exceeded the male. The figures for Llanelly are, of course, small but a high proportion of female deaths has long been characteristic of Wales. In war-time, too, such ratios are disturbed by migrations of the population.

THE PLACE OF MUNICIPAL CLINICS IN A MEDICAL SERVICE*

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The subject of this paper has been before the public and the medical profession for years, particularly since 1937, when the Report on the British Health Services was published by P.E.P. Various references in both popular and medical journals show that interest in it, far from dying out, has not abated in the slightest degree. The B.M.A. scheme, *A General Medical Service for the Nation*, was published in 1938; in 1940 a paper appeared in the *Lancet*, from Dr. D. Hubble, of Derby, on "The Future of the Family Doctor." In the autumn of the same year we had two circulars from the Medical Practitioners Union setting out a scheme for a State Medical Service, and, as recently as March of this year (1941) Dr. Pybus published in the *British Medical Journal* his ideas on the same subject. It is possible, too, that other communications have been made of which I am not aware.

In 1941 the B.M.A. set up the Medical Planning Commission, whose terms of reference were to study war-time developments and their effects on the country's medical services both present and future. This does not indicate any vital changes brought about by the war, but rather, as the *British Medical Journal* stated, that the war had thrown into sharp relief the deficiencies of our peace-time system of administering relief to the sick and of promoting and maintaining the health of the people. A spate of correspondence followed the announcement of the Commission. Many of the letters were frankly critical of its constitution and the manner in which it was chosen; but the underlying idea was well expressed by one correspondent, who said that it boiled down to the simple question of whether or not there was to be a State Medical Service after the war.

Now any change in the existing system is bound to affect not only the Society of Medical Officers of Health but almost every medical officer engaged in public health work. We must abandon the belief that any extension of the medical services, or the introduction of a more comprehensive scheme, is a matter which concerns the B.M.A. or the general practitioner only. Any change in this direction will affect the public health officer; we ought, therefore, to have the subject very much on our minds. If after consideration we can unite our views and opinions, we should make these fully known both to our medical colleagues and to the public.

Change in Public Health Outlook

One reason why any change will affect us lies in the extension which has taken place in the public health services during the last thirty years. In the early days public health was concerned chiefly with what have been termed the environmental factors—*e.g.*, housing, water, sewage, atmospheric pollution, food and drugs, etc.—with the impersonal rather than with the individual. Arrangements for dealing with infectious diseases introduced the principle of dealing with the individual and also with the idea of treatment. Gradually, however, as the clinics in connection with the school medical service began to develop, and with the inception of the tuberculosis, and later, the M. & C.W. centres, the principles of treatment began to permeate the public health outlook. Eventually, when under the 1929 Act health authorities were empowered to appropriate the former poor law hospitals, the problems of treatment, in urban areas at any rate, began to take pride of place from the environmental services, of which only housing and food inspection appeared to retain their previous importance for the M.O.H.

This widening of the public health services is in my opinion a progressive and sound policy, and is in no sense contradictory to the idea of preventive medicine, which is, traditionally, the fundamental idea behind all public health services. In effect all preventive actions may be regarded as "treatment"; and if we progress from the general to the individual we do not in any way invalidate this principle. If by early and skilled treatment of infantile paralysis we prevent crippling, or by up-to-date treatment of measles stave off broncho-pneumonia, or by early treatment of aural conditions minimise the chance of deafness surely it is in line with our highest traditions. Moreover, this policy is one to which we are irrevocably committed.

Defects in Medical Service

From the various enquiries which have been made, and from the opinions expressed from time to time by medical men themselves, there certainly does appear to be some disquiet about the present position of the medical services. Generally this appears to be concerned not only with the administration of the services, but also with their clinical aspect. For example, there are the dependants of insured people, estimated in England at approximately 15 millions (or about three-quarters of the number of those insured), who have no place in the national insurance scheme. Many of these, it must be said, however, are catered for under private and public medical arrangements which are conducted outside government auspices. These include works contracts, doctors' clubs, and public medical services. Nevertheless, as all school medical officers are painfully aware, this position, to put it mildly, is very unsatisfactory. We have all had the experience, only too frequently, of children turning up at the clinics suffering from high temperatures and other conditions for which home treatment was most desirable, but whose parents have plaintively said that they could not afford a private doctor. This gap, however, is so obvious and so generally recognised that it need be no further stressed. Another cause for dissatisfaction lies in the lack of provision under National Health Insurance for the help of specialists, and also on account of the variation in the extent and degree to which the ancillary services may be obtained. These in many cases depend on the condition of the funds of the friendly society with which the patient is registered. From the doctor's point of view there is the feeling that when a case goes to hospital it is the end of the matter for him so far as further treatment is concerned. It is his view, indeed, that this stifling of professional interest is unsatisfactory in every respect. These criticisms, it should be noted, are made not by disinterested observers only, or by

* Presidential address to the East Midland Branch.

public health officials, but chiefly by the doctors who are themselves working the N.H.I. Scheme; and I think, therefore, that they can be reasonably accepted.

Schemes for Improvement

Broadly speaking, there have been five main schemes promulgated in the endeavour to remedy the present state of affairs. Of these, the findings of P.E.P. and the General Medical Service Scheme of the B.M.A. are closely related. There is also a similarity between the suggestions for a State Medical Service made by the Medical Practitioners' Union in 1940, and of that made by Dr. Pybus in the *British Medical Journal* in March, 1941. Dr. Hubble's scheme is entirely different in many respects from any of these schemes.

THE P.E.P. REPORT

The recommendations made in the P.E.P. report are general in application, and may be summarised as follows: general practitioner services for all dependants of insured persons; better use of existing services; expansion of the measures for improving nutrition; more research and more information on industrial and social causes of ill health; an improvement in hospital arrangements and more facilities for auxiliary treatment; certain administrative changes involving relations with the Friendly Societies.

THE B.M.A. SCHEME

The provisions of the B.M.A. General Service Scheme are somewhat similar and may be stated thus:—

1. Extension of medical benefits is to be made to (*a*) dependants of insured persons and people over 70 who are not now covered by the N.H.I. Act. (The latter class is estimated to number about 600,000); (*b*) the destitute sick, comprising those who are at present catered for by the Public Assistance Committee arrangements; (*c*) others, who have salaries of £250 or less per annum who for various reasons are not at present covered by the N.H.I. Act.

2. A large and comprehensive increase in the extent of the auxiliary services (nursing, pharmacy, etc.) is recommended. All these are to be unified and made available, apart altogether from the range of friendly society scales. Full dental and ophthalmic services and a consultant service are to be on the same lines as obtains in private practice.

Some very important suggestions are made with regard to the administration of public health matters. These indicate a drastic reduction in the number of independent areas. The redundant areas are to be amalgamated with each other or incorporated into the County Councils, leaving as local authorities only those urban areas with populations of 100,000 or more, or rural areas of not less than 15,000. All recognised authorities, however, are to be established and made responsible for the complete health service, except as regards hospitals, which are to be treated on a wider basis. The contributions of beneficiaries under the scheme would still be levied according to existing arrangements, except that the P.A. committees would pay the contributions of the destitute sick. There would coexist a national maternity scheme and a separate hospital scheme, but these would not be administered under the N.H.I. Act. In the proposed maternity service there would be a general practitioner in charge of and a midwife in attendance on every case. The doctor would do the ante-natal examinations, attend the confinement if he thinks advisable or if summoned by the midwife, and see the patient safely through the puerperal period. Hospital beds would be reserved and the attendance of a specialist ensured when necessary. Laboratory facilities, ambulance services, and a supply of sterilised dressings would be made available. As for the hospital policy, as it is now under serious consideration again no definite scheme for co-operation with the health authorities is contemplated. The general idea is that the scheme should have a regional basis, with each region based on a central hospital which would be equipped and staffed to the highest degree of efficiency; and around it secondary hospitals would be grouped. These, it was suggested, might be staffed with part-time medical practitioners—every general practitioner to have the right of entry and to be in charge of his own patients. Out-patient treatment at the hospitals would be reserved for accidents and casualties, for patients presenting a doctor's letter for examination by a consultant, for those who as a result of this consultation required treatment available only at hospital, and for discharged in-patients who required special supervision and treatment. A recommendation is also made that all hospital staffs should be financially remunerated for their services. So far as relations with personal health services are concerned, the scheme visualises the continuance in their present form of tuberculosis and venereal diseases services, but suggests that those provided for mothers and infants and for school children would need substantial modification if overlapping with the general medical services is to be avoided.

DR. HUBBLE'S SCHEME

Dr. Douglas Hubble's scheme contains certain unusual features. Under the present arrangements he sympathises with the G.P., for, as he says, the G.P. has little midwifery to do, still less contacts with the specialists in hospitals, and does practically no surgery at all. He thinks the N.H.I. scheme has failed, largely because it does not give complete health services to the workers; nor does it give an adequate opportunity for the family doctor, because it makes no provision for pathological, laboratory and consultant services.

He shows that the position of the family doctor is not what it was, in the sense that, except in certain cases, he is no longer regarded as the guide, philosopher, and friend of the family. The proposals Dr. Hubble makes are designed to restore this position. In his scheme, therefore, the central figure will be the family doctor, and medical care would revolve around him. To achieve this he proposes that a new service quite distinct from N.H.I. should be created. A feature of it would be that the staff would consist largely of younger doctors. Indeed, Dr. Hubble suggests that no one over the age of 40 should be accepted to work under the scheme, and for the rank and file the retiring age would be 45. Those, however, who occupy more responsible posts in the service would be allowed to carry on until they were 50 or 55. After they had retired on pension it would, of course, be open to them to take up private or panel practice. The unit would be 1,000 children with their mothers, the number of mothers for 1,000 children being estimated at between 500 and 700. The doctor in charge of this unit would undertake everything necessary in the way of medical care—*e.g.*, ante-natal supervision, midwifery if necessary, tuberculin testing, haemoglobin estimations, diphtheria immunisations, and periodic medical inspection. Medical benefits for the children would end at the age of 16 years. For every 25,000 children with their mothers there would be a group director with two assistant directors, and in charge of several groups there would be a regional

director. The doctors in these posts would have clinical duties; they would include specialists such as pathologists, radiologists, and orthopaedic surgeons. The cost of running the scheme would be borne by the State assisted by contributions from parents who were in a position to make them. Dr. Hubble appears to think that a State Medical Service is inevitable, and that his scheme would prove a good curtain raiser before setting the scene for the big act.

The M.P.U. Scheme

The Medical Practitioners Union Scheme, which was issued by post to the medical profession in December, 1940, goes all out for a complete State Medical Service. It is quite evident from the introduction that the M.P.U. does not hold the M.O.sH. and the public health services in particularly high regard. Here is a quotation: "Every year the lure of free treatment attracts more and more of our patients to municipal clinics, while much work that we could do is handed over to salaried officials. Moreover, it is the avowed policy of many influential health officers to extend these measures until there is no place for the independent general practitioner, so unless something is done we can reconcile ourselves to slow extinction. . . . We all know the multiplicity of forms and ignorance of clinical work which is usually found under State management." It is a strange and somewhat contradictory opening for a document which recommends strongly a scheme for complete State control of medicine. There is, of course, the implication that one of the chief motives for the proposals lies "in the duty to see what can be done to meet the growing revolt against the long hours and the excessive charity imposed by the present scheme upon general practitioners, many of whom can see no hope of escape from the burden of practice except in a service which will provide for honourable retirement on adequate pension." Nevertheless, in spite of these words, there is a refreshing candour about the whole memorandum.

The chief points in this scheme are (1) that the service will apply to everyone irrespective of social or financial position; (2) free choice of doctor if possible, but this naturally would be limited to populous places; (3) doctors to be recruited to the service after being qualified for a period of at least two years and the service to be opened at its inception to all active doctors; (4) choice of district to be given as far as possible; (5) service to be full time and no private practice allowed—again to quote the memorandum: "Those members of the public who dislike the idea of taking advantage of a free service but whose own doctors have joined the State Service will either have to find a new doctor or to overcome their dislikes"; (6) all clinic work, including inspection of school children, etc., to be taken over by the new service. Certain suggestions as to the State purchase of practices are also made, together with some very alluring rates of pay. The proposals have been stated very generally and no attempt has been made to go into detail. The only mention, for example, of specialist and hospital services is that they will also have to be incorporated into the State system. It is probable that the scheme will be elaborated in a latter communication.

Dr. Pybus's Scheme

The scheme propounded by Dr. Pybus varies in some respects from that of the M.P.U., but basically it is similar. The differences are due actually more to the manner in which the schemes are presented. In one home treatment is stressed, while the other describes treatment more from the clinic and hospital viewpoint. Dr. Pybus goes more into the question of administration. He makes the suggestion that one body working under the Ministry of Health should govern the work of panel and private practitioners, consultants and specialists, public health medical officers, dental surgeons, nurses and other personnel; all clinics, whether school, M. & C.W., T.B., venereal, etc.; all hospitals, general, isolation and mental; and homes for old people and incurables. One difference in the two schemes lies in the availability of the service. Dr. Pybus would not actually limit it, but, while those with incomes of £250 per annum or less would have free service, those above that figure would be required to pay certain fees. Choice of district by the doctor, and choice of doctor by the patient, would be given as far as possible. The country would be divided into regions, and the headquarters of each region would be one of the big general hospitals. This would be the centre for the clinical staff and for the Regional Public Health staff (by that is meant, I suppose, the Regional M.O.H.), and the regional administrative staff. The region would be subdivided into areas with similar accommodation; and these again would be divided into districts, with the headquarters in the case of a district to be a fully equipped clinic capable of dealing with all the specialised services, in addition to public dispensaries. The clinic, however, would be more than a clinic, for attached to it would be a small hospital containing from 20 to 50 beds for emergencies, cases under observation, maternity cases, minor cases not requiring area hospitals, and patients too ill to be moved. Each district would normally cater for about 20,000 inhabitants and would have a staff from 10 to 16 medical officers. Surgeries at doctors' houses would be completely abolished, and all non-domiciliary consultations made at the clinics. In sparsely populated areas sub-clinics would be established in order to minimise long journeys. Each doctor would attend the clinics at certain days and hours, and there would always be a doctor on duty. The cost would be borne by the Government and raised partly out of taxation and partly by the fees paid by those above the £250 income scale. The total cost of the scheme is not estimated.

The reactions to this publication have been both diverse and violent. Some have condemned the scheme root and branch, some have given general approval with suggestions for improvement, while others have plumped for alternative measures.

Points of Agreement

In these various schemes the points of general agreement are as follows:

1. Medical care should be made available for all who through adverse financial circumstances or from any other cause are not able, or are in danger of not being able, to obtain it. This would automatically include the dependants of those who are insured under the present N.H.I. scheme. The treatment available for these people should include the services of consultants when necessary and all the auxiliary services already enumerated.

2. The present hospital system needs to be overhauled. In particular some arrangements should be made to solve the problem of the overcrowded waiting rooms in the out-patient department. It happens frequently, too, in some hospitals that the whole plan of specialist consultation is upset by the consultant,

owing to the pressure of other duties, having to delegate his consultations to someone with less experience and lower qualifications. There is, too, the anomaly of one hospital having a long list of prospective in-patients awaiting admission, while in the same town another hospital may have empty beds.

3. In all schemes the principle of regionalisation appears to have found universal support. There is general agreement that doctors should have larger representations on the administrative councils, and that adequate remuneration and some form of superannuation should be arranged.

Points of Disagreement

The chief points of disagreement are as follows:

Is it advisable to introduce a State Medical Service at this juncture or at all? All the old arguments, basically hinging on the question of the individual and the State, have been brought forward. Would a State-controlled service give the best results? Would a fixed salary and promotion by seniority destroy initiative and withdraw the incentive to work hard and well? Would the personal service of the doctor degenerate into mere official medical bureaucracy? Would service at the State clinics destroy the familiar relationship which has been built up for generations, at the house of the doctor?

From the viewpoint of the patient, would a State service allow any freedom of choice of doctor, or would he simply have to take what doctor was available at the time? It has been argued that with a team of doctors with various periods of off-duty, etc., complete care by the same doctor over a period of time is unlikely.

From the doctor's point of view, would an independent general practitioner take kindly to being despatched to whatever area was chosen for him? On the other hand, under a State scheme the doctor would have a fixed and certain salary, a surgery provided, and access to forms of treatment of which at present he cannot avail himself. The extent of availability has also caused some difference of opinion, but this is merely a question of degree. In one scheme it is the right of every citizen to have free treatment. In another, free participation is limited to people with certain fixed incomes. Another difference of opinion exists as to how the cost of the scheme is to be met—whether from taxation alone, or taxation plus rates, or with the addition of contributions. The administration of the scheme is also a source of disagreement, and various suggestions have been made in this respect. There are certain other points which have been raised, but on which the ideas expressed were hazy.

The idea of a central hospital appears clear and definite, but there is a lot of confusion regarding the type, constitution, and staffing of the secondary hospitals. Incidentally the hope may be expressed, even if these hospitals are destined to do only minor surgery, that only first-class surgeons will be allowed to do the work, otherwise there will be unpleasant repercussions.

P.E.P. was the body which stressed most prominently the importance of health education and the value of the present health services; they also expressed the hope that special attention should be given to the study of nutrition, and that medical research should be encouraged and observations be taken on the social and industrial causes of sickness.

Point of View of the M.O.H.

As far as I am aware there has not been any definite pronouncement on what our Society's policy is likely to be. The only Public Health article* I have seen is a very fine one from Dr. Grant, the M.O.H. of Gateshead, which appeared in the issue of Public Health of December, 1940. This appeared before the scheme of Dr. Pybus was published, and tended to complicate the issue. Nevertheless his proposals are statesmanlike and evidently take into account the practical difficulties which necessarily attend any big reconstruction. As might be expected, among his first principles he emphasises the importance of health and rates its pursuit as a national duty. He would have the administration of all the services, with the exception of hospitals, still carried on by the local authority, but by a greatly enlarged statutory committee which would be fully representative of all interested parties. He also suggests that the local authority clinics should be made available for consultation, diagnosis, education, and certain forms of treatment. With these two views I am in complete sympathy.

The Municipal Clinic

In all the proposed schemes the place of the municipal clinics is very indefinite. In the B.M.A. scheme they will continue to exist but their relation to the general services will be modified, and this modification is at the moment ill defined. It appears that in the full State schemes they will cease to function as separate entities, certainly so far as their present constitution is concerned. This would not greatly matter if the work they have been and are doing can be carried on and amplified. This, however, is what I gravely doubt, for although the present preservation of health and the cure of sickness ought to be complementary to each other, the fact remains that in a very big scheme run by one body the more urgent aspect, that of curing the sick, will tend to submerge the less impressive and the less spectacular goal of preserving health. It must be realised that the vast majority of the doctors who will work these schemes have hitherto been concerned with sick people only. Probably we have all had the experience (in discussing our work with a practitioner colleague) of being told, or at least having it implied, that though what we are doing may be useful and even necessary, it is simply not "medicine." This attitude to public health is, I fear, not uncommon. Our view, on the contrary, is that the main plank in our policy should be the attainment of health, and I think we can say sincerely that in our clinical outlook it has always been our endeavour to bring that policy to fruition. I think, therefore, it would be a retrograde step if the spirit of the clinic as it exists to-day were lost. Although much of our work is done in schools, in open-air classes, and in meal centres there is no doubt that the influence of the clinics is directed toward the creation of wholesome conditions of life and the health of the individual. There is little appreciation of the success of the efforts of our health and education committees, though the P.E.P. report does state that, apart from gaps in the

* Dr. Morrison's article was written in September, 1941, since when articles on planning have appeared in this journal.

service such as the lack of medical care of pre-school-children and the incomplete conditions of the dental services, very satisfactory results have been achieved.

One of the most indefatigable efforts of the clinical services has been to promote satisfactory nutrition. This crusade starts from the ante-natal clinics and continues right through the child's life. It comprises health education and ascertainment of malnutrition through the physical condition of the child and its home environment. In the M. & C.W. clinics extra milk, minerals, vitamins, etc., are given where circumstances demand. Nursery schools and classes are available where health education can be begun at an early age. Routine medical inspections and observation of the pre-school child are now part of the regular service. These ensure that every child will have a reasonable chance to secure the special care he requires. This may include efforts to improve the home conditions, such, for example, as a new or more sanitary house. It may mean extra milk in school, the provision of free meals, and accessory food factors such as cod-liver oil. It may mean a long stay in an open-air class, either day or residential; and for the rheumatic child some authorities have instituted appropriate clinics and homes. Many authorities have started summer holiday camps where the opportunity of a health-giving holiday can be offered. Ultra-violet ray treatment can be undertaken where necessary, either as a general application, or for some particular ailment, or as a tonic after attacks of infectious diseases.

Thousands of minor ailments are treated annually, and although the vast majority of these are trivial there must be many which, untreated, might become serious; and many others which would inevitably find their way to the hospitals and help to throng the casualty rooms. There is also the campaign against uncleanliness, which has an important effect on the health and hygienic ideas of the child. Although success in this has not been as great as might be desired, it is certain that much has been achieved. The influence, too, of the specialist services on the building up of the healthy child cannot be much over-estimated. As the result of the close co-operation which exists between the health and education authorities these services are also available for children of pre-school age.

But the physical side of the child, although until a few years ago the one that monopolised most of our attention, does not represent the complete picture, and the psychological aspect is now also being investigated. It is only comparatively recently that mental and emotional disturbances have been recognised as being potent factors in the health of the child, but already psychological clinics are springing up all over the country—a sure indication that the authorities are fully alive to their possibilities. Little beyond the merest mention need be made of immunisation, which is now available for all children not only in clinics but in welfare centres and schools.

Location of Clinics

It has been suggested in some quarters that clinics could with advantage be made into annexes to the hospitals, especially the sick children's hospitals, thus avoiding two centres and two separate systems of administration. This procedure was in point of fact partly visualised when the school medical service was first started, for when defects were ascertained at the medical inspections the parents were informed and requested to obtain early treatment. This action produced such a rush on the hospitals' outpatient departments that it was found impossible to deal with all the cases, with the inevitable result that treatment by the local authorities became imperative. To set up clinics as part of the hospitals would simply lead to the same results again. There is, too, the problem of "following up," which is one of the most important features of clinic work. Under present conditions it is difficult to see how the hospitals could undertake, willingly or otherwise, the supervision of non-attendance to ensure, for example, that glasses which were prescribed were actually procured and worn. Indeed, one of the weaknesses of the present out-patient system is that the hospitals take no further interest or action with regard to any person who simply ceases to attend. This is, however, understandable. There is also the problem of distance between the patients' homes and the hospitals one factor alone which often leads to non-attendance. This difficulty, which is in many cases simply inconvenient in boroughs, becomes a serious matter in the counties.

Duties of Hospitals

The hospitals have always been regarded as dealing with major cases. The clinics, on the other hand, have always been associated with minor conditions and cases which, if they require surgical intervention, do not demand immediate treatment. I should like to see this line of demarcation drawn still further, and if the extension of the general services materialises the clinics should undertake the minor ailments of the adult population as well as those of the children. There is no adequate reason why this should not be done, because the present buildings and equipment could be used. In the present circumstances adults have very few opportunities for general courses of ultra-violet rays or radiant heat or any form of "light" treatment. The orthopaedic facilities would be particularly valuable for adults, especially women, while the dental and ophthalmic departments could deal satisfactorily with many of the cases which at the present time simply drift. Mental health could also be included and a psychological unit incorporated into the general routine. This would naturally involve the opening of clinics for evening sessions, but there is no valid argument against this innovation—the more they are used the better. Extra staffs would be needed, but they will be required in any case if these extra services are to be generally extended. A satisfactory system of collaboration could certainly be devised between the general practitioner and the clinics, and I have very little doubt that a development along these lines would be cordially welcomed. This in brief is what, in my opinion, would be the most useful function that the municipal clinics could undertake. It is simply a matter of extension; the principle is already firmly established with the children. It would mean that the family medical man would deal with sickness in his surgery or in the homes of his patients; the hospitals would cater for those acute and serious cases

which require institutional and special treatment. The mid-way patient—seeking either the prevention of ill health, or the restoration of good health by measures outside the scope of the doctor's surgery, or not ill enough to warrant hospital treatment—would become the care of the clinic.

The Author's Plan

This paper is designed primarily to call attention to the important and close relationship which must exist between public health and any of the proposed medical extensions. This relationship will, I trust, have the full consideration of the Council of the Society before an agreed scheme is actually promulgated. The inclusion of three representatives from the Society on the Medical Planning Commission should at least ensure that the Council is kept informed of any pending changes.

To conclude my paper I should like to return to the general subject and express in a very sketchy manner a modified scheme which to some extent would solve some of the difficulties of the others. There is nothing particularly novel about these proposals. Indeed, with few exceptions they are taken from suggestions already made; but they are strung together in an effort to reconcile the many points of disagreement already enumerated. Put at their lowest value they may at least serve as a basis for subsequent discussion. I should like to base any scheme as regards availability, finance, and administration, on our present educational system. I would put health and education on the same level—free to everyone who desired to take advantage of it. Special treatment, to be defined as might be necessary, I should put on the same lines as higher education—perfectly free for those who could not afford to pay, with graduated fees up to a maximum and according to an income scale for those who are able to contribute. As in education, it would be a matter of free choice, and I am quite sure, no matter how universal the application of the scheme, that there would always be patients and always doctors who would prefer private practice and chargeable treatment.

The money to run the scheme would be raised by rates and taxes, thus overcoming the difficulty of extracting contributions from families who might be passing through a period of financial stress. The local authorities would foot the bill in their own areas and get back, as in education, a proportion in the way of grant. This proportion might vary according to the financial status of each particular area. Again as in education, the local authorities would be responsible for the administration, with the local authority exercising its present function of supervision, etc. As Dr. Grant suggests, the local health committee would be more representative than in its present constitution, and would include delegates from all bodies concerned. The family doctors would be paid on a *per capita* rate, as at present, and not a salary—a measure which would help them to retain their independence, and one which would meet the argument that a fixed salary would destroy initiative and incentive. They would continue to do their work as at present, consult in the familiar and friendly atmosphere of their own surgeries, and carry on with their domiciliary visits. Consultants would be available and paid by the local authority, either according to work done or on a fixed sessional rate, or both if desired. They would accordingly be eligible for consultation in the patients' homes as well as in the clinics. There would of course remain the full-time public health staff—medical, dental, and nursing—and they would probably require to be increased. This would simply be an extension of what is already performed. The clinics in existence at present would be employed and extended for consultations and the special treatment of adults, such as dental, ophthalmic, aural, psychological, with facilities for ultra-violet light, radiant heat, massage, etc. Included in this scope of treatment would be arrangements for dealing with conditions like uncleanliness and scabies, which demand family and not merely individual consideration.

Attention by the nurses to ear-nose-and-throat conditions and diseases which need frequent care and observation would also be undertaken, and would thus give the family doctor a feeling of assurance that his prescribed treatment was being professionally and adequately carried out. As all children would be on the lists of the family doctors the routine of the M. & C.W. centres and school clinics could be modified to suit the altered regime. This would also apply to routine medical inspection, which might eventually find its metier in nutritional surveys. A full interchange of information would be maintained between the clinic staff and the private doctor, an arrangement which I feel sure could be devised without much difficulty and one which would be entirely satisfactory. The clinics would be at the disposal of the family doctor if he wished to use them for the personal examination and treatment of his own patients: this would include facilities for ante-natal examinations, or any other cases for which the doctor thought the facilities at the clinic would be more suitable than those in his own surgery. For these examinations the local authorities would supply the equipment and nursing staff. The out-patient departments would deal only with cases likely to need in-patient treatment, casualties, and those ex-patients who still require observation and care. The local authority would continue to intensify all their present methods of ascertaining disease in children and of improving their general health by proper nutrition and unremitting care. The local authorities, in addition, would take over or acquire convalescent homes for the use of both children and adults.

This modified plan, I submit, is eminently a practical one and moreover capable of achievement within a reasonable space of time. It has the merit of being evolutionary in type and is actually only an expansion, even if a great one, of the present system, which in the main has proved quite congenial to the traditions and temperament of the British people. Although the cost would be very great it would be offset to some extent by the use of the existing surgeries, buildings, equipment and staff. This would give time for thoughtful development. New clinics, as in the case of new schools, could be planned and built without hurry and with consideration of the needs and circumstances of any particular area. It would, I believe, satisfy the varying requirements of the people and most of the ambitions of the doctors. At the same time it would be simple in procedure and its very character would give full support to the preventive aspect of medicine.

INDUSTRIAL PULMONARY FIBROSIS WITH SPECIAL REFERENCE TO SILICOSIS IN WALES*

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(*Concluded.*)

Diagnosis

It is not proposed to discuss the clinical diagnosis, except to say that generally speaking silicosis has no pathognomonic clinical signs. It should be borne in mind, however, that there must be a history of a dust hazard. Radiographic appearances afford the most reliable evidence in establishing the existence of the disease, and symptoms increase in severity with the progress of the lung changes as seen in the X-ray picture. Dyspnoea is the earliest symptom, is progressive, and remains to the end the most important.

First Stage.—The first stage is characterised by the appearance of fine discrete shadows indicative of nodulation, together with an increase in the hilum shadows, linear shadows, and pulmonary reticulation. Usually without impairment of capacity for work.

Second Stage.—In this stage dyspnoea and cough have become established. The radiograph shows the whole of both lung fields occupied by these shadows with some coalescence forming more or less dense opacities.

Third Stage.—This stage implies a condition equivalent to total incapacity. The radiographic appearances are those of massive consolidation and a total incapacity for work.

The first and second stages can be sub-divided in respect of the localisation, number, and distribution of the nodules on the one hand, and the extent of the coalescence of the nodules on the other.

Diagnosis is difficult only in the presence of complications, especially pulmonary tuberculosis, which may alter the symptoms, physical signs, radiological appearances, and, indeed, the whole course of the disease. The only definite proof of the presence of a tuberculous focus, as stated previously, is the presence of the tubercle bacillus in the sputum. The radiographic diagnosis of infective silicosis in the absence of this confirmation presents many difficulties. In the Association's Memorandum (Powell and Davies, 1940) the figures supplied by Dr. Keating showed that 16 patients previously granted certificates died during 1939 and came to necropsy. Evidence of silico-tuberculosis was found in all: of these, ten had been seen by tuberculosis physicians, but they, as well as the Medical Board, had not arrived at a definite diagnosis.

It is felt that if such cases were thoroughly investigated by culture examination of the sputum, guinea-pig inoculations, bacteriological examination of the faeces and of the stomach contents after gastric lavage, etc., a positive diagnosis would be established in a number of cases. An attempt in this direction has been made recently at Cymla Hospital by a re-examination of a series of patients who were compensated some years ago. Sputum outfits were given to all and arrangements were made to have the sputum cultured. No definite conclusions were reached owing to the fact that many of these cases had no sputum for examination.

* Paper read at a meeting of the Welsh Branch of the Society of Medical Officers of Health.

Prognosis

Where the pulmonary damage from silica is considerable the outlook is usually unfavourable, and when, as so often happens, this type of patient becomes tuberculous the prognosis is grave.

Dr. Irvine, Director of the Miners' Phthisis Bureau at Johannesburg, writes as follows (1929): "An uncomplicated silicosis may undergo prolonged and sometimes apparently indefinite arrest at any stage, but in the end infection tends to get the upper hand, and when this occurs the greater amount of original damage to the lung by silicosis the more rapid will be the terminal breakdown." This South African experience is to some extent absent in coal miners.

Everything considered, the silicotic who is removed from further dust exposure has a fairly good prognosis, but when tuberculosis intervenes the end is considerably hastened. The prognosis also varies with the industrial conditions which cause the disease. Where the hazard is not very serious and the resulting damage to the lungs of slight or moderate degree, the prognosis is on the whole good. On the other hand, where the exposure has been severe the case may proceed to a fatal termination in as short a time as one year. Statistical evidence as to the mortality does not give the true position. Many companies accept liability after necropsy on a certified case with the result that the Medical Board is not notified. It must also be remembered that a great number of workers die from natural causes, and though silicosis is often present it is not definitely the cause of death. In such cases no claim for compensation is made.

Reverting to Dr. Keating's figures of the sixteen cases that came to necropsy the survival period after certification by the Board varied from one month to eight years, the largest group of nine cases being between one and three years after certification. More striking, however, is the fact that in a group of seven diagnosed during life as silico-tuberculosis with a positive sputum the longest survival period after certification was fourteen months, the average for five cases being a period of five to six months. On the other hand, two patients diagnosed as cases of silico-tuberculosis, but with negative sputa, survived eight years after certification.

Complications and Sequelae

Emphysema is a constant finding.

Cardiac Disease.—A few articles in the literature call attention to silicotic fibrosis as a factor in cardiac enlargement and break-down. An association between cardiovascular disease and silicosis has not been definitely established. Recently Sir Thomas Lewis at Llandough Hospital investigated two patients of mine for evidence of right-sided heart failure. One was a Stage 3 silicotic with massive confluent shadows, and the other was an example of the nodular type whose previous history suggested right-sided cardiac failure. Sir Thomas was unable to find any clear evidence of this in either case. Gardner (1940) writes that personal experience and the reports from the literature convinced him that in most fatal cases of silicosis the heart is already damaged by arteriosclerosis or other conditions, and that the presence of a conglomerate area of fibrosis with emphysema merely adds to its burden. *Post mortem*, hypertrophy of the right side of the heart without arteriosclerosis and even greater involvement of the opposite side is a rarity.

Pneumonia and oedema of the lungs are common terminal conditions.

Bronchiectasis.—Dilatation of the bronchi may supervene as a secondary result of silicotic fibrosis. It is not very common, and as a rule does not reach the stage of a fully developed foul-smelling bronchiectasis.

Carcinoma.—Primary carcinoma of the lung is arousing much interest and attention in connection with silicosis because of the possibility that the latter condition may act as a predisposing cause. Anderson and Dible (1938) have published their researches into the relation between silicosis and carcinoma of the lung. The sum of their findings was that a group of cases of pulmonary carcinoma exists in which the organs contain an excess of silica. The histological evidence shows the presence of silicotic fibrosis, and the authors think that the role of the silicosis is aetiological.

Dr. T. W. Wade (1926), in his report on the high mortality rates from tuberculosis occurring in slate-quarrying workers of Caernarvonshire, quoted figures that showed there was some reason for thinking that slate dust, besides producing lung fibrosis, might also be a factor in producing cancer of the stomach, for it must be remembered that slate is swallowed as well as inhaled. I have not observed a case of silicosis complicated by pulmonary carcinoma, but one patient with silicosis was seen who died from carcinoma of the stomach.

Prevention

Dust Sampling and Control

Various methods are in use to define the degree of exposure by stating the number of dust particles under 10 microns in greatest diameter in millions per cubic foot of air. In certain industries laws have been enacted which limit the amount of dust permissible in the atmosphere.

The control of silicosis is both an engineering and a medical problem. The first and basic principle in dealing with the dust hazard is to remove the dust at its point of origin and thus prevent its dissemination into the air. This is the only procedure to which the term prevention may be properly applied. Once the dust is in the air the protection of the individual becomes difficult and often unsatisfactory. "Wet drilling" has been advocated, and so has drilling in the dry state. In the latter a dust trap must be used by means of which the dust produced in drilling is drawn by suction into a collecting box made of dust-proof material. The wearing of respirators is but a partial solution of the problem. Workmen in some instances are reluctant to use them because they make breathing difficult. A highly satisfactory respirator, the Mark IV, which is 90 per cent. efficient, has now been devised. Its use should be encouraged and the miners urged to co-operate for their own sakes by persisting in its use.

Denny and others in Canada have experimented with metallic aluminium in the prevention of silicosis. They have proved by experiment that silicosis can be prevented in animals exposed to the inhalation of silica if they also inhale metallic aluminium dust. The favourable result of these experiments has led to the method being tried out in several mines. The trials are still in progress and the results have yet to be reported.

Medical Measures

These consist of the clinical and radiological examination of all entrants into the industry concerned. This, as stated previously, is applied to some industries in this country. It is interesting to note from the figures of the Medical Board that there is a decreasing number of disablements in the industries where initial and periodic examinations are practised. There can be no doubt that this, together with improvement in dust extraction methods and ventilation, has played its part in bringing about the decrease. Tuberculous workers should be kept out of the industry, and to this end all entrants into the industry should be X-rayed. This is one of the defects of the present system.

In connection with the discovery of the infective case, blood sedimentation and blood counts have been advocated. Trail (1941) is of the opinion that an increased sedimentation rate is a definite indication of infective silicosis. Craw (1937), in a series of 50 haematite iron-ore miners, found blood changes when infection supervened. Aslett and Jenkins have investigated the blood in silicotic coal miners and have found no changes from the normal.

Increasing attention should be given by health and school authorities to the nutrition and physique of the boys in the coal area who will be the new entrants into the industry. These should be of the highest possible standard.

Treatment

In the present stage of our knowledge not much can be done for silicosis *per se*, apart from rest and symptomatic treatment, and no provision has so far been made for intensive investigation of the therapeutic possibilities.

Dyspnoea is the most distressing symptom, and it is known from experience that bed rest alone combined with good food and fresh air are often of great value, surprising improvement being sometimes obtained, probably due partly to the restoration of the impaired nutrition and partly to the recuperative effect on the cardiovascular musculature. At Cymla Hospital certain cases, after clinical and radiological examination, have been selected to undergo a course of respiratory exercises in order to improve their dyspnoea. It is considered that these exercises will increase the vital capacity of the lungs by expelling the residual air in the alveoli and in this way decrease the dyspnoea. All expenses of the investigation are defrayed by the Association, and the exercises are carried out in the Light Department of Cymla Hospital, Neath. The experiment is still in progress and no definite results have been obtained as yet.

Apart from treatment in an institution, much more can and ought to be done as regards the supervision—medical, social, and economic—of the patients in their homes. The silicotic, once certified, seems to be nobody's concern. The employers pay the compensation and retire from the picture. They intervene at times to try to persuade the silicotic to settle his compensation for a lump sum. The Trade Unions, having seen that compensation was obtained, rest upon their oars. Welfare organisations which provide facilities for recreation and subscribe to hospitals for the treatment of acute disease spend nothing on silicotics, the industrial casualties from their own ranks.

Compensation, Care, Rehabilitation

Many miners on full compensation are not fit for work, and are therefore unemployable. Compensation varied according to the average weekly earnings over a year, but never amounted to more than 30s. per week. This has now improved, allowance being made for dependants. Nevertheless, because of the disability which he has acquired, the silicotic is thrown out of employment and is expected to keep himself and his family with the help of public assistance.

Provision of care schemes for the tuberculous is the duty of local authorities by Act of Parliament. I suggest that such a scheme should also include silicotics. At least part of the scheme would have to be financed by the industry; but if the industry were to display the same academic interest in a care scheme as is displayed by some local authorities in Wales to-day towards care schemes for the tuberculous, I am afraid that much water will have flown under the bridge before such a scheme for silicotics is formulated. Many of the features of the Denbigh Scheme for the care of the tuberculous could be applied to the care of the unemployable silicotic. It should be remembered that at any time during his life the simple silicotic might become infective, and this onset might be expedited under economic distress, with grave results to the community. For this reason, seeing that it is a public health question, local health authorities might also take an interest in the scheme.

The plight of those workers who receive partial compensation is most distressing. They have a disability and are not capable of doing their full work owing to it. The amount of compensation paid these workers is so small that they must find some kind of employment. Naturally, work in or around the coal pit is the only work they have been trained to do. They are not allowed to work on the coal face, and therefore have to find surface work. This kind of work is not easy to find, nor do the employers take kindly to employing these men.

Rehabilitation of these workers on the same lines as suggested for the tuberculous is definitely indicated. This could be done by training them for an industry to be set up near their homes. The products of this industry would be sold in the open market, and should not be marketed on sentimental grounds, which is of limited value only. The excellent quality of goods manufactured by such institutions for the tuberculous at Papworth, Barrowmore Hall, Preston Hall, etc., carrying out occupational therapy, have been acceptable to the most fastidious buyers, and when made under properly organised factory conditions, these goods are sure sellers in the open market.

If, as suggested, these factories were established near the homes of the workers, thus obviating the necessity for them to leave home, I am sure that no unwillingness to participate in the scheme would be found. The Ministry of Labour have started such a scheme in connection with the making of munitions in the anthracite area. This is a war-time measure, and there is no guarantee that it will be continued after the war. The success of any such scheme would depend on the proper financing of it. There is no doubt that the money could be found if the employers and the Union got together to work out a scheme for the benefit of these industrial casualties.

Summary

1. The industries included in the Silicosis and Asbestosis Medical Arrangements Scheme are reviewed.
2. The incidence of silicosis continues to be serious, and in Wales occurs chiefly in the coalfields of South Wales and in the Slate Mines of Merionethshire.
3. Ninety per cent. of the total certificates of disablement awarded by the Silicosis Medical Board in Great Britain in the coal mining industry are granted to workers in the South Wales Coalfield.
4. The results of a survey of a group of Welsh slate quarry miners is given, showing the high incidence of silicosis in that industry.
5. Silico-tuberculosis is much higher in the slate quarry miners than in coal miners, but it is suggested that infective silicosis is more prevalent in coal miners than hitherto suspected.
6. The radiological appearances of silicosis is described.
7. The complications and sequelae are discussed.
8. The prevention of the disease is both an engineering and a medical problem.
9. Tuberculous workers should be kept out of the industry, and to this end all new entrants into the industry should be X-rayed.
10. Institutional treatment should be given to all silicotics on full compensation and they should be included in a care scheme on the same lines as such a scheme for the tuberculous.
11. The rehabilitation of those workers on partial compensation should be undertaken.

I am greatly indebted to Dr. D. A. Powell, Principal Medical Officer, my colleague Dr. Aslett, and Drs. Keating and Thomas of the Silicosis Medical Board, for much valuable advice and assistance.

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OBITUARY

Archibald Kerr Chalmers, M.D., LL.D.

Dr. A. K. Chalmers, President of the Society of Medical Officers of Health in 1913-14, and for thirty-three years Medical Officer of Health for Glasgow, died at Bridge-of-Weir on January 24th in his eighty-sixth year.

Archibald Kerr Chalmers, who spent his whole life on his native Clydeside, was born in Greenock and received his medical education at Glasgow University, qualifying M.B., C.M., in 1879. He proceeded to the M.D. in 1887 and the D.P.H. of Cambridge University in 1889, and became F.R.F.P.S. Glasgow in 1901. In 1926, after his retirement from public office, the LL.D. (*honoris causa*) of Glasgow University was conferred upon him, and in 1932 he was made Honorary Fellow of the Royal Faculty. When the Territorial Force was inaugurated he was appointed chief sanitary officer for the Lowland Division, with the rank of Lieutenant-Colonel, and he acted in this capacity during the last war. He held the Médaille du Roi Albert of Belgium.

Dr. Chalmers was appointed to the staff of Belvidere Hospital in 1879, and in 1892 he became, with the late Dr. J. B. Russell, joint medical officer for the city of Glasgow. In 1898, when Dr. Russell joined the Scottish Board of Health, Dr. Chalmers assumed full control: he was at this time President of the Royal Sanitary Association of Scotland. During these years Glasgow saw many sanitary improvements, including a scheme for dealing with insanitary and congested areas in the centre of the city and on the south side of the river, and also a remodelling of the drainage system. Dr. Chalmers had not been long in office when he had to deal with an attack of bubonic plague. With his efficient staff he successfully combated this, and also an attack of smallpox which followed. In 1904 he added to his other duties those of medical officer for the port local authority, and he held the two offices until he retired in 1925 at the age of 70. Among his other activities he was a member of the central Midwives Board of Scotland and of the General Nursing Council for Scotland, and examiner for Fellowship of R.F.P.S. Glasgow, and also for the D.P.H. of Cambridge. In 1916-18 he was a member of the Medical Research Commission (National Health Insurance Act), and from 1920-22 President of the Section of Epidemiology of the Royal Society of Medicine. He was one of the first members of the Consultative Council of Medical and Allied Services, set up by the Scottish Department of Health in 1920 to correspond with the Council in England. In 1907 he was a member of a commission appointed to consider health conditions in Belfast.

In 1925 Dr. Chalmers gave the Watsonian Lectures before the Royal Faculty of Physicians and Surgeons of Edinburgh, and these were subsequently published under the title, *Epidemic Diseases of the Central Nervous System*. He also wrote a memoir of his colleague, the late Dr. J. B. Russell, under the title, *Health Administration in Glasgow*, and after his retirement he undertook the publication of a history of the health of the royal burgh during the previous hundred years. He published many papers on isolation hospitals, the relevance of death rates to housing conditions, and other public health subjects. Many of these appeared in the *Proceedings* of the Royal Sanitary Institute and the Royal Institute of Public Health.

Dr. Chalmers's reputation both as an administrator and practical public health worker was high. He had the Scottish characteristics of industry, conscientiousness, and seriousness, and his reputation was established far beyond the town in which he worked.

He is survived by his wife and two sons, to whom our sympathy is extended.

James Robert Robertson, L.R.C.P., L.R.C.S. Ed., D.P.H.

We regret to record the death of Dr. J. R. Robertson, Medical Officer of Health and School Medical Officer of Dukinfield, Cheshire.

James Robert Robertson was educated at St. Mongo's College, at Glasgow, and at Paris. He qualified L.R.C.P., L.R.C.S. Ed., and L.R.F.P.S. Glas. in 1903, and took the D.P.H. of Cambridge in 1910. During the Boer War he was a dresser in South Africa, and in the war 1914-1918 he served in Malta and France. He practised for thirty years in the Dukinfield area. For a long time he was a member of the honorary medical staff of the district infirmary, being for fourteen years secretary of the Board, and also at one period its chairman. In these capacities he gave the infirmary the benefit of his well-trained and clear intellect, and as its senior physician his sound clinical judgment was greatly valued. Among other appointments he served as medical officer to the V.D. Clinic, Ashton Area. Although suffering during the past three years from ill-health, he continued with the duties of his private practice and his public appointments. Dr. Robertson will be missed both by his professional colleagues and by the community to whom he gave such unstinted service. He leaves a widow, two sons, and two daughters.

William Grant, M.B., Ch.B., B.Hy., D.P.H.

The death took place on February 1st at Easington, Co. Durham, of Dr. William Grant, Medical Officer of Health to the Rural District Council. He was 65 years of age.

William Grant was educated at Edinburgh and Newcastle. He qualified M.B., Ch.B. at Edinburgh in 1908, and took the B.Hy., and D.P.H. of Durham in 1916. He had begun practising in Easington in 1912, and in 1921 was appointed medical officer of health for the district, which has a population of 80,000—mostly miners. He also served as medical superintendent to the Thorpe Isolation Hospital. He was a J.P., and in 1930 was made a magistrate in the County of Durham.

Dr. Grant was a close friend of the late Mr. Ramsay MacDonald. His home at Easington, in the centre of the Seaham Division, was Mr. MacDonald's headquarters during the elections of 1929, 1931, and 1935.

BOOK REVIEWS

Diseases of the Nose, Throat and Ear. By I. SIMSON HALL, M.B., F.R.C.P. ED., F.R.C.S. ED. Second Edition, 1941. Edinburgh: E. & S. Livingstone. pp. 446; 4 coloured plates and 71 illustrations. Price 15s. net. (Postage 7d.)

This is a sound and reliable guide to diseases of the nose, throat and ear, well suited to the needs of the general practitioner as well as the senior student. Everything likely to be encountered is included, but there is often little differentiation between what is common and what is rare. The book is well printed and produced, and most of the illustrations are excellent; some, however, are of unequal merit, such as the tiny photographs of (to the average reader) unfamiliar sets of instruments for operations. There are illustrations of the mastoid operation and the frontal sinus operation, but not of the tonsil operation—and two of the technically excellent colour plates by no means illustrate what they are supposed to. The specialised methods of examination are made simple and clear, but more notice might have been taken of the electrical aids to diagnosis, which after all will be those used in practice by all except the specialist. The diseases of the nose, throat and ear are clearly and adequately differentiated. Methods of treatment include the most modern and are fully described, and a number of useful prescriptions are given.

Simple Health Hints, prepared by Anna Broman, M.R.C.S., L.R.C.P., with a foreword by Dr. G. A. Auden, is a collection of "notes for the use of Youth Group Leaders wishing to give short talks on practical Health Education to members of Youth Groups." (H.M. Stationery Office, price 3d. net.) This 32-page pamphlet on the whole succeeds well in doing what it sets out to do. It covers the familiar ground in a pleasant and instructive way. We are not quite certain that the author is on safe ground in attributing headaches to a diet poor in vitamin B, and note that she blames vitamin C deficiency for the same symptom. It is a pity that the author has not stressed potatoes as a valuable source of vitamin C. The author does not always write concisely, and perhaps might have avoided such ambiguities as: "See to these points and remedy them before heating the room like an old woman."

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments to the health departments of various local authorities.

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

BURNLEY C.B.: A.M.O., M. & C.W., Dr. Joyce M. Scholefield.

EALING M.B.: Temp. A.M.O.H., Dr. W. C. S. Wood.

EVESHAM & PERSHORE R.D.: M.O.H., Dr. J. Murray.

GLOS. C.C.: A.M.O.H., Dr. J. W. F. Brown.

MANCHESTER C.B.: Dr. J. Fairley Swan.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

MIDLAND BRANCH

President: Dr. Ethel Cassie, O.B.E. (Senior A.M.O., M. & C.W., Birmingham).

Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton C.B.).

The third meeting of the session was held in Birmingham on December 6th, 1941, at 2 p.m. The President and 27 members were present.

The minutes of the previous meeting were read, confirmed and signed.

The Branch nominated Dr. H. Paul as their representative on the Central Medical Planning Committee of the Society.

PARATYPHOID IN BIRMINGHAM AREA

Dr. J. F. Warin gave an address on recent outbreaks of paratyphoid fever associated with synthetic cream, in which he described three epidemics which had occurred in Birmingham and the Midlands during the past eighteen months. The first outbreak was in the summer of 1940, when thirty-three cases were reported in Birmingham. The second and largest outbreak was spread over the months of May and June, 1941, and involved Warwickshire, Worcestershire, Leicestershire, and Staffordshire. The known cases in these areas amounted to 231. The last outbreak occurred in October, 1941, and involved Birmingham and district only, eighteen cases being reported. The source of infection in each of the three outbreaks was probably synthetic cream, but attempts to isolate *B. paratyphosus* from this medium had all been unsuccessful. There was strong presumptive evidence that three large bakeries were concerned, one in each of the three epidemics. The percentage of ascertained cases in each outbreak giving a definite history of having eaten the suspected cream was as follows: outbreak No. 1, 48·5 per cent.; No. 2, 74 per cent.; and No. 3, 72 per cent. The synthetic cream coming into Birmingham was manufactured by six different London firms. The first bacteriological examinations of their products showed that four of the five were heavily contaminated. In the case of one firm, an agar count of 72 million organisms per c.cm. was reported with a coli count of 36 million per c.cm., but later analyses showed very great improvement. The bakeries concerned readily co-operated with the Birmingham Public Health Authority in measures to control the outbreaks. These included (1) temporary cessation of the manufacture of cakes and pastries containing synthetic cream; (2) thorough sterilisation of all equipment; and (3) examinations of the blood and excreta of all employees engaged in handling the synthetic cream. (Thirteen of the ninety-one employees examined in connection with one outbreak gave a positive agglutination test, but symptoms suggesting a previous mild attack of paratyphoid were elicited only in two out of the thirteen.) As the epidemics were limited to the Midlands, infection of the cream during its manufacture was unlikely. Similarly, infection in transit between London and Birmingham was not probable, as distribution was made in sealed tins. The evidence in each epidemic strongly suggested infection at the bakery, either by a carrier or by a missed case.

Dr. Gibbons Ward did not think the evidence conclusive that infection of the cream had taken place in Birmingham, and stated that there had been epidemics of paratyphoid in other parts of England during the same periods. Dr. Donald said that, as a result of the Birmingham investigations, the Ministry of Health were now exercising a strict control over manufacturers of synthetic cream. He thought it desirable to limit the number of cream handlers in a factory, and to exercise strict supervision over their personal cleanliness.

SCABIES

Dr. L. J. Bacon then opened a discussion on some problems in the treatment of scabies. The first essential was thorough ascertainment of the prevalence of the condition. This might be improved by propaganda in the Press and in shelters, and by circular letters to welfare officers in factories. Doctors could be informed of the facilities for treatment and cleansing provided by the local authority. Schemes of treatment might be (*a*) domiciliary, (*b*) at a clinic with a doctor and nurse in attendance, or (*c*) at a cleansing centre in charge of a trained lay attendant. Such centres could be readily improvised, the essentials being warmth, privacy, and hot baths. Of the medicaments recommended, sulphur, the polysulphides, benzyl benzoate, and derris powder were most commonly used. Benzyl benzoate was probably the medium of choice, as, although it was costly, fewer applications were required. At present it was difficult to obtain. Sulphur ointment (5 per cent.) was cheapest, but the treatment took longer and more attendances of the patient were necessary. Dr. Bacon observed that the disinfection of bedding and clothing in the home was more important than treatment of the actual apparel worn, as the latter would be brought under the influence of the application made on the patient's skin. Steam disinfection of bedding and clothing was unnecessary, because a dry heat of 122° F. for ten minutes would kill the acarus. This could be done by exposing articles to radiant heat from an electric or open fire for twenty minutes and then turning them for another ten minutes, or by the application of a hot iron.

Four of the speakers in the subsequent discussion considered that infection by clothing and bedding was not uncommon, and quoted cases in support of their views. Dr. Parker stated that the skin irritation persisted for some time after the acarus had been killed, and stressed the importance of preliminary soaking and scrubbing before medicaments were applied to the skin. He had found that benzyl benzoate was too strong for young infants.

The President proposed a vote of thanks to both Dr. Warin and Dr. Bacon for their interesting addresses. This was carried by acclamation.

HOME COUNTIES BRANCH

President: Dr. D. H. Geffen (M.O.H., Enfield U.D.).

Hon. Secretary: Dr. C. E. E. Herington (M.O.H., Dagenham M.B.).

A meeting of the Home Counties Branch was held at Tavistock House South on December 12th, 1941, there being present the President and 20 members.

The minutes of the meeting held on November 7th, 1941, were read, confirmed, and signed.

Mr. L. Farrer Brown, B.SC. (ECON.), Secretary of the Central Midwives Board, gave an interesting address on the duties and functions of the Board, together with a brief history of its formation. During the discussion which followed Dr. Buchan disagreed with the suggestion that inspection of midwives should be carried out by officers appointed by the Board. Several other speakers also held this view. Dr. Williams stressed the importance of adequate payment to midwives in order to raise the standard of their profession. The President thought that 60 cases a year was a good working average and should not be exceeded except in special circumstances. He was not in favour of midwives having uniforms. Dr. Caryl Thomas agreed with this. He voiced the thanks of the meeting to the speaker and made some speculations on the future practice of midwifery.

The speaker, in acknowledging the vote of thanks, stated that, although he felt satisfied with the way in which supervision had been carried out by most local supervising authorities, he was still in favour of central supervision, which should be largely for educational and instructional purposes. He was strongly in favour of uniforms for midwives, one of the chief reasons being that they tended to make the community "midwife conscious."

(It is hoped to publish Mr. Farrer Brown's article in a subsequent issue of PUBLIC HEALTH.)

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Virginia Saunders-Jacobs.

Hon. Secretary: Dr. Katherine M. Hirst.

Hon. Assistant Secretary: Dr. Violet Russell.

The December meeting of the Group took the form of a week-end refresher course at the British Postgraduate Medical School in London. It was attended by 54 members.

Professor James Young lectured on ante-natal care with special reference to recent work in hypertension and toxaemia, and also to pelvic arthropathy, the diagnosis and treatment of which condition were illustrated by cinematograph films. Dr. Meave Kenny gave a talk on pelvic radiology, illustrated by photographs and skiagrams. She pleaded for the extension of routine X-ray investigation to all primigravidae and showed the practical advantage to the obstetrician of knowing the exact shape of pelvis present in each individual. Dr. Kathleen Harding spoke on post-natal care, giving a demonstration of physical exercises for the puerperium. Dr. Reginald Lightwood then opened a discussion on infant hygiene, in which many members took part; it was chiefly concerned with the part that obstetrician, midwife, and paediatrician should play in the care of the newborn child. Dr. Kathleen Harding gave a detailed analysis of the physiology of breast-feeding and spoke on the present difficulties in its maintenance.

Dr. E. Virginia Saunders-Jacobs was supported by other members of the Executive Committee in returning thanks to all the lecturers who had combined to give the Group a most instructive and enjoyable week-end; the generous hospitality of the London County Council had been of great value and was appreciated.

A meeting of the Group was held on January 3rd, 1942, being preceded by a sandwich lunch. The President occupied the chair, and 30 members and visitors were present.

The minutes of the last meeting having been confirmed and signed, Dr. R. T. Brain read a paper on some commoner skin conditions in young children, illustrated by slides on the epidiascope and by demonstrations of cases. Discussing the treatment of the varieties of birth-marks in young children, Dr. Brain said that most cavernous naevi disappeared spontaneously in five or six years. Then he dealt with xero-dermia and ichthyosis, advising the addition of liquid paraffin or vaselin to the vegetable oils which are needed as an emollient for the dry skin, in order to prevent too rapid absorption. Eczema, "a manifestation of localised hypersensitivity of the skin in a hypersensitive child," was dealt with at length. Dr. Brain considered that sedatives were essential in the phases of acute irritation. Isotonic saline or sodium-bicarbonate solutions were usually better tolerated for cleansing purposes than the oils commonly advised as a

substitute for soap and water. Milk could sometimes be taken better if modified by the addition of citrate or of hydrochloric acid. Oatmeal was always to be avoided on account of the anti-D factor. Erythema of the iris should be regarded as an allergic reaction to septic infection, and the condition of tonsils and teeth should be investigated.

The greater part of Dr. Brain's lecture was devoted to the two diseases of topical importance—scabies and impetigo. As in eczema, so also in impetigo, Dr. Brain considered that ointments were better avoided. In most cases lotions were effective, and with ordinary surgical cleanliness and a drying lotion a case of impetigo ought to be cured within a week. Dyes were effective, but had obvious drawbacks. When watery lotions were not well tolerated a paste or cream should be used rather than an ointment. Dusting powders of sulphanilamide (5 per cent. diluted with kaolin or talc) or calomel (30 grains with zinc oxide ½ oz. and dermatol or kaolin to the ounce) were the treatment preferred for bullous impetigo (pemphigus) in infants; calomel powder also provided an ideal dressing for the umbilical cord, and was preferable to the boric powder so often employed.

At the end of a most interesting afternoon, a vote of thanks to Dr. Brain was proposed by Dr. Ann Mower White (A.M.O.H., Southwark), seconded by Dr. Parsons (A.M.O.H., Mitcham), and carried with acclamation.

The Maternity and Child Welfare Group has formed a sub-committee to consider medical planning for the future in so far as it affects the services for the welfare, in its widest sense, of the mother and child. Members of the group who are interested in this subject are invited to put forward their views in writing to the Hon. Secretary of the sub-committee, Dr. Violet Russell, Town Hall, Kensington, London, W.8, for the consideration of the subcommittee. A memorandum will be drawn up by the subcommittee embodying the views of the group for submission to the Medical Planning Committee of the Council of the Society.

TUBERCULOSIS GROUP

President: Dr. T. R. Elliot (T.O., Salop C.C.).
Hon. Secretary: Dr. R. L. Midgeley (Medical Superintendent, Devon County Council).

A meeting of the Tuberculosis Group Committee was held at the offices of the Society on November 21st, 1941.

The President occupied the chair, and there were ten members present. The minutes of the previous meeting were read and signed.

Dr. Ward gave his report as Council Representative, with a brief account of the activities of the Standing Advisory Committee, the Central Council for Health Education, the Central Council for the Care of Cripples, and the Central Council for Recreative Physical Training.

The Hon. Secretary was instructed to write to Dr. Lissant Cox to ask him if he would represent the Tuberculosis Group on the post-war planning Committee of the Society.

Dr. Ernest Ward was then nominated as President of the Group for the year 1941-42, together with other officers.

A discussion on post-war planning resulted in the decision that members should send any suggestions to the Hon. Secretary, who should combine them into a memorandum.

The next meeting of the Committee will be held at the offices of the Society at 10.30 a.m. on February 20th, 1942.

The Annual General Meeting of the Group was held at the offices of the Society at 12 noon on November 21st, 1941. The President occupied the chair and there were nine other members present. The minutes of the previous meeting were read and signed.

The Hon. Secretary reported that although times had been difficult for the arranging of meetings the officers had dealt with various matters by correspondence. Dr. Ward had kept the Group informed of the activities of the various bodies on which he represented it. The *locum* service had continued to function, though more names were needed. The Hon. Secretary was asked by men requiring *locums* for various information about them—*e.g.*, their ability to drive a motor car, as well as more usual professional questions. As these questions had a direct bearing on the suitability of a man for a post it would be a help if those who had employed *locums* would send a report for future reference.

The officers for the year 1941-42 who had been nominated by the Committee were elected. Dr. Jessel and Dr. Christopherson moved a vote of thanks to the retiring officers, and this was carried with acclamation.

A discussion then took place on ways and means of interesting younger members in the activities of the Group. It was generally felt that personal approach and publicity in PUBLIC HEALTH of the activities of the Group were the best methods to employ.

A joint announcement by the Ministry of Food and the Ministry of Health, states that the life of canned foods varies with the article, the presence or absence of a suitable protective internal lacquer, and the temperature and the humidity of the storage place. The last factor only affects the external condition, since damp may lead to rusting and eventually to perforation. Cans are made from tinplate, which is a pure steel sheet coated with pure tin. One year is the usual time for the storage of canned soft or stoned fruits kept in a cool place. If kept longer the food value of the pack is not impaired but it may appear less attractive, and the natural acidity of the fruit may attack any scratched or otherwise damaged parts of the lacquer of the can. Honey and jam should keep at least three years in lacquered cans. Vegetables in lacquered cans store well for at least two years. If kept longer the appearance may become less attractive but the food value remains unchanged. Baked beans in tomato or gravy do not deteriorate in appearance and keep longer than two years. Fish (especially sardines and salmon) keep for over five years, as do most meat packs (sausages, meat rolls, galatines, tongues, soups). Canned hams present a special problem in food preservation, and the packer's guarantee is usually only six months. If, however, after longer storage the can is not bulged, the contents are usually sound. Condensed milk keeps for varying periods according to the sugar content. Unsweetened milk keeps in good condition for about three years, and sweetened full cream milk remains unchanged for six to nine months, after which time it may become sugary, but this slow crystallisation is in no way objectionable. Dried milk powder may be sold in packets or cans. Its keeping quality depends on the amount of moisture and butter fat which it may contain, and also on the method of packing. It should be used within a few weeks of receipt.

A "blown" can may be detected from the fact that one or both of its ends will be bulged and cannot be pushed back to the normal position. A rust hole, puncture, or a defective lid are also signs of danger. All blown and leaking cans should unhesitatingly be discarded, and even if a can looks sound the contents should not be eaten if they have an unusual smell or colour.

PUBLIC HEALTH

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CONTENTS

EDITORIAL

Public Health Rationed

Readers with an eye for typographical detail may have noticed that during the past two years minor typographical changes have appeared in this journal. These have all been directed to one end, namely, the printing of more matter on the page. Even in peace time PUBLIC HEALTH is not a big consumer of paper, and therefore there is no great margin to accommodate the restrictions demanded by the Paper Controller. So far we have avoided putting any undue strain on the eyesight of subscribers and have managed to preserve our usual well-kept appearance. But the time has now come to divest the journal of some of its elegance and to bring it out in a more severe, workaday suit; and in this garment the present issue appears. The handsome margins have gone and are encroached upon by printed matter. The list of contents on the first page of text has been arranged so as to close up on the white space that helped to make it look attractive. The bulk of the reading matter in the front part of the journal is now set in a smaller face of type—9 point instead of 10—and the matter which usually appears in the second half of the journal—principally accounts of Society meetings—is set in 8 point instead of 9. As the line of type is to be lengthened, that part of the journal set in 8 point will be rather an uncomfortable "eyeful", and those with incipient presbyopia will tend to blame the Journal Committee for the resultant strain to their optical system. But they must blame the times they live in for the type the journal is to be printed in. For these changes we must ask the indulgence of readers, and also take this opportunity of offering a word of apology for the irregular time of appearance of the journal month by month. Most of the factors that have made for this have been unavoidable. Efforts have been made to remedy what can be remedied, and if it remains impossible to preserve the smooth and efficient standard of peace time, we trust that readers will continue until the end of the war to extend their indulgence to those who are running the journal.

Diagnostic Surveys for Tuberculosis

We publish this month an article by Professor Picken in which the recent increase in mortality from tuberculosis is depicted in tabular and graphic form. Contrary to a recent editorial suggestion in the *Times*, there can be no doubt that the rise is real and considerable and dates from soon after the outbreak of war. It closely follows the course this disease took in the war of 1914-18. There are faint indications that something similar has been happening in the U.S.A. even before the entry of that country into the war, which, if it proved to be true, would again be a repetition of the experience of twenty-five years ago. The reaction seems too quick to be explained by under-nutrition, and the theory that it is due to stress of work and life in wartime and during the period of intense preparation which preceded it, as propounded by Laidlaw and Macfarlane, seems justified. The much graver state of affairs in parts of Europe, of which there are hints, is more likely to be related to inanition.

In so far as this reversal of the trend of tuberculosis is due to the social and occupational circumstances of wartime and may be accentuated in the near future by shortage of food, the fundamental remedies are outside the province of public health administration. We have now, however, medical knowledge, methods, and an administrative organism which should be capable of retarding the process if they are promptly applied. The beds in existing sanatoria and hospitals are full and their waiting lists are too long. The people who break down under exceptional stress are those who are most likely to react favourably to timely treatment. In spite of the obvious obstacles to large building programmes, extension of beds for tuberculosis should receive a high measure of priority. It is equally important that those with incipient or latent disease should be guarded from the special risk of overwork in industry or the physical strain of the Fighting Services, and that others should be protected from the danger of infection from them. Already the number of examinations by tuberculosis officers has greatly increased, by reference to them of recruits, evacuees, and other selected members of the community. But other methods are needed and are at hand. The National Association for the Prevention of Tuberculosis has recently issued a memorandum on this subject.* It points out that the static number of cases of respiratory tuberculosis in the British Isles at any time is about quarter of a million and that 1,500 between the ages of 15 and 50 die of this form of the disease each month. We should persistently try to discover cases at an early stage as a preventive measure. The only method, it says, of detecting the disease before it produces symptoms is by X-ray examination. The Trades Union Congress is stated to have passed a resolution urging that young workers should be so examined within a year of entry into industry and every year thereafter up to the age of 18 years, but the ideal would be to extend it throughout early adult life. Students in secondary schools,

* The Discovery of Symptomless Pulmonary Tuberculosis. N.A.P.T., Tavistock House North, London, W.C.1.

technical schools, colleges, and universities should also be submitted to periodical X-ray examination, and large firms are asked to do the same for their office staffs as well as factory hands. Public education should aim at making the people receptive of the idea.

The memorandum of the N.A.P.T. is timely, although its tendency to focus attention on the adolescent and young adult is perhaps more politic than administratively sound, for it is probable that X-ray examination confined to these ages would miss many symptomless cases, at least among male town-dwellers. For some groups of the population contemporaneous tuberculin tests should also be carried out, and in this connection recent improvements in the patch test have made this simple procedure more reliable. The memorandum proposes at any rate a big enough programme for a start. Until recently American workers have expressed a preference for full-sized paper radiographs, but Major de Lorimer of the U.S.A. Army Medical Corps has come down strongly on the side of miniature films.* This journal drew attention to the modern development of miniature X-ray plants early in 1940† and again in 1941,‡ as an economical and expeditious way of approaching the problem. The Royal Navy is using routine radiography extensively, but an unfortunate pronouncement by a Government committee early in the war discouraged the examination of recruits in this way, as has been done so extensively in Australia and the U.S.A. The reported findings as regards tuberculosis in recruits to the Armies of the U.S.A. have recently been summarized by Helen S. Canny, Statistical Assistant of the National Tuberculosis Association.§ She points out that uniformity of results was not to be expected, since in some areas all recruits were examined by X-rays but not in others. Further, new recruits have passed through a double filter (soon to be eliminated), the first being a local board similar to our national service boards, the second an "induction centre" on entry into the Army, so that results at this second examination would be affected by the exclusion of cases of tuberculosis at the first. While X-ray examination is available for all entrants at the induction centres of some Corps Areas, it has not been so complete in others, although it is expected that it will be possible to X-ray every man entering the Army from the beginning of this year. The proportion found to have disqualifying tuberculous lesions at local boards in Pennsylvania was 0·63 per cent. before X-rays were used as a routine, but rose to 1·83 thereafter. In the Broadway-Chinatown area of New York, where rejections from all causes are high, the proportion found tuberculous with the aid of X-rays reached 8·7 per cent. There was much less variation between the findings at those induction centres for which data are available, the lowest percentage being 0·45 in New Hampshire and the highest for a presumably mixed racial group 1·50 in parts of Delaware. At one such centre in New York, however, where the findings among white and coloured groups were given separately, the positives were 0·84 per cent. in the former and 4·35 in the latter. The general conclusion is that about 1 per cent. of men of this age may be expected to show X-ray lesions. This is in fairly close accord with the experience of the two British Dominions from which results have been published—*viz.*, Canada with 1·06 per cent. and Australia with 1·04 per cent. In Australia only 0·56 per cent. were regarded as having active disease.

It is understood that the Ministry of Health is now taking steps to make available miniature X-ray apparatus and promote X-ray surveys. It is important that the plants should be of such a nature as to give a very high measure of accuracy in the hands of those competent to use them. It appears that two types of mobile apparatus are available, a four-valve type with petrol generator or a condenser set. The latter has the advantage of easier portability but, as at present designed, is considered by some experts to have insufficient condenser capacity to give completely satisfactory results. It is to be hoped that the Ministry and authorities proposing to acquire a set will take the best informed opinion on these matters and not rely merely on the assurances of the makers. If the outfit is to be purchased an initial expenditure of about £5,000 has to be contemplated, including the cost of a specially designed van properly insulated and heated, so that the machine may be taken to the vicinity of any group of persons to be examined.

Bull. Nat. Tub. Ass., 1941, **27**, 153.
† PUBLIC HEALTH, 1940, **53**, 74.
‡ *Ibid.*, 1941, **54**, 72.
§ *Bull. Nat. Tub. Ass.*, 1942, **28**, 21.

Public Health Measures in Germany

A recent article in the *Bulletin of War Medicine** gives an excellent summary of measures which have been adopted in Germany during the present war to combat epidemics and to raise the physical standard of the nation. The following is a brief summary of the article, which should be read by all those interested.

As in this country, a circular was issued in September, 1939, dealing with typhus exanthematicus. The temperatures for killing lice are much higher than those recommended in this country. It is recommended in another circular that children should be vaccinated against smallpox during the second year and re-vaccinated at the age of 12; two incisions are to be used, of at least 3 mm., 3 cm. apart. Inoculation against diphtheria is advised, especially in areas where a spread of the disease is feared. The instructions to Sanitary Authorities with regard to germ carriers are stringent. Carriers must have bacteriological examinations of excreta whenever required and the police must report yearly on the carriers living in their area. Carriers may not be employed by dairies, butchers, pork butchers, food factories, or bakers, and the occupations of hairdresser and cellarman are also prohibited to them. Much use is being made of miniature radiography. In certain areas it is proposed to establish a "tuberculosis register" by this means, and by 1939 more than 500,000 persons had already been examined in Mecklenburg. A decree on venereal diseases issued on September 27th, 1940, is stringent. Tracing of the source of infection is made compulsory, and the police have wide powers. Under the law of 1927, treatment of syphilis by arsenical preparations, mercury, or bismuth, was possible only with the consent of the patient. This law is in abeyance, and the consent of the patient is now required only for lumbar punctures, cystoscopy, ureteral catheterisation, or urethral dilatation. The Minister of the Interior ordered that a census of new cases should be made during June, 1940.

By decrees in August and September, 1939, the rationed amounts for bread, milk, fats, meat, sugar and farinaceous foods were fixed, and the sale of eggs, cheese, coffee, tea, cocoa and spice was regulated. Expectant mothers receive half-a-litre of unskimmed milk and 150 grammes of farinaceous foods daily. Pregnancy must be certified by a doctor or midwife. Supplementary meat (250 grammes) and farinaceous foods (100 grammes) per week are also given to blood-donors during the fortnight after the bleeding. It is interesting to note that the diseases for which supplements are allowed are intestinal affections, gastric ulcer, diseases of the liver and kidneys, and tuberculosis. Tuberculous patients treated at home can obtain a supplement of 250 grammes of butter, 3½ litres of milk, and three eggs per week. This should be compared with the recent decision of the Ministry of Food in this country. A study of tables of the distribution of rationed foodstuffs in the late autumn of 1939 and of 1940 respectively shows that there was a reduction of 125 grammes in meat for all members of the community for a four-weeks' period. There was a slight reduction of the fat ration and also a 50 per cent. reduction in the ration of unskimmed milk to pregnant and nursing women. The ration of sugar was reduced, but that of jam, eggs and cheese was increased. Much use has been made of animal blood in the preparation of sausages, and an Order stipulates that the blood used—as prepared by a special process—may come only from bovines, pigs, sheep and goats. Great use is also made of bones, from which edible fat and gelatine are extracted and a paste manufactured for spreading on bread. Synthesis of fats has passed the experimental stage and such fats are stated to have been successfully used for foodstuffs. At Altona a factory has been perfected for the preservation of whale flesh. The lupin has been used in the baking of pastry, and attempts have been made to cultivate the soya bean. Extensive research has been carried out on the resistance of different vitamins in canning.

* Medical Research Council, 1941. September. Pages 1-10.

In November, 1939, a decree was issued providing for anti-rachitic prophylaxis for each infant. A large-scale experiment has also been carried out on the prophylaxis of scorbutic conditions.

The course for a medical diploma was reduced in 1939 from eleven to ten semesters and various alternatives were introduced to the compulsory period of a year in a hospital service at the end of the course. Since then additional steps have been taken to speed up the course. In order to increase available hospital beds steps have been taken to reduce the number of maternity cases treated in hospitals. A close liaison was established between the school medical inspection service and the Hitler Youth organisation. School medical officers now have the title of "Youth Doctors." A "Service for the Health of Young Persons" is responsible for them from the ages of 6 to 18 years, and regular medical examinations—"health call-ups" and "dental call-ups"—are arranged. These arrangements, it is claimed, closes the gap between the school-leaving age and the eighteenth year. It is hoped in the future to link up the health service for young persons with those of the labour camps and the army. Several police orders have been issued dealing with the conduct of young persons—such as prohibition of their being at places of amusement after 9 p.m., or being served with spirits or tobacco for their own use.

A circular of 1939 stated that new buildings should be constructed with some view to the possibility of aerial bombardment. The number of beds must not exceed 600, except where the institution is used for university teaching or includes specialist departments. The number of stories should be two or three. Shelters, preferably constructed in the interior of the building, must be large enough to accommodate the staff and beds and must include an emergency operating room and other facilities.

As a tail-piece to the above summary, we may note the instruction given to Nazi writers of M.D. theses that "Jewish authors may be quoted only if that is absolutely necessary for scientific exactitude; in such cases the fact that non-Aryans are quoted must always be specified and their works must be placed in a special category in the index of authors cited."

The Health of India in 1940

The annual reviews of the Public Health Commissioner with the Government of India* always contain a large amount of interesting material, and this latest volume proves no exception. In the past, because of the difficulty in collecting complete statistical data, these health reports have appeared about eighteen months after the year to which they related. Detailed statistics will in future appear in supplementary volumes, and the speedier appearance of official information on health matters has met with general approval both from public health workers and from the general public.

As might be expected, the health of India during 1940 was not affected by war conditions, and, in fact, no abnormal outbreaks of the common epidemic diseases were recorded. Cholera has not yet been mastered, but Bombay Presidency has demonstrated during the past four years the possibility of preventing epidemics associated with religious festivals by insisting that every person attending a certain large pilgrim centre shall be protected with anti-cholera vaccine. This measure seems to have had a considerable influence in reducing the spread of cholera throughout the Province, and it is gratifying to note that the public are co-operating with the authorities in carrying out these mass inoculations. The incidence of plague has fortunately decreased considerably during the past decade, but the occurrence of fresh outbreaks in one or two areas in Bombay Presidency indicates that the danger still exists. However, experiments carried out during the past six years in an endemic area have so fully established the value of cyanogas fumigation of rat burrows as a preventive measure that the Plague Advisory Committee of the Indian Research Fund Association have now recommended the intensive application of the method in all plague-infected areas. Since it was established in 1939, the Tuberculosis Association of India has made further important advances in organising preventive measures. Not only have Provincial and State branches of the Association got to work, but a model Central Tuberculosis clinic has been opened in New Delhi, and still more recently a large sanatorium was opened.

During 1940, the war may have exercised little influence on the health of India, but it certainly has increased the danger of the introduction of yellow fever. For several years past the Government of India have taken stringent measures to avert the possibility of such a calamity and, though the Government's stiff attitude was the subject of repeated criticism at international conferences and elsewhere, their estimate of the potentialities of the situation in East Africa has been confirmed by the sudden appearance of a serious outbreak of yellow fever in the Sudan. There can no longer be any doubt that the danger of the carriage of yellow fever infection from East Africa to India, and beyond, has become more acute and additional precautions have recently been instituted.

In 1937 a Central Advisory Board of Health was established. The Board held its third meeting during 1940 and discussed a wide variety of subjects, including reports from two of its special committees. These dealt with the compulsory inoculation of pilgrims against cholera and with food adulteration. The fact that the Board were able to recommend compulsory inoculation indicates the progress made during recent years in regard to health matters; health education has obviously had the desired effect. The same remark applies to the serious problem of adulteration of food. The Indian is beginning to realise that the food racketeer has far too long enjoyed immunity from punishment and many will welcome further measures for the control of the purity of food supplies. The teaching of hygiene in schools, and the medical inspection of school children were also discussed. These are rightly considered to be two of the foundation stones of national health.

Space forbids the mention of other important sections of the report, but one of the most interesting chapters, as usual, is that which reviews the medical researches in progress. The whole report breathes of vigorous and enthusiastic activity in many fields of public health endeavour, and is one which health officers in this country may be expected to peruse with feelings of sympathy and admiration for those who continue to bear the torch of health in this great and important part of the Empire.

* Annual Report of the Public Health Commissioner with the Government of India for 1940. Published by the Manager of publications, Delhi. Printed by the Government of India Press, New Delhi, 1941. Price 12 annas or 1s.

Research in Industrial Medicine

The Medical Research Council announce that they have appointed Professor A. W. M. Ellis, M.D., F.R.C.P., formerly Professor of Medicine at the London Hospital, to a whole-time position on their scientific staff as director of research in industrial medicine. The investigations to be undertaken by Professor Ellis and his assistants will in the first instance be directed to problems of industrial toxicology, which are of special importance during the war.

The *Bulletin* of the National A.R.P. Co-ordinating Committee for September/October states that of all the problems connected with evacuation, the evacuating of children under five has proved the most complicated. It states that some 216 residential nurseries have been set up in the country since the war, with accommodation for 6,800 children, but that this is quite inadequate. It goes on to state that if recommendations contained in the recent Ministry of Health Circular on wartime nurseries could be put into effect the situation would be considerably eased. This circular permits the setting up of day nurseries in all areas. The Maternity and Child Welfare authorities are to be responsible, and the Exchequer will bear the cost. This problem is referred to again in the November issue of the *Bulletin*, and delay in overcoming the various difficulties is attributed in part to "the reluctance of local authorities to get a move on."

TUBERCULOSIS IN WAR-TIME

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Some compensation for the war-time restriction of the usual vital statistics is afforded by a new table included as an appendix to the Registrar-General's Quarterly Returns since the beginning of 1941. Much of the information contained in it has been analysed recently by Stocks (1942) but the tuberculosis figures deserve further consideration.

Rise in Tuberculosis

Included in the table are the numbers of deaths from tuberculosis, respiratory and other forms being shown under these two separate headings. The rise of mortality from this cause which became noticeable after the outbreak of war, especially in the first quarter of 1940, has caused anxiety, which was accentuated by concern as to the possible effects of the dispersal of patients from institutions and the subsequent resort to communal shelter life in some large towns. Public statements that the first quarterly figures for 1941 throughout the whole country showed an improvement, and some similar local experiences extending to the greater part of the year, may have lulled some of our fears. In his recent Presidential Address to the Society of Medical Officers of Health, for instance, Sir Alexander Macgregor (1942) remarked that the mortality from pulmonary tuberculosis, which had risen by about 20 per cent. in Glasgow in 1940, would not apparently be much greater in 1941 than it was in 1940. The number of deaths from tuberculosis in Cardiff fell in 1940, but I am informed by Dr. Greenwood Wilson that there may be a slight increase in 1941 when the records are complete. Dr. D. A. Powell, Principal Medical Officer of the Welsh National Memorial Association, has supplied me with figures for the whole of Wales for 1941 which show that deaths from all forms of tuberculosis rose in numbers to 2,031 from 2,011 for the corresponding months of 1940, an increase of 20; the deaths for the whole of 1940, it may be added, exceeded those of 1939 by 124 and of 1938 by 8. It would appear that the war-time rise in Wales has been continuous, though not so great in 1941 as in 1940.

Comparison with Pre-War Years

It may therefore be worth while to examine the records for the whole country a little more closely. This may be done by comparing the new quarterly returns referred to above with pre-war records contained in the Annual Statistical Review. The former are apparently deaths registered in quarters, whereas the latter are distributed by date of occurrence. More important, the deaths from 1938 onward in the new table have been classified according to a new system, but those contained in the Review up to and including 1938 are based on the old classification. Fortunately this does not create a large error of comparison so far as tuberculosis is concerned. The effect of re-classification in 1938 and 1939* was a reduction of 2·5 per cent. in the number of deaths attributed to tuberculosis, so that to that small extent any excess since 1940 is masked when the figures are compared with those for the years when the old system was in force.

With these warnings, the two sets of figures may be regarded as giving a useful indication of tendencies. They are set out in graphic form in the accompanying chart. The course of the deaths, for both sexes combined, from all forms of tuberculosis is plotted separately for each of the four quarters of the years 1929 to 1938 (inclusive) and again from 1938 to the latest available quarter of 1941. While there is a good deal of irregularity in the first quarter and some in the fourth (no doubt due to the effect on deaths attributed to tuberculosis, as for many other causes, of inclement weather as well as influenza and other similar winter infections), the downward trend of the deaths in the second and third quarters was almost unbroken until 1938. The picture of the war years is very different. There was a pronounced rise in every quarter of 1940. In the first quarter of 1940 this increase might have been attributable to the bitter weather at the beginning of the year and to a minor epidemic of influenza. The slight recession for this quarter in 1941 favoured such an explanation, but the sharp rise in the second quarter of 1941 and the upward tendency in all quarters of 1940 make it clear that the movement is not due to any such accident. We are faced with a change comparable with that which accompanied the war of 1914-18.

Increase in Both Forms and Both Sexes

Separate data for the sexes and for respiratory and other forms of tuberculosis are given in the Registrar-General's new table and need not be reproduced here, but the accompanying table shows them analysed so as to compare recent figures with those for 1938 taken as constant. With such slight variations as might be expected, the tendency is the same for both sexes and for the two sub-groups of cause. It would be unwise to base any conclusions on the variations mentioned, but the eye is caught by the relative increase in deaths from non-respiratory tuberculosis in the second quarter of 1941, especially when Stocks has shown how great an increase has occurred in deaths from tuberculous meningitis both in children under 10 years and at all ages.

QUARTERLY DEATHS FROM TUBERCULOSIS IN ENGLAND AND WALES
(Numbers in each Quarter of 1938 for either Sex being taken as 1,000)

	Quarters I		II		III		IV		Whole Year	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Respiratory Form—										
1938	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1939	1,119	1,045	968	1,020	955	952	1,033	979	1,022	1,001
1940	1,342	1,224	998	1,098	1,001	1,015	1,113	1,055	1,120	1,103
1941	1,251	1,148	1,132	1,198						
Other Forms—										
1938	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1939	966	937	1,006	925	978	934	990	914	985	928
1940	921	1,051	1,113	1,057	1,071	1,088	1,104	1,018	1,053	1,054
1941	1,128	1,153	1,233	1,349						

Discussion

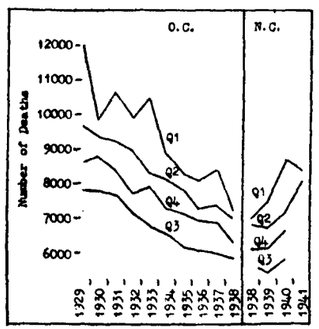
The increase in the deaths from tuberculosis is of course reminiscent of the behaviour of the disease in this and other countries during 1914-18. The reversal in 1914 and succeeding years of the long decline of tuberculosis was striking. We now see a repetition of the movement from the beginning of the present war. Its association with war is incontrovertible, but the reasons for it are not so obvious.

The multiplicity of the social, economic, environmental, physiological, clinical, administrative, and hereditary factors which may influence this disease is almost the despair of those who seek reasons for its rise and fall. Statisticians have tried to unravel this tangled skein, but success seems to elude them. One of the most comprehensive analyses was recently made by Hart and Wright (1939), who endeavoured to explain the retardation of the decline of mortality from respiratory tuberculosis among young adults which became apparent early in the present century. Their general conclusion was that in this sensitive group of the population the check to the rise of the standard of living, accompanied by a setback in the improvement of housing, and an increase in the industrial employment of young women might be the complex of causes. Their impression was that other economic factors, including inadequate nutrition, were less important, although this view was not entirely borne out by examination of the London data, which were more complete in this regard than those for the county boroughs, the main field of their inquiry. Most of us have probably believed that the chief predisposing element is undernutrition. The experience of the blockaded countries of Central Europe during the war of 1914-18 seemed capable of almost no other explanation. Even when a neutral and prosperous country suffered a war-time rise of mortality very similar to our own we find this explanation favoured by Madsen (1937), who wrote :—

> " During the war the housing conditions in Denmark remained almost unchanged, whereas we were gradually subjected to a number of restrictions concerning the most important elements of food articles of nutrition. After the war the nutritional conditions were again normal, but now there was in towns a considerable housing shortage that lasted for several years. In spite of this, however, we find continued fall in the tuberculous mortality."

The Registrar-General has suggested that the maintained high mortality among young adults long after the war might be a delayed result of the war-time deprivations to which they were subjected in childhood (for quotations see Picken, 1940). On the other hand, it is difficult to accept such an explanation of the slowing down of the decline of tuberculosis in the U.S.A. from 1914 onward followed by an actual increase in 1917. It is true that that country entered the war in 1917, but it is unlikely that America felt any serious shortage of food at any stage of the war.

The chart of quarterly deaths in England and Wales during recent years shows that the reaction to the onset of war was quick, and the same conclusion may be drawn from the corresponding statistics of the previous war. It would seem that the deaths have risen too soon to justify the view that war has made previously healthy people more susceptible. It would be more plausible to suggest that something led to increased mortality among those already tuberculous. Laidlaw and Macfarlane (1941) think that rationing in this war has afforded sufficient quantities of the basic foodstuffs to maintain health, and the general opinion of tuberculosis officers seems to be that tuberculous patients are not suffering any ill effects from food shortage. When we look back at 1914-18 it is impossible to trace what would have been the true course of the curve, for the picture was confused by the violent rise of deaths certified as due to tuberculosis during each of the three waves of influenza in 1918 and 1919, but there is some indication that a decline was beginning in the fourth quarter of 1917 at a time when the full force of the U-boat blockade might have been expected to have the opposite effect. When these circumstances are taken into consideration it seems probable that the explanation put forward by Laidlaw and Macfarlane, which was also in the minds of those who watched the process in the last war, is correct—namely, that long hours of work, overstrain, and curtailed rest are the cause.



England and Wales: Deaths from Tuberculosis (All Forms) in Separate Quarters since 1929.
Q = Quarter.
O.C. = Old Classification.
N.C. = New Classification.

Both the quarterly curves and the total annual figures for England and Wales suggest that the decline in tuberculosis mortality began to be arrested in 1939, when rearmament had already been speeded up and these factors had therefore come into play. This explanation would also accord with the experience of the U.S.A. in the previous war, for the wheels of industry were turning more rapidly to supply the allied countries before America entered. So far there is no clear indication of a similar reaction in that country during this war. There was a very slight rise of tuberculosis mortality in thirty-two States during the first quarter of 1941, but it coincided with a substantial increase of influenza, which may have been sufficient to account for it. The death-rate rose in New York City in 1941, especially from the non-pulmonary forms of tuberculosis. The effect of the acceleration of munition-making in 1941, and especially now that America is fully in the war, will be watched with interest. No detailed information is available from Germany, but reference in the *Times* of January 12th, 1942, to an article by a German medical writer indicates that tuberculosis had been increasing there before last March. The general impression is that the German people had, by that time at least, suffered no very serious deprivation of food, although this may be subject to revision when the whole truth is known. But there is no doubt that industry has been working at an increasing pace since 1933. On the other hand, the following quotation from a letter of last October in the *Bulletin* of the American National Tuberculosis Association for December, 1941, from one of the occupied Low Countries points to the effect of undernutrition :

> " Although statistics are still very incomplete, tentative figures reckon on a 300 per cent. increase in morbidity. Mortality is, of course, extremely high, and patients react very slowly to the therapeutic means which did so well before the war—pneumothorax, surgery, etc."

It is something of a paradox that the mortality from tuberculosis should have continued on its downward path through the long years of unemployment (though young adults showed this improvement to a less extent), and then increase with employment and wage-earning at a time when sufficiency of food was probably available, when its price was reasonably controlled, and when the public were better informed than they had ever been as to its proper use. It would be foolish to minimise the importance of nutrition in the maintenance of resistance to this disease, but the war-time rise in deaths so far seems more likely to be due to the stress and strain of overwork and an irregular life, having their effect both upon those who knowingly or unknowingly suffer from the disease and also by lowering the resistance of persons newly exposed to infection. It is possible, also, that the campaign for increased drinking of milk without much regard to its tubercle content may have played a small part in the rise of deaths from non-respiratory causes.

Summary

1. An increase of the mortality from tuberculosis in England and Wales began very soon after the outbreak of war in 1939, as in 1914.

2. The reaction seems too quick to be attributable to defects of nutrition, although these may come to play a bigger part.

3. It is more likely to have been due to the stress and strain of hard work, long hours, and irregularities of living, which have been increasing in tempo since about 1935.

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* The figures according to the old classification for 1939 are contained in a table printed in the *Lancet* of July 12th, 1941, page 55.

A STOCKTAKING OF THE MIDWIFERY SERVICE*

By L. FARRER BROWN, B.SC. (ECON.), *Barrister-at-Law,*
Secretary of the Central Midwives Board

On Thursday, December 11th, 1902, at a meeting at the Privy Council office in Whitehall, the Central Midwives Board began its difficult and, at times, stormy career. The Board's entry into its fortieth year provides a convenient reason for this attempt to take stock of the midwifery service and its development since the beginning of the twentieth century.

England was a late starter in taking steps to provide an efficient and well-organised midwifery service. From the beginning to the 'eighties of the nineteenth century the leading countries on the Continent of Europe took action for the proper organisation and regulation of the practice of midwives. In England the nineteenth century saw agitation without action. In 1813 the Society of Apothecaries protested against the unsatisfactory state of midwifery practice in England, and endeavoured to persuade Parliament to provide for the examination and control of women who were acting as midwives for profit. The efforts of the Society were unsuccessful. From the 'seventies onwards there were unceasing agitation and propaganda, but it required the introduction of ten Bills into Parliament before the first Midwives Act was placed on the Statute Book in 1902. The late start was not followed by a determined drive to make up for lost time. Sure and substantial progress has been made but at a painfully slow rate; and we still cannot claim to have a midwifery service which is a model for other countries. The tempo has increased slightly during the last few years, as developments planned earlier have become fully effective and previous obstacles have diminished or disappeared. But even nowadays in many respects the two essentials for speedy development—namely, the will to achieve and the direct approach—are both lacking.

Slow Progress

The slow progress was due to several causes. Some fortunately no longer exist, but others still seem capable of creating trouble. The following, I think, were the main causes (I make no attempt to grade them in order of importance):—

1. *An undue dispersal of responsibility and powers*—in other words the absence of a single body charged with the duty of building up and perfecting the midwifery service and possessing effective powers for the task.
2. *Lack of co-operation between official bodies.*
3. *Sectional opposition*, both active and passive, to the Midwives Act and the Board.
4. *Parliamentary and public apathy.* The following story, vouched for at the time, points to the existence of some misunderstanding as well. Shortly after the prohibition of unqualified women from midwifery practice, a woman was alone and unaided at the time of her child's birth. She rendered first-aid to herself with considerable skill, but she confessed afterwards, "I was horribly frightened because, you know, it is *now* against the Law."
5. *Low social and economic status of midwives.* In the *Lancet* of July, 1907, it was recorded that some trustworthy information had been obtained with regard to the fees paid to midwives in certain districts, thus: ". . . in an agricultural district, near Hythe, in Kent, where the wages range from 16s. to 20s. a week, the old midwives received a fee of 7s. 6d. and at least one bottle of spirits to be shared with the patient, and in an agricultural and mining district near Radstock, in Somerset, the old fee was 3s. 6d. for the confinement alone, and 5s. if the baby was washed during the ensuing week, 5s. or 6s. worth of spirits being also invariably expected . . ."

The realisation that improvements in the midwifery service have not been won easily serves a particularly useful purpose at the present time. It provides a healthy corrective to a natural tendency to advocate retrograde steps as a thought-and-exertion-saving means of resolving wartime difficulties. It may also serve the interests of maternity and child welfare by stimulating resistance to a tendency, which has recently shown signs of reviving, of subordinating midwifery to the service for the nursing of the sick.

Early Conditions

The present service, consisting predominantly of whole-time, trained, salaried midwives attending all but 10 per cent. of the confinements, is a very different service from that which existed at the beginning of the century. Then over half the midwives were self-taught, semi-skilled, often illiterate, and frequently a source of danger to the women they attended. Some could echo the sentiments of an old American midwife who is alleged to have said, "I am too old to clean, too weak to wash, too blind to sew; but, thank God, I can still put my neighbours to bed." Of those who could claim to be trained, most had had training of short duration and of a limited nature. The large majority of the midwives were private practitioners. A considerable proportion were part-timers attending very few cases a year. The distribution throughout the country did not harmonise with the needs—the rural areas in particular being ill served owing to the great difficulty which midwives had in making a living in those parts. The handy women retained considerable popularity and flourished in many areas.

Those who undertook the task of improving the craftsmanship of the old bona-fide midwives must have had stout hearts. Three related methods were employed:—

1. *Issue by the Board of Detailed Rules of Practice.*—These related to even the most elementary duties.

2. *Personal Advice and Tuition by Inspectors of Midwives.*—Undoubtedly, in those early days many of the Inspectors carried out supervision in the manner now advocated; in other words, they were real teachers. In its report for the year 1910-11, the Board commented upon the progressive improvement in the methods of practice of untrained midwives due to the care and assiduity with which the Inspectors had instructed and helped those under their supervision.

3. *Exercise of Penal Powers by the Board.*—Under the Midwives Act, 1902, a local supervising authority has the duty of investigating any complaint of negligence, malpractice, or misconduct on the part of a midwife, and, if it finds a *prima facie* case, of reporting the facts to the Board. On receiving such a report the Board considers whether or not to institute proceedings against the midwife for the removal of her name from the Roll of Midwives.

Since the Board's formation penal proceedings have been taken against 1,898 midwives and the names of over 1,000 have been removed from the Roll. From 1903 to 1915 the number of cases usually exceeded 100 a year. After 1916 the number dropped fairly steadily, but from that date until 1930 the penal work of the Board was still relatively heavy, the number of cases each year averaging 46. Since 1934 there have been fewer than 20 cases a year, in one or two years fewer than 10.

In the first eight years one-third of the midwives against whom penal proceedings were taken had to answer charges of failing to observe that most elementary rule which required a midwife to keep herself, her clothing, appliances and dwelling clean. As late as 1915 an Inspector of Midwives, writing about her earlier visits, commented on the rather alarming variety, in type and quality, of midwifery bags. One woman apparently carried a silk-lined handbag, another a small chip basket, black and shining with dirt and age. Many of the baskets were also used for shopping purposes, and such articles as tea, sugar, tobacco, candles, slippers and combs were mixed with the outfit. Some midwives took with them rabbit tails for use as powder puffs, and raisins, snuff, and pepper were considered necessary items by others.

Roughly 10 per cent. of the penal cases during the first ten years concerned midwives charged with being drunk and incapable of performing their duties. One such woman, in a case that to-day sounds more like the imaginings of a nightmare than a statement of fact, was charged in the following terms: "That, having undertaken to convey the body of the deceased infant to the churchyard for burial, you were found sitting in a garden drunk and incapable with the corpse in a box by your side." The task of eliminating this type of practitioner might have been easier had she not enjoyed a certain popularity among a section of the poorer classes. A Departmental Committee report issued in 1909 mentions this added difficulty in the way of progress and seeks reasons for the preference shown for the old type of attendant. One of the conclusions reached was that "the preference may be due to her companionable, not to say convivial, qualities, and occasionally, but we hope rarely, to the more sinister reason . . . that she is believed to enjoy 'a lot of churchyard luck.'"

The regrettable deduction is that the bottle of gin was not unknown as an article of equipment. What was perhaps more serious was that the clinical thermometer was frequently not considered an essential item. Many midwives were charged with failing to take the temperature of their patients. It is strange to read to-day that in 1911 the County Medical Officer of Health for Gloucestershire was "pleased to find that nearly all the midwives who could see well enough to make out the tiny figures and points on the thermometer were able to understand it, and that while some were content to know the danger signal others were quite educated in the art of taking the temperature." The rule requiring the recording of pulse and temperature rates as a routine measure met with a far from enthusiastic reception among many of the old midwives and some local authorities.

The failure on the part of the early generation of State-certified midwives to recognise the seriousness of ophthalmia neonatorum, and their consequent reluctance to summon medical aid, called for particular vigilance on the part of local authorities and the Board. From 1914 until 1930 more than 25 per cent. of the total number of penal cases each year related to charges of failing to send for medical aid in cases of ophthalmia neonatorum. Frequently the proportion was far higher, reaching its maximum in 1928, when it rose to 70 per cent. The vigilance exercised by the local authorities and the Board has had good results.

Some Present-day Figures

At the present time about 90 per cent. of the confinements in England and Wales are attended by midwives. In about 65 per cent. of the total, the midwives act in the capacity of midwife; in 25 per cent. they act as maternity nurses. The nation is therefore within a short distance of providing, as was recommended by a Departmental Committee in 1929, that every pregnant woman shall have the services of a skilled midwife at her confinement.

There are between 15,000 and 16,000 practising midwives. The number is probably not very much higher than the number of midwives who were practising in the early days of the Board's existence. Of these midwives, about 4,300 are working in institutions and 10,900 are engaged in domiciliary work; 75 per cent. are in salaried employment, and there is every reason to expect that the percentage will steadily increase. About 45 per cent. of those in salaried employment are in the service of local authorities, the remainder are employed by voluntary hospitals and district nursing associations. In 1940 there were 3,300 midwives in private practice, about 700 were working in institutions, and the remainder were engaged in domiciliary work. A comparison with the year 1937 shows a marked decline in the number of private domiciliary midwives—from 5,500 to 2,600—and the decline is likely to continue.

The midwifery service, nowadays, is not far removed from a State midwifery service of wholetime practitioners whose salaries either are paid direct from public funds or are the subject of grants from such funds. Those who fear the encroachment of salaried employment into the professions on the ground that the greatest stimulant to good work will disappear might be reassured if they studied the effects of such employment on the attitude of midwives to their work. There seems no doubt that the extension of salaried employment has been accompanied by further advances in the standard of midwifery practice.

The midwifery service has suffered serious strains and dislocations as a result of the war; but the resilience which the service has so far shown under these conditions is a tribute to those who comprise it. The downward movement in the maternal mortality rate which began in 1934 still continues, and in 1940 the rate was the lowest on record. That was a proud achievement. It is true that the biggest contributory cause has been the remarkable decrease in the puerperal sepsis rate, but it must not be overlooked that that decrease has been accompanied by an appreciable and uninterrupted improvement in the "other causes" rate. Better midwifery has produced better results. The midwives have made their contribution to the better midwifery.

If the cases attended by midwives, in the capacity of both midwife and maternity nurse, are divided by the number of midwives, the following averages are obtained. Every salaried midwife working in institutions in England and Wales in 1940 attended on an average 32 cases as a midwife and 10 as a maternity nurse. The private midwives in institutions attended on an average 11 midwifery cases and 27 maternity cases. In the case of domiciliary midwives in England and Wales each salaried midwife in the counties attended an average of 24 cases as a midwife and 8 as a maternity nurse (these figures are slightly higher than the average for 1937), while each salaried domiciliary midwife in an urban area attended an average of 55 cases as a midwife and 11 as a maternity nurse. (The average for 1937 was much lower, being 29 cases as a midwife and 6 as a maternity nurse.) The averages for private domiciliary midwives show marked declines compared with 1937. In the counties the average for 1940 was 8 cases as a midwife and 4 as a maternity nurse, as compared with 18 and 6 in 1937; and the average for the private midwife in urban areas was 18 cases as a midwife and 10 as a maternity nurse, compared with 38 and 10 in 1937. At the present time the number of domiciliary confinements attended by midwives is more than double the number of institutional ones. Unless the rate of increase in the number of institutional confinements becomes higher than it has been in the last few years, several generations will pass before domiciliary confinements become a thing of the past.

Of the midwives who notified their intention to practise last year, nearly 52 per cent. had been enrolled in the eleven years from 1930 to 1940. Less than 14 per cent. were enrolled before 1920. There were only 11 bona-fide midwives—that is, midwives who had not received any training in midwifery but had been enrolled by virtue of having been in bona-fide practice as midwives for at least one year before the passing of the Midwives Act 1902.

About 30 per cent. of practising midwives are married. If, as is probable, there are very few married midwives working in institutions, the percentage of domiciliary midwives, including those in private practice, who are married must be about 45 per cent.

In 1940, the youngest practising midwives were aged 22 years. There were four of them. The oldest were 72 and there were two of this age. The median age was between 37 years and 38 years, the lower quartile between 31 years and 32 years and the upper quartile between 46 years and 47 years. Looked at another way, three-quarters of the practising midwives were aged between 27 years and 47 years inclusive. Just under one-twentieth were under 27 years of age. Just over one-twentieth were aged 55 years and over. The age group in which there were the largest number were those of 31 and 32 years.

Just under 50 per cent. of the midwives practising last year were general trained nurses at the time of their enrolment as midwives. The term general trained nurse in this connection includes all those allowed by the rules of the Board to take a shortened course of midwifery training. Roughly, they were all those who had completed at least three years' general training. Not all of them were State-registered nurses. Some midwives have taken general nursing training after they have qualified as midwives, but the number is not known.

Only a comparatively small number of practising midwives have qualified to administer nitrous oxide and air analgesia. Since May, 1936, midwives have been entitled to administer this form of analgesia on their own responsibility under certain conditions. One of these conditions is that a certificate of proficiency has been obtained after attendance at an approved course of instruction. More midwives would have obtained certificates of proficiency had it not been for the war. Some of the approved courses of instruction have had to be abandoned. It has become increasingly difficult for midwives to be released from their duties to attend courses of instruction. Many would, no doubt, have qualified when attending the compulsory refresher courses under the scheme which was introduced by the Board in January, 1939, but which was suspended eight months later on the outbreak of war.

Training Centres

Now for some information as to where the practising midwives of 1940 had received their training in midwifery. About 500 were enrolled by virtue of having been certified as midwives in other parts of H.M. Dominions, mainly in Scotland, Northern Ireland and Eire, and a similar number had been trained under private doctors and private midwives. Omitting these 1,000, 50 per cent. of the remainder had been trained at voluntary hospitals, 20 per cent. by district nursing associa-

* An Address at a meeting of the Home Counties Branch of the Society of Medical Officers of Health. The Central Midwives Board is not responsible in any way for the opinions expressed in this article.

tions, and 30 per cent. at municipal institutions, including poor-law institutions. If the training schools are grouped according to the number of practising midwives each had trained, 100 and more midwives had been trained at each of twenty-eight schools. These twenty-eight together had trained 54 per cent. of the total number of practising midwives. The remaining midwives came from more than 250 schools.

The twenty-eight schools included seventeen voluntary hospitals, nine district nursing associations, and two municipal maternity homes—Hull and Ipswich. Nine of these voluntary hospitals and four of the district nursing associations together accounted for 40 per cent. of the total number of practising midwives. I think the leading ones deserve individual mention. Away on its own, at the head of the list, is the Plaistow Maternity Hospital, at which over 1,660 of the midwives had been trained. Liverpool Maternity Hospital is second with 546, Queen Charlotte's Hospital third with 435, and in the fourth and fifth places are St. Mary's Hospital, Manchester, and Royal Derby and Derbyshire Nursing Association with 420 and 403 respectively. Only one of the twenty-eight institutions is a general hospital. This is the Queen Mary's Hospital for the East End, which comes towards the bottom of the list and which is the only general training school for nurses. Two others are hospitals for women and are affiliated training schools for nurses. The remainder are district nursing associations and maternity hospitals.

I do not think that any useful purpose would be served by considering why the 250 or more schools which trained less than half the total number of practising midwives made such a small contribution to the maintenance of the midwifery service. Many of these schools have been eliminated from the training list, and the Board's present training rules for pupil-midwives were designed to correct the major defects which gave rise to the previous unsatisfactory state of affairs.

Course of Training

Under the present scheme the course of training is divided into two parts. The first part extends over six months for pupil-midwives who are State-registered nurses, and eighteen months for others. The second part, which is the same for all pupils, extends over six months. The first part of training is designed to provide pupils with a sound theoretical and practical knowledge of midwifery as it is conducted under the best available conditions. In the case of pupils who are not State-registered nurses the first six months are devoted mainly to the elementary principles of nursing. The second part of the course is designed specially for pupil-midwives who intend to practise as midwives. The object is to provide a transition period during which a woman can pass, under skilled supervision, from the status of pupil to that of fully qualified practitioner. She is given as much practical experience as possible; the supervision is as slight and unobtrusive as the safety of the patient will allow.

The success of the training scheme depends to a large extent upon the Part 2 training schools accepting as pupil-midwives only those who are seriously considering adopting midwifery as a career. Some pupils do not make up their minds as to their future career by the time they have completed the first part of their training, so that a rigid rule cannot be applied. But the object will be nearly enough attained if every Part 2 school acts in the knowledge that its function is to produce practising midwives, and if it takes all possible steps to secure that a large proportion of its pupils do, in fact, become practising midwives. The main danger to be guarded against is an influx into the Part 2 schools of a large number of pupils who have no intention of becoming practising midwives. Should that happen there will be a return to the unsatisfactory state of affairs which the present scheme of training was intended to remedy. At the moment there are ninety Part 1 schools and seventy-six Part 2. Before any school is approved its facilities for training, its suitability for the particular part of the training in which it wishes to engage, and the experience and teaching ability of its staff are all carefully considered. In 1937 the Board appointed an Educational Supervisor to act, under the direction of the Secretary of the Board, as a personal link between the Board and the training schools and teachers. She carries out a thorough inspection of any institution which applies for approval as a training school, and also makes periodic visits to institutions which have been approved. The appointment of this officer would not have pleased one of the first medical members of the Board. In 1904, in an article in the *Lancet*, this member stated that he was "horrified at a proposal of the Board to appoint a midwife as an inspector to visit institutions applying for recognition." In his view this proposal involved "a degradation of the medical profession and the magnifying of the midwife's office, and indicated the defective composition and consequent bias and sort of moral incompetence of the Central Midwives Board."

An examination, conducted by leading obstetricians, is held at the end of the first part of the course of training. Successful candidates at that examination, if they are State-registered nurses, are awarded a certificate. This certificate, known as the "First Certificate," is intended to meet the needs of those women who wish to have evidence of midwifery training but who have no intention of practising as midwives. It is to be hoped, for the sake of the future standard of midwifery practice, that medical officers of health will realise their responsibility to facilitate the general acceptance of the First Certificate for the purpose for which it was intended.

The Enrolment Examination is of an entirely different nature from the First Examination. In many respects it resembles an interview by a matron of a prospective midwife for her staff; it is designed to ascertain if the pupil-midwife has acquired qualities of self-reliance and confidence and has gained the necessary practical experience to enter midwifery practice. It consists partly of a discussion between the candidate and the examiners based on the records which the pupil has kept of the cases she has attended, and partly of a clinical examination. Midwife-teachers share equally with obstetricians the responsibility for conducting this examination.

In case there should be any who still feel that the introduction in 1938 of the present scheme of training was a premature step, I quote the following extract from a letter which Miss Alice Gregory wrote to the *Times* in 1907 :—

> "In the Dutch training schools (for midwives) we find that the *minimum* course is two years; the first is devoted to study (7½ hours daily) and this period may be doubled at the discretion of the teachers. The second year is given to practical work . . . and this again may be doubled if the pupil is not considered sufficiently apt to be trusted alone in such responsible work. . . . Are our women so brilliant that they can acquire in three months, and by means of twenty cases and fifteen lectures, knowledge which is only gained by the Dutch during two, three, or four years of laborious toil? Or can it be that in spite of our great riches, our philanthropy and our socialism, the lives of our working women are of as correspondingly small value to us as these figures would represent—shall we say one-sixteenth of what they are worth to the Dutch, or indeed to the French, Italians and Belgians, who all give this length of training, while the Russians give even longer?"

From the examiners who conduct the Enrolment Examination, and from other sources, the Board has received good evidence that the midwives qualifying under the present scheme of training are of the type and quality demanded nowadays. There are not any signs yet of a deterioration as a result of the war.

Shortage of Midwives

Quality seems all right; the most pressing problem is quantity. There is growing evidence of a shortage of practising midwives which, unless it is rapidly corrected, will become acute. The shortage is not in the number of midwives who qualify but in the number who practise after qualification. The number of pupil-midwives training in the Part 2 schools has increased steadily since the beginning of 1940. The number now in training in those schools is more than double the number at the beginning of 1940. During the week ended December 6th, 1941, the number reached a high record. If all those who complete Part 2 of the course and are enrolled as midwives practised as such there would be no difficulty. The trouble is that many of them do not practise.

This problem of shortage is not a new one. It has recurred at intervals since the early days of the profession's regulation by the State. Running through the past records is this refrain frequently repeated: shortage of midwives; inadequate remuneration; low status; no inducement to practise. In 1906, the Association for Promoting the Training and Supply of Midwives, an association which exercised considerable influence in the early days, drew attention to the "very great shortage of midwives," and went on to state that, despite the shortage, the Association sometimes found it difficult to place those whom they had trained because frequently a living wage could not be assured. The same Association in 1908 stated: "We are often asked to supply a midwife, with a nurse's training in addition, at a salary which, beyond the bare cost of board and lodging, would hardly amount to the wages of a kitchen maid." In 1918 the then Medical Officer of Health for Liverpool complained that the midwife was always struggling at or below the border line of existence. Two years later the Medical Officer of Health for Leeds, in stressing the value of a well-trained and conscientious midwife in a working-class district, wrote: "It is a pity that the profession of the midwife cannot be made more attractive in order to induce women of good education and upbringing to enter its ranks. At present it provides at the best but a precarious livelihood."

The Report of the Departmental Committee on the Training and Employment of Midwives in 1929 contains the following statements: "Approximately 20 per cent. of the rural population of England is at present unprovided with the services of trained midwives." And in another section: "Midwives who are trained nurses do not in the great majority of cases practise after certification, because they are generally able to find more attractive and lucrative positions in the nursing than in the midwifery profession."

Despite the improvements which have been made in recent years—and these improvements have been considerable—the refrain is still being repeated.

Now that such a large proportion of practising midwives are in salaried employment, a solution of the problem should be easier than in the past. Is it too much to hope that at long last an adequate solution will be attempted?

Suggested Remedies

It has been suggested that the way to remedy the shortage is for the Board to reduce the length of training for pupil-midwives to what it was before 1938, namely, six months for pupil-midwives who are State-registered nurses and twelve months for others. This suggestion should be viewed in the light of the following facts: During the five years 1935 to 1939, 16,000 midwives (a number in excess of the total number of midwives in practice) were enrolled by the Board. These midwives had been trained under the scheme to which it is suggested the Board should now revert. In 1940, only 28 per cent. were practising as midwives. The conclusion to which these figures point is that only a quarter of those who considered it worth while to become qualified as midwives considered it worth while to earn their living by the practice of midwifery.

The power to take effective action rests with the authorities employing midwives. In the long run what an individual or an organisation or a nation is prepared to pay determines the quality of the service which is obtained. A highly efficient midwifery service cannot be obtained on the cheap. A committee is to be set up to consider national scales of salary for practising midwives. The appointment of this committee seems to have been incidental to the movement to improve the salaries of State-registered nurses. Its welcome will not be less cordial on that score, although it is to be hoped that it will not become a habit in official or unofficial quarters to treat midwives and midwifery as mere incidentals to the hospital or district service for the sick. In view of its national importance the midwifery service is deserving of more than "afterthoughts." Naturally, high hopes are entertained that this committee will take full advantage of its opportunity, will act on a broad and courageous view, and will remove the main disability under which the midwifery service suffers in its efforts to attract women of the highest qualifications. It cannot be alleged that this country has been extravagant in its expenditure on maternity and child welfare. Out of a total expenditure by local authorities of £500 million on revenue account, about £56 million is devoted to public health, and of this sum about £4,700,000 is spent on maternity and child welfare, including the domiciliary midwifery service. Grants to local authorities from central funds are included in these figures. The expenditure on maternity and child welfare compares with an expenditure of about £14 million on mental hospitals and mental deficiency, and represents an outlay of about £7 a registered birth.

An improvement in the economic status of midwives would do much to build up the occupation of midwifery in public and official esteem, but such an improvement must be assisted by other means if the midwifery service's supply lines are to be made secure. Those, and particularly medical officers of health, who are concerned in any way with midwives, can effect a great deal if they show in all their dealings with them that they really regard them as members of an ancient and honourable profession, and if they take every opportunity of enhancing, and avoiding any possibility of belittling, the dignity and responsibility of midwives. It must be recorded with regret that this course is not universally followed at the present time.

Someone who has had wide experience of midwives and nurses in various parts of the country recently expressed the view that unless midwives are allowed, both in hospital and in domiciliary practice, to assume the full responsibilities of a midwife, they will, if they are State-registered nurses, abandon midwifery because they can find far greater scope in medical or surgical nursing. As a corollary to this view it was suggested that sisters-in-charge of maternity units of general hospitals should have the status of matrons of maternity hospitals, and should be directly responsible to the hospital committees for the staffing and conduct of the units. There are, I believe, precedents for such an arrangement.

The decision that the salaries of midwives shall be considered on a national basis is an important innovation. Although the midwifery service is a national service, its affairs hitherto have been determined more on a local than a national basis. While believing that the local basis should be retained in respect of the employment of midwives, I feel that it will make for a better and more efficient midwifery service if, at the appropriate time, other matters besides salaries are dealt with nationally.

In face of the attention given on the radio and in the Press to the question of uniforms, I am forced to the conclusion that an attractive uniform, which evokes in the hearts of those who see it envy or admiration according to the sex of the beholder, is an important means of making a community conscious of the existence of a national service, and, later, of developing its respect for the members of that service; and that, at the same time, such a uniform has a stimulating effect on those who wear it. This being so, I plump for an attractive, well-designed and distinctive national uniform for all practising midwives. I have no doubt that a skilled designer would be able to include suitable decorative features to denote other qualifications and local allegiance.

Financial and other arrangements for the training of pupil-midwives should be viewed from the national angle. Midwifery training schools train for the whole community, not for the locality in which they are situated. Grants from central funds should be used as the ally of training policy, and in their distribution account should be taken of a training school's efficiency as a producer of well-trained practising midwives. If a model is desired in determining the principles and machinery of distribution, a better one cannot, I think, be found than the University Grants Committee; it distributes Treasury Grants to Universities, including medical schools, and has wisely guided the development of University education in this country.

Training the Teacher

First-class buildings are not an essential for a first-class midwifery service, but first-class teachers are. To ensure a proper supply of first-class teachers a National Training School for Midwife-Teachers is needed. At this school those

midwives who have the desire and ability to become teachers of midwifery would become fully qualified for the task. The school should be residential and should be attached to an eighty-bedded or larger maternity hospital, outstanding for its arrangements, and equipment, and the quality of its staff. It should be the show place. The medical and senior midwifery staff should be chosen for their skill in teaching as well as for their distinction in the practice of midwifery. The student teachers would take a year's course of study and would hold special junior posts on the hospital's staff, their duties relating to the training of pupil-midwives. They would be carefully selected according to ability. I am sure that the numbers wishing to take the course would be such that the vacancies would be filled only by the most promising. The hospital would have to be a Part 1 training school for pupil-midwives, so that the student teachers would have opportunities for gaining practical experience in the difficult art of teaching.

At the end of their year's course the student teachers would sit for the Board's Midwife-Teachers Certificate Examination, an examination of high standard; and the successful ones would then become the approved teachers in the various training schools for pupil-midwives. Their influence on the proficiency of those schools and the general standard of midwifery skill would be startling. If only I had hope that my plea for such a school would catch the eye of a benefactor and stimulate him or her to provide the endowment!

Supervision of Midwives

Lastly, a reference to the supervision of midwives. The Midwives Act, 1902, provided that every local supervising authority should exercise general supervision over all midwives practising within its area in accordance with the rules of the Board. For the performance of this duty medical and non-medical supervisors of midwives have been appointed.

Supervision which consists of a perfunctory inspection from time to time of records and equipment is irksome to the midwives and of little value to the service. As a disciplinary weapon, supervision has largely outlived its usefulness. But if supervision is educational, aiming at stimulating the desire for high quality work and aiding the fulfilment of that desire, it has an important part to play and should be retained and developed. Invariably the better midwives and better midwifery are to be found in those areas in which the supervision is regarded in this light and is carried out by persons who are highly experienced enthusiasts. I realise that I may now be approaching a minefield, but I feel bound to put forward the view that it would make for a better co-ordination of the midwifery service and generally for a higher standard of proficiency if the supervision of midwives ceased to be a local function and became the function of a central authority. The aim would be to substitute a single, knowledgeable and enthusiastic direction for direction by 188 independent authorities, some large, some small; some bold, some timid; some interested and enthusiastic, others not interested. There are H.M. Inspectors of Schools; there should, I suggest, be H.M. Supervisors of Midwifery.

Summing Up

Past efforts have yielded good results, but much remains to be done. Whether or not the midwifery service will become better will depend largely on the public attitude towards it. In other words, it will depend on whether the maternity and child welfare service is regarded as something of a luxury in which only half-hearted and spasmodic interest need be shown, or whether it is regarded as a national necessity of high priority ranking.

The Poet Laureate has written*: ". . . if there be the will to have a splendid thing, that thing will be made. A nation is great in so far as she wills to have splendid things; if she wills them they come; if she does not, she will mess along with anything which will somehow do." It is to be hoped that our nation, faced with a declining population and having suffered the ravages of war, will *will*, when peace returns, to have a splendid midwifery service. Against that day, we must strive to guard the service from every avoidable impairment.

* *In the Mill*. By John Masefield.

BOOK REVIEWS

A Synopsis of Hygiene. (Jameson and Parkinson.) By G. S. PARKINSON, D.S.O., M.R.C.S., L.R.C.P., D.P.H., Lieut.-Colonel R.A.M.C. (Ret.), Acting Dean and Director of Public Health Department, London School of Hygiene and Tropical Medicine. With a Section on Personal Hygiene by G. P. Crowden, D.SC., M.R.C.P. Seventh edition. 1942. London: J. & A. Churchill, Ltd. Pp. viii + 712. Price 25s. net.

Our bookshelves are loaded with textbooks on public health which we keep because they contain some information which may be of use to us, but which get out of date so rapidly that we seldom refer to them. The march of knowledge and the development of administration are so rapid that one may sometimes doubt whether it is worth while having textbooks at all. But students have to learn and workers in public health must have some quick means of verifying information which is so diverse and voluminous that the average memory cannot be trusted to retain all of it. The writers of this book have found the best solution of the problem. It first appeared in 1920 and a gap of seven years elapsed before the second edition was published. Since 1927 six new editions have appeared, including that now under review, the intervals never exceeding four years in length and being once as short as two. Its form has undergone substantial modification from time to time and the material has been constantly brought up to date. While the earlier editions had few references, the text is now liberally interspersed with them, and in the circumstances of the present time the recent date of many of the references in the seventh edition is creditable. Both for students and public health officials in this country the book holds a unique place. It is somewhat larger than formerly and covers the whole field of public health, including those changes in law, administration, and practice which have arisen in wartime but are not in the nature of emergency and ephemeral additions to our work.

Although Sir Wilson Jameson's name still appears in the title, he has now dropped out of active participation in its preparation, which has devolved on Colonel Parkinson, with assistance from Dr. Crowden and other members of the staff of the London School of Hygiene.

The 1941 Year Book of Public Health. Edited by J. C. GEIGER, D.D., D.P.H. Chicago: The Year Book Publishers, Inc.; London: H. K. Lewis and Co., Ltd. 544 pp. Price 16s. 6d. net.

This volume is one of fourteen comprising the practical medicine series of year books founded in 1900 and published continuously since then. The value of a book such as this, which summarises published works, depends largely on the balance of judgment which is shown by the editor in choosing the papers abstracted. Dr. Geiger sets himself no light task, for there is an enormous mass of literature to choose from; but he has accomplished it well and made the book readable by frankly commenting on almost every paper. There are sections on administration; communicable diseases and epidemiology; health education; child, dental, hospital, industrial, mental, and military hygiene; housing; maternal care; nursing; food and milk; nutrition; and on laboratory and statistical work. It is interesting to note the relative space allotted to the various sections. There are 29 papers on child hygiene as compared with 5 on maternal care; 13 pages on dental hygiene as compared with 5 on housing and 2 on nursing; 17 on nutrition and 37 on industrial hygiene. The effect of the war is reflected in the 40 pages devoted to military hygiene.

The extent to which the editor has obtained his material from various countries, bearing in mind the restricted access to publications which was operating even in a then neutral country like the U.S.A., is also possibly significant. The section on industrial hygiene comprises 28 extracts: 21 come from U.S.A., 4 from South American, 2 from Canadian, and 1 from Dutch sources—not one from Great Britain. The section on child hygiene comprises 23 papers: 19 come from U.S.A., 2 from South America, 1 from Canada, and 1 from Great Britain. We do better with tuberculosis—4 out of 40 extracts have a British origin. But there is not a single British reference under health education or mental hygiene. On the other hand, we are credited with no fewer than 17 of 32 papers on military hygiene.

Feeding the War-time Family (published by the Children's Nutrition Council, 6, East Common, Harpenden, Herts, price 1d., or 13 copies post free for 1s.) is a sensibly written and really helpful 8-page pamphlet which has been designed for popular use with lectures and demonstrations. Among the numerous short guides to better feeding this is one that can be warmly recommended.

Who's Who, 1942. Adam & Charles Black. Pp. 3552. Price 70s. net.

Who Was Who, 1929-40. Adam & Charles Black. Pp. 1500. Price 40s. net.

All who consider *Who's Who* to be the indispensable reference book will be relieved to find that so far it has not proved necessary to curtail its volume, unless it is that Messrs. Black have proved wise husbandmen of their available paper supply. In fact, the 1942 edition is 64 pages larger than its predecessor. *Who Was Who*, 1929-40, is the third volume of biographies removed from *Who's Who* on account of death.

The 1942 (49th) edition of the *Annual Register of Charities and Public Institutions* has been published by Longmans for the Charity Organisation Society. The price is 8s. 6d. net. It contains details of more than 2,700 Institutions and Societies, of Assistance Board Area Offices, of Probation Services, Settlements, County Societies, and Hospital Almoners. There are chapters on the care of the blind, the deaf and dumb, cripples, on mental and other hospitals, homes for inebriates, epilepties and incurables, etc. There is a statistical chapter on the finance of the social services, and special chapters on war organisations and on refugees. It is an invaluable guide for doctors seeking assistance for those under their care.

The Minister of Health, Mr. Ernest Brown, speaking on Wednesday, February 11th, at a luncheon arranged by the Charing Cross Hospital, referred to the recent announcement of the broad lines on which the Government proposes to plan the hospital services after the war, and said: "The first principle is, of course, that the basis of any hospital service must be the welfare of the patient. There has been in the past, and is now, a large measure of devoted service rendered to patients at hospitals of all kinds. I do not think, however, that we can claim that everyone can under the present arrangements readily obtain the treatment they need, or that patients do not sometimes fall between two stools. The second principle of post-war planning is that the Government should put on the major local authorities a duty to secure the provision of an adequate hospital service for their area. In discharging their new duty the local authorities must, of necessity, look for assistance to the voluntary hospitals, whose experience is so extensive and valuable. Above all, the local authorities will look to the large teaching hospitals, whose nature fits them to be the keystone of the arch of the hospital service. There is a great opportunity here for the voluntary hospitals to grasp—an opportunity to play a major part in the future as in the past, on the sure foundation provided by the financial assistance they can expect to receive from the local authorities. I am confident that this is the proper way of securing for the community the continuance of the invaluable contribution made by the voluntary hospitals; and I am confident also that the voluntary hospitals will whole-heartedly co-operate. It is in a true partnership in the fullest sense of the word that local authorities and voluntary hospitals will best serve the patient whose well-being is at stake. The third principle of the Government's policy is to design a service by reference to areas substantially larger than those of individual local authorities, with a proper division of function between the various hospitals in these areas. The Government's policy includes the institution of surveys—one of which has already begun in the London area—to provide a solid basis on which our future planning can rest. The Government recognises the double responsibility of the teaching hospitals like Charing Cross, as healers of patients and teachers of students. It has given a pledge that in addition to any financial assistance received from local authorities, the teaching hospitals will also be given increased educational grants from the Exchequer."

H.M. Stationery Office have published at a price of 6d. a booklet of suggestions and instructions for the arrangement, planning and construction of mental hospitals, under the Lunacy and Mental Treatment Acts, 1890-1930. It can be purchased directly from H.M. Stationery Office, 421-429, Oxford Street, London, W.1.

OBITUARY

SIR HENRY BRACKENBURY, M.D., LL.D.

The sudden death on March 8th of Sir Henry Brackenbury means the loss to the public health service of one of its staunchest supporters in circles where it has not always been regarded with unqualified favour. He was a great figure in the medical and educational world. As a general practitioner he stood for the preservation of the best features of independent practice in medicine, and against the tendency for specialisation to limit the field of work of the family doctor. He fought with striking success for a reasonable standard of remuneration for practitioners giving service to the State. It is no wonder that he was the dominant character in the Council of the British Medical Association, of which he was Chairman from 1927 to 1934. But it was not a narrow syndicalism that gave him his power. As Mayor of Hornsey he got to know the whole field of local government and the people's view of the place of medicine within it; as Chairman of Middlesex Education Committee and of the Association of Education Committees, he acquired a breadth of view on social welfare which is rare in medical men; as a liberal of the school which revivified the British spirit in the first decade of the century he stood for rapid evolution rather than doctrinaire and sectional remedies for ills in the body politic; in the General Medical Council he counteracted the academicism, conservatism, and impracticality of most of its members.

The public health service, however, knew him best as leader in the fight for better remuneration and terms of service for its members in the difficult post-war years, culminating in the Askwith agreement. On the Advisory Committee set up to settle differences of interpretation of the agreement and its application in unforeseen circumstances he led the medical representatives with skill, courage, and flexibility. Here, as elsewhere, his encyclopaedic knowledge of medical and political affairs was a source of strength. He represented the B.M.A. on the Council of the Society of Medical Officers of Health from 1926 until the time of his death. He took an active part in its business in spite of his many other commitments.

Brackenbury's clear and incisive mind was reflected in the clarity and precision of his speech. Smaller men sometimes thought him dictatorial. He was certainly no intriguer manipulating his colleagues or opponents behind the scenes. His character was as crystal clear as his mind. He had little small talk, and seemed to suffer rather than seek the social round attached to his eminent position. But he had the bigness to listen to other men, and to help younger men to find their place. He was unique and has no successor, but his influence will last.

CHARLES ERNEST GODDARD, O.B.E., M.D.

Dr. C. E. Goddard, who was for more than forty years Medical Officer of Health for Wembley, died at his home in Rottingdean on January 31st at the age of 82.

Charles Ernest Goddard was born in Kensington and was educated privately and at King's College and its hospital, where he gained the Todd Prize and Medal and the Tanner Prize, and held two surgical appointments under Lord Lister. He obtained a certificate of Honour in Surgery. He qualified M.R.C.S., L.R.C.P. in 1883, and took the M.D. of Durham University in 1900. He went to India as ship surgeon in 1883. On his return he was R.M.O. at the old North London Hospital for Consumption at Hampstead, and held several local posts in Harrow, Wembley and Hendon. In his early days at Wembley he was the only practitioner in the district. He was medical officer of health for Wembley and Harrow, relinquishing the appointment in 1934, when the district was greatly extended, and continuing as M.O.H. for Wembley until his retirement in 1936. During his long service in these capacities he advocated many reforms, including cleaner manipulation of food and better disposal of the dead by embalming or cremation. The building of the Wembley Hospital, which he later served as honorary consulting physician and as honorary treasurer, was largely due to his advocacy. Among other local appointments which he held at various times were those of secretary-treasurer and hon. manager to the Workmen's Hall (now called the Wembley Institute),

police surgeon, surgeon to the Copland Village Hospital, Poor Law Medical Officer, and a trustee of the Harrow Pension Fund.

Before the last war Dr. Goddard commanded the 2nd London Sanitary Company, and in 1914 he took the 320 men of his unit to France and distributed them among the divisions on the salient. He himself commanded the unit attached to the 1st Cavalry Division at Ypres, and he was mentioned in despatches in 1915. He was one of the founders of the Ypres League. On his return to England he became President of the Chelsea, Holborn, and the City of London Medical Boards, and later Deputy Commissioner of Medical Services under the Ministry of National Service. Dr. Goddard was M.O.H. for the British Empire Exhibition which was held at Wembley in 1923. In 1918 he received the O.B.E.

Dr. Goddard married twice, and there were four sons and one daughter by the first marriage. His eldest son joined him in partnership and later took over the practice. His second son, who died in 1935, was Colonial Secretary in Sierra Leone. His third son was killed in France in the last war, and his youngest son is now Chief of Air Staff at Wellington, New Zealand.

FREDERICK FIELDING BOND, M.D., D.P.H.

Dr. F. F. Bond, who died suddenly at Malton, Yorkshire, on February 8th, had been for many years Medical Officer of Health for Rastrick.

Frederick Fielding Bond was born at Accrington in December, 1861, was educated at Christ Church School there, and at the University of Edinburgh, where he graduated M.B., C.M. in 1884, taking the M.D. two years later. He went into practice at Rastrick, and in 1889 took the D.P.H. of the English Conjoint Board. He became M.O.H. for the district and Superintendent of the Brighouse Small-pox Hospital. During the war of 1914-18 he held a commission as captain, R.A.M.C., and for two years was Medical Officer to the Brighouse V.A.D. Hospital. In 1927, while acting as ship surgeon in the African Steamship Company's Line, he made to the Board of Trade suggestions for wireless medical consultations at sea.

GEORGE NICHOLSON STATHERS, M.R.C.S., L.R.C.P., D.P.H.

Dr. G. N. Stathers, for many years Medical Officer of Health for the first Wycombe Rural District and for the Brackley Urban and Rural Districts, died on February 6th at Brackley, Northamptonshire, at the age of 84.

George Nicholson Stathers, who received his medical education at University College, Dublin, qualified L.R.C.P. (ED.), L.M., and M.R.C.S. (ENG.) in 1879, and took the D.P.H. of Cambridge in 1891. Besides his appointments as Medical Officer of Health in the Wycombe and Brackley Districts, he was for many years surgeon to the Brackley Cottage Hospital. His son, Dr. Gerald Nicholson Stathers, joined him in partnership and continued the practice after his father's retirement.

The following Chadwick Public Lectures may be of interest to members: On Tuesday April 14th, at 2.30 p.m. Mr. D. C. Graham, M.INST.C.E., will deliver the Bossom Gift Lecture at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1, the subject being "Dangers from Rainfall in Urban Areas—Prevention of Flooding of Buildings and of its Insanitary Consequences." On Tuesday, May 12th, at 2.30 p.m., Dr. J. Alison Glover, late Senior Medical Officer to the Board of Education, will speak at the Royal Society of Tropical Medicine and Hygiene, 26, Portland Place, London, W.1, on the school medical service in wartime. On Thursday, June 18th, at 4 p.m., Mr. E. Augustus Bowles, M.A., F.L.S., will speak at the Chelsea Physic Garden, Swan Walk, Chelsea, S.W.3, on plants in relation to food, medicine, or poison. Admission to all these lectures is free.

In view of the increased incidence of scabies the Ministry of Health has decided to amend the National War Formulary by including the following preparation for the treatment of scabies: Benzyl benzoate application: benzyl benzoate, 25 g.; lanette wax SX (of commerce), 2 g.; water to 100 ml. Chemists will be able to obtain supplies of lanette wax SX from Ronsheim and Moore, 4, Anne Boleyn's Walk, Cheam, Surrey. The amendment will be issued as a slip which can be gummed into the formulary.

Training and Resettlement of the Tuberculous

The Interim Scheme for the Training and Resettlement of Disabled Persons is to assist men and women suffering from some degree of disablement to obtain suitable employment, and to provide any training which may be necessary to enable them to take up work within their physical competence (Circular 2576, Ministry of Health). The Scheme is not intended to meet the needs of the more severely disabled. The Scheme is not limited to disablements resulting from war service or enemy action, but covers disablements due to industrial and other causes; persons who have been disabled on account of tuberculosis are therefore within the scope of the Scheme. It is clear that the Scheme is not appropriate to the needs of a large proportion of tuberculous patients, since their condition requires employment in protected or special circumstances which the Scheme cannot provide. It may, however, be of considerable assistance to those patients who are capable of taking up whole-time employment under ordinary conditions with or without special training. The selection of patients for employment or training should be made with the greatest care, and only those who on medical grounds can properly do so should be encouraged to take advantage of the Scheme. So far as tuberculous persons are concerned, recommendations should be made only in respect of patients in whom the disease is quiescent and likely to remain so, and, in the case of pulmonary tuberculosis, where the sputum is negative.

The Tuberculosis Officer of the Authority responsible for the case should send particulars to the nearest Employment Exchange and ask that an interview with him should be arranged. The local officers of the Ministry of Labour and National Service will get into touch with the patient in order to discuss his future employment with him and with the Tuberculosis Officer. An essential part of any arrangements for the employment or training of tuberculous patients must be the continuance of any necessary treatment or medical supervision. This is of particular importance (the Circular goes on to state) in view of the fact that employment or training under the Interim Scheme may involve removal for short or long periods from the patient's home area. Arrangements are being made by the Minister of Labour and National Service to secure medical advice at the Ministry's training centres.

Notification of Toxic Anaemia

Section 66 of the Factories Act, 1937, as applied by Regulations, requires every medical practitioner attending on, or called in to visit, a patient whom he believes to be suffering from lead, phosphorus, arsenical, mercurial, manganese, carbon bisulphide, aniline or chronic benzene poisoning, or anthrax, toxic jaundice, compressed air illness, or epitheliomatous or chrome ulceration contracted in any factory to notify the case forthwith to the Chief Inspector of Factories*, and a similar obligation is imposed on the occupier of a factory to send written notice of every such case occurring in the factory to the Examining Surgeon and Inspector of Factories for the District. The Minister of Labour and National Service has now made a Regulation, in pursuance of sub-section (4) of that Section, extending its provisions to toxic anaemia. The object of notification is to afford to Factory Inspectors a clue to dangerous conditions over which they can exercise control.

In modern industry extended use is being made of X-rays, radio-active substances, and a number of chemical compounds, and the effect on the health of workers is being carefully watched. In particular, attention is being directed to the action on the blood and blood-forming organs, and in order to bring to notice cases affected in this way the condition to be known as "toxic anaemia" has been made notifiable to the Chief Inspector of Factories by every medical practitioner.

For the purpose of this Regulation the term "toxic anaemia" is intended to apply to dyshaemopoietic anaemia occurring in a person employed in a process which brings him into contact with X-rays, radio-active substances, and any chemical compound which may be capable of causing this effect. At present the available information on the chemical substances is very incomplete, but it is well known, for instance, that T.N.T. is liable to cause an anaemia of a progressive type with or without the more common condition of toxic jaundice. It is not now proposed to limit the term "toxic anaemia" to any one particular type of dyshaemopoietic anaemia, but rather to invite the notification of all cases of illness associated with such a disturbance of the blood picture where the patient has been exposed to any of the causal agents referred to above as well as others which may be met with in order that the case may be fully investigated, especially in its causal relationship.

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* Present address (February, 1942), Ministry of Labour and National Service, 28, Broadway, London, S.W.1.

Insecticides against Bed-Bugs in Air-Raid Shelters

On the basis of a report from a sub-committee appointed to examine the question, the Bed-Bug Infestation Committee of the Medical Research Council recommends the following insecticide formulae as most suitable for use in shelters under the conditions now prevailing:—

1. *Pyrethrins in Kerosene.*—The preparation to have a guaranteed content of 0·6 per cent. to 0·8 per cent. of the pyrethrins described as I and II. Alternatively, a weaker pyrethrin solution made equally toxic for bugs by the use of an adjuvant harmless to human beings may be accepted.

2. *Thiocyanates.*—(*a*) Lethane in kerosene: to have a guaranteed content of 6 per cent. "Lethane 384." (*b*) Lauryl thiocyanate in kerosene: to have a guaranteed content of 3 per cent. of lauryl thiocyanate.

3. *Heavy Coal-Tar Naphtha with Cresylic Acid.*—The cresylic acid (5 per cent.) to be dissolved in heavy coal-tar naphtha complying with the following specification: (*a*) specific gravity at 60° F., not less than 0·835, nor greater than 0·910; (*b*) distillation range (S.T.P.T.C. apparatus)—not more than 10 per cent. shall distil at 160° C. and not less than 90 per cent. at 190° C.; (*c*) flash point (Abel), not less than 100° F.; (*d*) tar bases, not to exceed 0·25 per cent.

For various reasons it has not been considered desirable to attempt to estimate the cost of the various formulae, and it is assumed that local authorities, when ordering, will be guided by the supply position and will ensure that the composition of any insecticide they decide to use is fully disclosed by the makers and a guarantee obtained that such composition will not be changed without notification.

Precautions.—The following precautions should be observed when any of these preparations are used: (i) they should be used only when a shelter is empty, and an interval of at least two hours should be allowed to elapse before the shelter is again occupied; (ii) to avoid any possible risks of fire, the use of naked lights and smoking should be strictly prohibited while handling and spraying these insecticides; (iii) owing to the interaction of hypochlorites and pyrethrins, or even traces of cresylic acid, air disinfection of shelters cannot be carried out concurrently when either formula (1) or (3) is used; several days should elapse between the two forms of treatment; (iv) owing to the possible solvent action of heavy naphtha care should be taken when using formula (3) to prevent its coming into direct contact with rubber.

Methods of Application.—It is emphasised that proper atomisation of the insecticide is essential when sprayed. The use of power sprayers in large shelters is advocated, and hand sprayers of the "Flit" or similar types in smaller shelters. It is further considered that a brush might be usefully employed in the treatment of cracks and other harbourages where such are readily accessible. The appropriate treatment obviously depends on the local circumstances.

Obliteration of Harbourages.—It is considered that much may be done to prevent infestations by the avoidance or obliteration of harbourages. For the latter purpose cement washing, distempering and painting may all be useful if supplies and labour are available. Two suitable limewash-cement paints are recommended in the Ministry of Home Security (Engineers Branch) Circular CE/GEN/46.

Sampling of Food Substitutes

Representatives of the Metropolitan Branch recently discussed with Dr. W. A. Lethem of the Ministry of Health and some representatives of the Ministry of Food the position of local authorities in relation to the sampling of food substitutes under the Food and Drugs Act. The following statement has now been supplied by the Food Substitutes Control Department of the Ministry of Food for the information of medical officers of health.

The Food Substitutes (Control) Order, 1941, of the Ministry of Food, made it necessary for all manufacturers of food substitutes to be licensed. Application forms are issued on request. Those seeking a licence are compelled to submit: (i) details as to the description, use, and output of the substitute for which the application is submitted; (ii) the ingredients and percentage of each used in manufacture; (iii) specimens of all packages, labels, and literature, and a sample of the product. Over 2,000 requests for application forms were received. Approximately 50 per cent. have submitted applications for licence; 795 have been granted licences to manufacture; 176 have been rejected. Many of the applications were for old established products, manufactured by reputable firms. Little difficulty was experienced with these; only minor adjustments of labels, literature, claims, and prices were necessary under the licence.

Each application is submitted to a panel of officers, a close examination of the ingredients, claims, and prices is made, and in the event of a licence being granted a strict price control is a term of the licence. In all cases extravagant or misleading claims on labels or literature are required to be deleted.

Milk Substitutes.—No licence has been granted permitting the sale of any milk substitute to the general public. This decision was made having regard to the fact that milk is purchased by the general public for its unique nutritive value. The use of milk substitutes by the bakery trade is somewhat different, and, providing they are of such composition as would give desired results, it was felt no objection could be raised to their use. The extravagant claims and exorbitant prices being charged for many of the milk substitutes were drastically dealt with under the terms of the licence granted.

Egg Substitutes.—Egg substitutes sold to the public are usually of the aerating type, whereas the bakery trade make considerable use of non-aerating types of such products. Although employment of such products in the bakery as egg extenders gives satisfactory results their value for household purposes is more doubtful, and licences permitting the sale of such substitutes to the public were limited to two instances where considerable usage was evidenced.

Fruit Juice Substitutes.—Products offered as fruit juice substitutes have in the main consisted of powders or solutions of citric acid flavoured with lemon or orange oil. The claim to being a juice substitute has only been allowed in the cases where ascorbic acid has been present in sufficient quantity to justify such description. In most cases manufacturers are required to describe the product as a flavouring.

Some Requirements.—Under all licences granted the packages have to be marked with the licensed retail price, and the deletion of all claims to be the equivalent of any product such as eggs, milk, fruit, etc., has been required. Pictorial representations of eggs, poultry, fruit, etc., have also to be deleted. It is an offence to sell any food substitute other than in the container and with the label and description as packed by the licensed manufacturer or packer.

The Enforcement Division of this Ministry is responsible for the enforcement of the Food Substitutes (Control) Order and has arranged for samples to be taken for examination by the Government Laboratory to ensure that the goods being sold comply with the formula embodied in the application form on which the licence was granted. The Ministry will also exercise the right of subjecting any licensed substitute to such assessment or review as to satisfy any doubt as to the desirability of continuing the licence.

Clause 5 of the Order states that a licence granted under the Order shall not operate to relieve the holder from complying with the provisions of any Act, Regulation, etc., for the time being in force.

The Ministry of Food will give medical officers of health details of the conditions applying to any licence granted under the Food Substitutes (Control) Order where such information is desired in connection with any proceedings under the Food and Drugs Act. Application should be made to the Divisional Food Officer or to the Food Substitutes Control, Ministry of Food, Westfield, Llannerch Road, Colwyn Bay.

An Editorial Board, under the Chairmanship of the President of the Board of Education and composed of representatives of the fighting services, the Ministry of Health, the Department of Health for Scotland, the Committee of Imperial Defence and the Medical Research Council, has been set up by the War Cabinet to direct the preparation of a Medical History of the War. Sir Arthur MacNalty, K.C.B., until recently Chief Medical Officer of the Ministry of Health, has been appointed Editor-in-Chief, and representatives have been appointed by the Service departments concerned. The collection and classification of material for the history has now begun. Much material on war-time medical problems already exists and this will increase as the war progresses. The Editorial Board hope that they will have the full support and co-operation of the medical profession in their task of collecting data and would be glad to receive copies of published articles, reports, and other information from medical officers of health and medical practitioners which may be of use in assembling material for the medical historians. Such data should be communicated to the Editor-in-Chief, Medical History of the War, Room 208, Caxton House West, Tothill Street, London, S.W.1.

The Times of January 12th, 1942, quotes a contemporary issue of the *Münchener Medizinische Wochenschrift*, which gives the cases of diphtheria during the first 25 weeks of 1931 as 25,144; in 1939 they were 65,144; and in 1941, 65,775. For scarlet fever the corresponding figures were 1931, 19,494; 1940, 56,154; and 1941, 167,428. For dysentery they were: 1931, 2,596; 1939, 6,135; and 1940, 12,705. Similar increases are shown for whooping cough, tuberculosis, and ptomaine poisoning. The average increase in the number of cases from 1931 to 1939 is threefold, while from 1939 to 1941 the average figures are six times those of 1931.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

GENERAL PURPOSES COMMITTEE

1. The first meeting of the General Purposes Committee for the session 1941-42 was held at Tavistock House, Tavistock Square, W.C.1, on Friday, February 20th, 1942.

Present.—Dr. Cyril Banks (Chairman), Drs. J. S. Anderson, J. J. Buchan, G. F. Buchan, J. A. Charles, R. H. H. Jolly, Gordon Lilico, Sir Alexander Macgregor, Professor R. M. F. Picken, Sir William Savage, Drs. Virginia Saunders-Jacobs, J. A. Stirling, R. Sutherland, E. Ward, H. Gibbons Ward, H. C. Maurice Williams and F. T. H. Wood.

Apologies for absence were received from Drs. James Ferguson and T. N. V. Potts.

2. Minutes of the meeting held on May 23rd, 1941 (printed in PUBLIC HEALTH, July, 1941) were confirmed and signed.

3. **Medical Superintendents' Society.**—The Committee considered the proposal made by this Society that there should be reciprocal representation between that body and the Society of Medical Officers of Health. It was decided to invite two or three representatives of the Medical Superintendents' Society to attend the next meeting of the General Purposes Committee and to discuss on what basis co-operation between the two bodies could be arranged.

4. **Salaries of Hospital Pharmacists.**—The Committee received the following scale of salaries advocated by the Guild of Public Pharmacists:

Scale of Recommended Minimum Commencing Salaries for Hospital Pharmacists

1. *Pharmacists in Charge.*—(*a*) With four or more assistants, £500 p.a.; (*b*) with two or three assistants, £450 p.a.; (*c*) with one assistant, £400 p.a.; (*d*) with no assistant, £300 to £350 according to size and nature of institution.

2. *First Assistant Pharmacists.*—(*a*) With three or more other assistants £350 p.a.; (*b*) with one or two assistants £325 p.a.; (*c*) with no assistant, £300 p.a.

3. *Second Assistant and other Junior Pharmacists*, £260 p.a.

4. *Part-Time Pharmacists.*—(*a*) Where there is no other pharmacist, or where attendance is required for less than 12 hours per week, 5s. an hour; (*b*) when acting as assistant to a full-time pharmacist for 12 hours or more per week, 3s. 6d. an hour.

5. *Locum Tenens Pharmacists.*—From £5 5s. to £7 7s. per week according to duties.

These figures are based upon the cost of living index of September, 1939, and should be adjusted accordingly.

NOTES.—(1) The above figures are minimum commencing salaries, and are based on the assumption that the normal hours of duty do not exceed 40 per week. (2) The salaries quoted are for pharmaceutical duties only. Additional fees should be paid for other work—*e.g.*, tutorial duties, biochemical analysis, bacteriology, radiography, photography, etc.—even though carried out during the normal hours of duty, and due consideration should be given, when assessing such fees, to any special qualification possessed by the pharmacist in connection with such duties.

5. **Society's Investments.**—The Hon. Treasurer reported that the India 3 per cent. stock held by the Society was due for repayment at the beginning of March. The original purchase had been £4,099 17s. 5d., but at present prices the stock on repayment would be worth about £3,700. The Committee accepted the Hon. Treasurer's proposal that the proceeds of repayment should be made up to £4,000 and this amount used to purchase 3 per cent. Savings Bonds.

6. PUBLIC HEALTH.—The Chairman of the Journal Committee reported changes in the printing and make-up of the journal which will be rendered necessary as from the April issue owing to restrictions of paper supplies.

7. **Dr. Vynne Borland.**—A letter was received from Dr. Borland proffering his resignation from the Council and the General Purposes Committee for health reasons. The Committee learnt of this with regret and referred the letter for report to the Council.

8. **Senior Dental Officers, Monmouthshire C.C.**—Correspondence with the British Dental Association was reported regarding the restoration of cuts in the salaries of senior dental officers in Monmouthshire, made under the Geddes Act, 1922. The Acting Executive Secretary reported that he had referred this matter to the Hon. Secretary of the Welsh Branch. The Committee decided to await a reply before they acted.

9. **National Book Council.**—It was reported that Dr. Ashworth Underwood had undertaken to compile a list of books for general lay readers on the subject of health.

10. **Medical Planning.**—A letter from the Yorkshire Branch which expressed disagreement with a resolution passed by the Home Divisions of the British Medical Association that representatives of the Ministry of Health and the Ministry of Labour be excluded from all meetings of the Medical Planning Commission until the final meeting was received. Dr. Sutherland was asked to inform the Yorkshire Branch that the B.M.A.'s resolution has since been modified.

11. **Scabies.**—Further correspondence was reported from the Urban District Councils' Association regarding the desirability of making scabies a notifiable disease. It was decided to reply that the Society's view was still that the Scabies Order and the use of cleansing stations were sufficient to meet the problem and that no general measure of notification was desirable.

The Committee also received a notification from the British Association of Dermatology suggesting the Society's collaboration in formulating methods for improving the treatment and management of cases of scabies. It was decided to nominate the President, Drs. L. J. Bacon, N. D. Begg, George F. Buchan, and James Fenton to meet representatives of the Association.

12. **Tuberculous Persons, Extra Nourishment.**—The Acting Executive Secretary reported that letters from the C.M.O.H., Isle of Ely and from the Association of Municipal Corporations urging the necessity for an increased supply of eggs and fats had been referred for the opinion of the Standing Advisory Committee on Tuberculosis. The Advisory Committee's reply pointed out that tuberculosis patients were now entitled to two pints of milk per day on a medical certificate; and that those suffering from certain forms of tuberculosis, such as tuberculosis of the larynx involving interference with swallowing, or tuberculous ulceration, were entitled to an extra supply of eggs under the priority system dated November 26th, 1941. In the circumstances the Advisory Committee could not recommend any alterations at present but undertook to review the matter from time to time. It was decided to communicate the reply of the Advisory Committee to the Society's correspondents.

13. **Radiology in the Detection of Pulmonary Tuberculosis.**—It was resolved to refer the memorandum on this subject received from the National Association for the Prevention of Tuberculosis for the remarks of the Tuberculosis Group.

14. **Suspension of Dudley M.O.H.** A report was given on this case. It was felt that the decision did not affect the general question of the security of tenure of medical officers of health.

15. **Correspondence.**—(i) A letter from Dr. H. G. Trayer raising the question of the policy of having medical superintendents in administrative charge of municipal hospitals responsible directly to the M.O.H. or administrative officer designated was referred to the Medical Planning Committee for discussion.

(ii) Suggestions that papers should be read before general meetings of the Society by Dr. Sinclair Miller on poliomyelitis and by Mr. McKenny Hughes on bug infestation were not accepted in view of the present policy not to hold general meetings. In the case of Mr. Hughes it was left open for the Home Counties and Metropolitan Branches to hold a joint meeting for the purpose if thought desirable.

(iii) The Committee considered a letter from the Women Public Health Officers' Association expressing concern about the Board of Education's circular 1559, in connection with the war-time duties of school nurses. The Committee decided to reply that the policy was considered to be unavoidable in the present shortage of doctors for the Forces. A further point raised by the Association was that a local authority had been prevented from appointing two qualified school nurses and had to advertise for two auxiliary nurses instead. In this question the Committee decided that the principle of dilution of trained nurses for such work as cleanliness surveys must be accepted on the understanding that the auxiliary appointments were for the period of the war only.

(iv) The Association of Municipal Corporations asked the Society's view on a letter from the Barnstaple Borough Council advocating compulsory immunisation against diphtheria, at least for the period of the war. It was decided to reply that the Society adhered to its previous view that the introduction of compulsion would hinder rather than help the progress of immunisation.

(v) The Metropolitan Branch raised the question of alleged laxity in the medical certification of civil defence personnel. It was felt that this matter was really one for the General Medical Council but that several civil defence authorities had met the difficulty by referring doubtful cases to a body of medical referees.

16. **Travelling Expenses for Group Executives.**—Dr. Ernest Ward raised again the question of payment of railway fares for members attending Group executive committees in London. The Hon. Treasurer in reply asked Dr. Ward to prepare a more detailed estimate of the expenses which might be involved.

17. **Representation of the Society.**—The following were re-elected as representatives of the Society: Central Association for Mental Welfare—Dr. T. P. Puddicombe; London School of Hygiene—Dr. J. J. Buchan; Central Council for Health Education—Dr. W. A. Daley, Capt. G. S. Elliston, Drs. James Fenton, John Macmillan, T. Orr, R. P. Garrow, Maitland Radford, and E. Ward.

In view of the impossibility of obtaining representatives who could attend Central Council meetings it was decided to invite the Branches to nominate members for the remaining six places on the Central Council.

18. **National Requirements of Health Visitors.**—The Joint Consultative Committee for the Training of Health Visitors and of Organisations of Health Visitors wrote to say that a sub-committee had been appointed to endeavour to estimate the total number of health visitors needed now and in the future and the number likely to be available. They requested the help of the Society. The Committee referred this matter to the Maternity and Child Welfare Group.

19. **National Dried Milk.**—The Maternity and Child Welfare Group's revised directions for issue with National Dried Milk were submitted. It was decided to refer these to the Council.

20. **Delayed Notification of Tuberculosis.**—A letter on this subject from Dr. Ernest Ward was referred to the Standing Advisory Committee on Tuberculosis.

21. **Daytime Nurseries.**—The East Midland Branch raised questions about the construction of daytime nurseries, particularly with reference to inadequate staff accommodation. The Committee expressed various views on this subject, and it was thought that modification could usually be obtained by approach either to Regional Officers of the Ministry of Health or to those of the Ministry of Labour.

22. **Re-organisation of Local Government.**—Dr. J. A. Stirling asked that the Society should give very close attention to the proposals on the above subject with special reference to those of the Board of Education to transfer the care of children aged 2 to 5 years to Education Authorities.

23. **County M.O.H. Northumberland.**—Dr. Charles presented a full report of the Ministry of Health inquiry into the suspension of Dr. J. Walker. The Committee deferred any action until the decision of the inquiry was promulgated.

The meeting then adjourned.

24. **The Acting Executive Secretary.**—The chairman informed the Committee that Capt. G. S. Elliston had been advised to undergo an operation and that he was about to enter hospital forthwith. The Executive Secretary (Mr. G. L. C. Elliston) had been granted compassionate leave from his R.N.V.R. service in order to look after the Society's business in the meantime. The Committee offered Capt. Elliston their sympathies and wishes for a successful operation and a speedy recovery.

Branch and Group Meetings

WEST OF ENGLAND BRANCH

President: Dr. P. H. Stirk (formerly M.O.H., Exeter C.B.)
Hon. Secretary: Dr. I. G. Davies (Deputy M.O.H., Bristol C.B.).

A meeting of the West of England Branch was held at Bristol on December 11th, sixteen members and four visitors were present. In the absence of the President and Vice-President, Dr. Wilson was elected to the chair. The minutes of the last meeting were read and confirmed. Then papers on post-war medical planning were read by Prof. Parry (Bristol), Dr. Cowan (Glos.), Dr. Larks (City Hospital, Plymouth) and Dr. Lishman (Devon). Dr. Parry's paper was published in the February issue.

MORE MEDICAL PLANNING

Dr. Cowan said that planning of future medical services should be capable of application by stages. The question should be considered from the point of view of the individual patient. He pointed out the advantages of the B.M.A. scheme of extended domiciliary medical service under the National Health Insurance scheme. The health services were said to be in conflict with the general practitioner, but this could be got over, as in the Gloucestershire scheme, by employing general practitioners in clinics of all kinds. He thought that other branches of medicine—industrial medicine, pathological services, medical education, hospital services, research—should all be linked up.

Dr. Larks dealt chiefly with hospital planning, and thought that our present system of voluntary and municipal hospitals developing side by side, more or less independently, could not continue. Referring to the Regional Councils suggested by the Nuffield Trust, Dr. Larks thought that regionalisation could be carried further to nationalisation. He hoped that hospital administration would become a recognised branch of medical specialisation. The scheme he envisaged would be nationally financed, regionally controlled, staffed medically through a service, with a national nursing service, and with a medical administrator responsible through his house committee to a regional body.

The part of medical planning which interested Dr. Lishman most was the child health service. He thought there should be a new planning group or society, the "Child Health Group," which would not be limited to doctors. He elaborated the constitution of such a group, giving details of its administration and function.

After a discussion the following resolution was carried by 9 votes to 7: "That it would be desirable for a State Medical Service to be established, but that private practice should continue." Dr. Lishman proposed and Prof. Parry seconded the following resolution: "That in any plan for the future the School Medical and Maternal and Child Welfare services should be co-ordinated and amalgamated into one service—the Child Welfare Service." This was agreed unanimously.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the branch was held in Newcastle on December 13th, 1941. The President and nineteen members were present. The minutes of the last meeting were read, confirmed, and signed by the chairman.

A letter had been received from the British Medical Association (North of England Branch) requesting the Northern Branch of the Society to nominate one representative to serve on a Regional Medical Planning Committee. The Secretary pointed out that the committee would consist of 16 members, and he did not consider that one member of the Society would adequately represent public health interests. The Secretary was instructed to write to the British Medical Association and suggest that the Northern Branch of the Society be allowed to have three representatives on the proposed committee.

Dr. Hudson gave an interesting talk on domiciliary practice and the part which should be played by the State in the granting of various benefits to insured persons and their dependants. Dr. G. A. Dawson (representing the public health officer) followed with a paper on public health practice, and gave his views on the medical needs of the post-war population and the foundations of a future public health service. He pointed out that the ideal service should put specialist treatment and skilled nursing within the reach of all, and should work mainly on preventive lines. Dr. C. N. Armstrong (representing the consultant) then read a paper on specialist practice. He pointed out that specialist practice had two services to perform—consulting and teaching—which called for high-grade individual capability. He suggested greater contact between the general practitioner and the consultant and stated that the future aim should be centralisation of specialist services in hospitals. He thought it should be possible to formulate an insurance scheme (independent of the National Health Insurance) whereby freedom of choice of consultant should be made available to all.

YORKSHIRE BRANCH

President: Dr. J. Galloway (M.O.H., Dewsbury C.B.).
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.)

An ordinary meeting of the Branch was held in Leeds on January 2nd, 1942. The President was in the chair, and was supported by 30 members and 4 guests. The President welcomed Professor Blatz, of Toronto University, an expert in child psychology, who is visiting this country at the invitation of the Ministry of Health.

The minutes of the last meeting were read, approved, and signed. The President then called upon Dr. Holt, Medical Officer of Health, Keighley, and Dr. Irvine, Medical Officer of Health, Shipley, to open the discussion upon war-time nurseries.

Professor Blatz said that the nursery school was not primarily a health measure but an educational device. He agreed that the family was the cornerstone of civilisation, but, in Canada at any rate, a large proportion of families could not be held up as examples of how children should be reared. Not only had the majority little knowledge of the educational needs of the infant and the young child, but they could not attend properly even to its physical care. Modern towns were an artificial device; therefore people must be trained to live together in a spirit of compromise, tolerance and co-operation. He only wished that such things were instinctive. Children began to develop their characters from about the age of two, and by the time they entered society they had developed certain quirks. In Canada, 5 per cent. of them were to enter mental hospitals, and probably not one of the rest was absolutely adjusted. We could live together more happily if we trained children how to do it from the earliest age, and the individuals who were to influence them must have at least as much training as a good teacher. In his institution they did not consider two years after a university degree too long. He was distressed, therefore, at the suggestion that matrons and nurses would be adequate for the proper care of pre-school children and that the care of the two to five's should be medical. They should not be separated from their parents but should spend part of the day at least in an institution under qualified care where they could learn the art of social adaptation away from the narrow environment of the home.

Dr. J. J. Buchan thought that the present nursery movement was a temporary one to facilitate war work and that we must aim at young children under two being brought up in their own homes.

Nursery schools in future would, however, be more numerous and better than in the past. It would be as bad to attempt to run nurseries by nurses alone as by teachers alone. The ideal was to train persons who would be expert in both fields, and able to balance the sometimes conflicting physical, mental and temperamental requirements of the child.

The President stated that Dewsbury had had a nursery for thirty years, and had found in peace-time that it must be open from 6 a.m. to 6 p.m. As far as they could find in Dewsbury, the demand for nurseries was not nearly so great as the Ministry of Health appeared to think.

Dr. Gibson felt that the Ministry of Health should lay down

definite instructions at this stage, because the staffing and administrative needs should now be known.

Dr. Sutherland drew attention to the importance of assessing the actual need for war-time nurseries. In his own area he had had a questionnaire form completed and returned by all employed mothers of pre-school children. In addition his health visitors had inquired into the attitude of unemployed mothers of pre-school children both to employment in industry and to war-time nurseries. Approximately one-third of the employed mothers of pre-school children were dissatisfied with existing arrangements for the care of their children while they were working, and were anxious to use war-time nurseries, and approximately one-third of the non-employed mothers of pre-school children expressed their readiness to go into industry if their children could be admitted to nurseries. He had also inquired from the employers how many additional women employees they were likely to need within the next six months; he had found that the number was a large one, so the existing need for war-time nurseries was of comparatively small importance compared with the demand which would arise later.

In replying to the discussion, Dr. Holt said he did not believe that social behaviour was altogether a thing which had to be learnt. It was present in animals. He did not see how a child could be taught it except by example. He agreed with Professor Blatz that every word uttered before even the youngest child should be carefully studied, but he could not agree that the best people to show this example were experts, of whom he was suspicious. He thought a better alternative to nursery schools was to bring other children into the child's home and let them play in front of the mother, who, after all, was the person who had the child's interests most at heart. Women past child-bearing age were not suitable for handling young children. Young married women were best. A nurse should not be expected to cope with more than five children.

Dr. Jervis said he had gathered that there was some doubt as to whether the child was vegetable, animal or just a human being. In Leeds they had had day nurseries since before the last war. They had a teacher attached to these nurseries to train the children, but the number now available could not possibly meet the demand. They had tried the "daily minder" system, and that had failed entirely in Leeds largely because the minders refused to care for children during night shifts. Nursery classes had provided accommodation for 5,000 children, but day nurseries were required for 1,000. They now had seven day nurseries operating, with nine or ten in preparation. He considered that the residential nursery was the most satisfactory.

MIDLAND BRANCH

President: Dr. Ethel Cassie (Senior A.M.O., M. & C.W., Birmingham).

Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton C.B.).

The fourth meeting of the session was held at Birmingham on February 5th, 1942. The President and 24 members were present. The minutes of the previous meeting were read and confirmed.

A discussion then followed on medical planning from the public health aspect. Dr. A. J. B. Griffin said there was a State-controlled public health service, a preponderance of State-controlled hospital beds, and over sixteen million people receiving domiciliary treatment under the National Health Insurance Acts; we were already more than half-way to a State medical service. An efficient medical service must be State controlled and should be regionally administered. It would be necessary to have a comprehensive domiciliary medical service for all, with full benefits. These should include domiciliary nursing, an ambulance service, and convalescent treatment. In addition to his present responsibilities the medical officer of health should control the ambulance and domiciliary nursing services, and have some degree of supervision over the domiciliary medical services in his area, although these might be the direct responsibility of a separate medical specialist on the staff of the medical officer of health.

Dr. Katherine Hirst said that the Maternity and Child Welfare service was essentially preventive and could not be conducted effectively on individual and unco-ordinated lines. Any attempt to include such work within an extended National Health Insurance Scheme would lead to vagueness of purpose and diversity of direction, and must be detrimental to real progress. The aim of any post-war scheme should be the setting up of one health service for children of all ages from infancy to adolescence. Midwifery should be organised as a whole-time service.

Dr. H. P. Newsholme put in a plea for the integration of voluntary hospitals. The aim should be the co-ordination of all voluntary and municipal hospitals in an area on a partnership basis on equal terms, with local and regional organisation and a central hospital council. Both the local and regional hospital councils should include representatives of the staffs and governing bodies of the voluntary and municipal hospitals, and of the local medical profession. Their functions might be: (1) To encourage, modify, or restrain the desire for expansion of individual hospitals; (2) to suggest whether expansion or development was most urgently needed; and (3) to regulate the issue of special appeals for funds by individual hospitals in the area. Regional councils would be concerned with the equalisation of hospital services throughout the whole of the region, whilst the Central Council would deal with questions of policy, discipline, and the training of students and nurses.

SOUTHERN BRANCH

President: Lieut.-Colonel D. G. Cheyne, O.B.E., M.C. (Assistant Director of Hygiene, Southern Command).

Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B. and Port).

A meeting of the Southern Branch was held at the American Red Cross Harvard Field Hospital Unit, on February 6th, 1942. Fourteen members and twelve visitors were present. Dr. I. McLachlan, the retiring President, invested Colonel D. G. Cheyne with the President's badge of office, and installed him in the chair.

The minutes of the meeting held on October 16th, 1941, having been circulated, were approved as correct and signed by the President.

The President thanked Dr. Paul Beeson for his kindness in allowing the Branch to hold a meeting in the American Red Cross Unit.

In supporting the idea of a State medical service, Colonel Cheyne put forward a suggestion that an Imperial medical service might be considered, and gave as an example the operation of the E.M.S. system, which, although containing some defects, had in fact worked quite well. Similarly, with regard to a national hospital system, Colonel Cheyne cited the Indian Medical Service, where a successful national hospital service had been operating for some time. He went on to recommend the establishment of a special branch of research, including a curative section, a laboratory section, and field investigation Unit, the laboratories and hospitals acting in the closest co-operation.

With regard to panel practice, drastic reorganisation might be necessary on "firm" or team lines. With regard to the administration of a state medical service, Colone Cheyne suggested the present Ministry of Health and regional organisation as a basis, and invited comments on the suggestion that the medical administration might be run on Service lines—*i.e.*, by men selected for such high appointments on their merits as judged by their previous work.

COMBINED MEETING OF TUBERCULOSIS AND M. AND C. W. GROUPS

A combined meeting of the Tuberculosis and Maternity and Child Welfare Groups was held on February 7th at the London School of Hygiene. The President of the Maternity and Child Welfare Group, Dr. E. Virginia Saunders-Jacobs, was in the chair.

Tuberculosis in Childhood

Dr. C. N. C. Toussaint (T.O., Bermondsey) spoke on the clinical problems of tuberculosis in young children, and Dr. Jean Mackintosh (Regional M.O. for M. and C.W., Aberdeen) spoke on the administrative side of the subject from the point of view of the maternity and child welfare officer. It was stated that in spite of the 20 per cent. increase in tuberculosis among young adults the incidence in childhood was still on the decline in England and Wales. Dr. Toussaint said that young children should never be exposed to the risk of contact with an open case of tuberculosis. An increase in the incidence among adults was likely to be followed by an increase among young children. An investigation into a series of deaths in young children from tuberculous meningitis showed that 85 per cent. had been in contact with an open case of tuberculosis in either a parent or a near relation. Dr. Toussaint considered that acute tuberculosis in young adults was more likely to be the result of exposure to infection in office or workshop than to the flare-up of childhood infection. Childhood infections in his opinion conferred a certain protection, and, although the individual might be reinfected in later years, he would not again be exposed to the danger of the acute miliary form.

Dr. Mackintosh doubted whether any advantage accrued from a tuberculous infection in childhood. American figures seemed to indicate that these children were very liable to recrudescence of the disease in adolescence, especially if their surroundings were unfavourable. Both Dr. Mackintosh and Dr. Toussaint considered that the large increase in the consumption of unpasteurised milk by young children presented a real danger, and that measures should be taken to ensure a safe milk supply. Dr. Mackintosh pointed out that the Government's distribution of vitamins to young children removed most of the disadvantages of boiling the milk when pasteurisation was impracticable. Boiled milk was preferable to raw milk containing tubercle bacilli. Dr. Mackintosh also stressed the desirability of ensuring that workers in day nurseries and similar institutions were not suffering from tuberculosis. Dr. Toussaint did not advocate mass radiology for young children, but thought a cutaneous test might be made a part of the maternity and child welfare service. The patch test became positive in the early stage of invasion, and such children might well receive special care and be investigated with a view to finding out the cause of infection. He thought that B.C.G. might be given a further trial. It had been found useful by veterinary surgeons and had never been sufficiently used in this country.

MATERNITY AND CHILD WELFARE GROUP

The following meetings have been arranged for:—

April 18th and 19th.—Clinical week-end at Oxford on obstetric and paediatric subjects. Programme to be issued shortly.

May 22nd, 4.30 or 5 p.m.—Combined meeting with the Children's Section of the Royal Society of Medicine on "The Prevention of Chronic Lung Conditions in Young Children" (postponed from February).

June.—There will probably be a general meeting on "Medical Planning" during June.

July 4th and 5th.—Annual General Meeting and postgraduate course (on paediatric subjects) in London, following the National Conference on Maternity and Child Welfare, to be held at B.M.A. House on July 2nd and 3rd.

Joint Tuberculosis Council

A meeting of the Joint Tuberculosis Council was held on February 20th in London.

Dr. D. A. Powell, the chairman, and 16 members were present.

The question of the shortage of nurses in sanatoria was raised once more, in connection with the report of the Nursing Committee, and the Secretary was instructed to communicate with the Ministry of Health and the General Nursing Council requesting that further consideration be given to the establishment of a supplementary register for tuberculosis nurses.

A committee, with Dr. N. Tattersall as convener, was set up to consider the question of notification of cases of tuberculosis with a view to defining the position more accurately.

The following officers were elected for 1942: Dr. D. A. Powell, Chairman; Drs. James Watt and E. Ward, Vice-Chairmen; Dr. G. Jessell, Hon. Treasurer; Dr. D. P. Sutherland, Hon. Auditor; Dr. J. B. McDougall, Hon. Secretary.

The committee which had previously been convened by Dr. Hawthorne (resigned), and which had been responsible for advice on milk, was requested to take over questions of nutrition generally. Dr. L. E. Houghton was appointed the new convener of this committee, and Drs. Trayer and Rusby as additional members.

Co-ordination of Tuberculosis Organisations

A discussion on co-ordination of the various organisations dealing with tuberculosis in this country followed, and letters were read from the National Association for the Prevention of Tuberculosis, the Tuberculosis Association, and from the Tuberculosis Group of the Society of Medical Officers of Health.

The N.A.P.T. asked that the J.T.C. should send five representatives to a conference at which the Tuberculosis Association would also be represented. The Tuberculosis Association invited the opinion of the Council on the question of co-ordination generally. The Tuberculosis Group of the Society of Medical Officers of Health stated that the time was inopportune for drastic alterations in the organisations dealing with the varied aspects of the tuberculosis problem, and also suggested that the work of the Standing Advisory Council should be transferred to the Joint Tuberculosis Council which, in their opinion, was fully representative of all organisations dealing with the many aspects of tuberculosis work. An interesting discussion followed in which it was clear that there was no measure of general agreement. Drs. Sutherland, Jessel and Trayer supported the view that the Joint Tuberculosis Council was in fact the body which could deal adequately with all the problems which had to be discussed, and that the Standing Advisory Committee had undertaken much of the work which had previously been allocated to the Joint Council. Dr. Lissant Cox felt that many of the present difficulties were due to the fact that one organisation was ignorant of the other. The view of certain members of the Tuberculosis Association was expressed by Drs. Hebert and Rusby, who said that an organisation with over 300 members felt that the time had come for them to be more adequately represented on bodies dealing with national problems in tuberculosis. Dr. Hebert gave some instances of gross overlapping between committees, and Dr. Vere Pearson felt that the N.A.P.T. ought to take the lead in administrative matters and that the other organisations ought to be constituted sub-groups of it.

It was resolved that the invitation of the N.A.P.T. to send five representatives to meet members of the other organisations be

acceded to, and the following were appointed to attend: Dr. J. Watt, Dr. G. Lissant Cox, Dr. D. P. Sutherland, Dr. G. Jessel, and the Hon. Secretary. It was further resolved that the N.A.P.T. be requested to invite a similar number of members from the Tuberculosis Group of the Medical Officers of Health. A motion by Dr. G. Jessel to invite the Ministry of Labour and National Service to send an observer to the meetings of the Joint Council was passed.

The next meeting of the Council will be held in London on May 16th at 10 a.m.

The Medical Research Council announce that their Radiotherapeutic Research Unit (formerly Radium Beam Therapy Research) has now resumed clinical work in new quarters which have been provided by the London County Council at Hammersmith Hospital. For the present this work will be confined to the treatment, by radium beam therapy or X-rays, of cases of carcinoma affecting the buccal cavity, tongue, pharynx and larynx. The Director, Dr. Constance A. P. Wood, would be glad to have suitable cases referred to her: these should be patients who have had no previous treatment, either surgical or radiological, and preferably not in a very advanced stage of the disease. The physical work under the charge of Mr. L. G. Grimmett, which has meanwhile been continued in temporary quarters at the Imperial College of Science and Technology, has also been transferred to Hammersmith Hospital.

The Ministry of Health has recently (Circular 2569) expressed the hope that local authorities will employ alien doctors where possible, as many of them still remain unemployed and possess qualifications and experience suitable for hospital appointments. To further this end, the conditions of employment have been relaxed, and in future it will be permissible to employ an alien practitioner even if there is only one British resident in addition. There will also be no objection to the employment, for example, of two alien practitioners in a hospital with some 100 beds and a total staff of 14 or 15, or of three where there is a total staff of 25.

The Minister of Health has appointed Dr. F. Murchie to be Deputy Director-General of the Emergency Medical Services.

A meeting of the Fever Hospital Medical Service Group will be held on Friday, May 8th, at 3 p.m., in B.M.A. House. Speaker: Dr. L. F. Hewitt (Belmont Laboratories). Subject: "Recent Advances in the Preparation of Antitoxin."

The establishment of a section on films in health education and medicine at the American Film Centre was announced recently by Mr. Donald Slesinger, Director of the Centre, at its office, 45, Rockefeller Plaza, New York City. Dr. Adolf Nichtenhauser is in charge of the section, which will be a clearing house and information centre on the use and production of health education and medical films. Attention will also be paid to the technical medical film, especially with regard to its use in medical schools. From its beginning the American Film Centre has co-operated with medical and scientific agencies, such as the Wistar Institute of Anatomy and Biology in Philadelphia, and various hospitals in New York and New England, in the study and production of films. The section on health and medical films has received a three-year grant from the Rockefeller Foundation.

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EDITORIAL

Planning

Medical planning is rather hampered by the existence both within and without the medical profession of two schools of thought which do not easily mix. One believes that interference by the State is a thing to be avoided at any cost, the other that the betterment of health depends on the expansion of State medicine. To each its tenets have assumed the inevitability of axioms, and it is difficult for the seeker after truth to get from either much evidence in support of his views but instances of defects in the other system. Planning would be comparatively simple if we were all quite sure that nothing is of so much importance as the preservation of private practice and the voluntary hospital system, or the management of all medical affairs by elected representatives of the people controlling a profession of salaried officers. It is a distinct disadvantage to see good and bad in both systems and realise the need for finding a way which will combine the best of both. Mr. Somerville Hastings, the author of a Fabian pamphlet on the Hospital Services,* is not much troubled with doubt. The health services must be complete and free to all. All hospitals must be managed in large areas by directly elected representatives of the people. Specialists and general practitioners should be employed on a full-time salaried basis. To him advocacy of the survival of voluntary hospitals is accounted for by the fact that "the ruling classes, who instinctively detest all forms of municipal service, look upon the provision of hospital treatment as a charity and not as a right, as one of the links in the chain that binds the working classes in their present subservient position." Until, therefore, all hospitals can be brought into the governmental system, discussions between voluntary hospital managers and local authorities (without intrusion by any extraneous bodies or persons) may be beneficial to both, but authorities should if possible avoid contracts with voluntary hospitals, co-operating rather with one another. If voluntary hospitals are used it should be strictly on the basis of payment for work done. In the meantime the council hospitals should be entirely removed from the Poor Law, higher whole-time clinical posts should be developed, and possibly the position of medical superintendent should give way to lay management. Municipal hospitals should take an increasing place in medical education.

Lord Dawson, who recently addressed a medical society at a military hospital on medical reform, approaches it from the opposite political pole.† He recognises the need for it, as the plan of 1920 which bears his name makes manifest. But he has faith in the inevitability of gradualness. An ordered service of medicine should evolve from what already exists and must be suited to the habits and thoughts of the people. He stands by the scheme of 1920, which envisaged the hospitals linked together in a region with teaching hospitals as the focus and secondary and primary hospitals radially associated with them. The hunger of general practitioners for a hospital connection would be satisfied by putting them in clinical charge at the primary hospitals, which would also be the health centres for their ambulant patients and for the personal health services in which they would take part. Lord Dawson appears to contemplate the executive authorities under such a scheme as being the major local authorities, but he does not make it clear whether their jurisdiction would extend to the existing voluntary hospitals. In any case statutory committees of such authorities would be under an obligation to seek the advice of a regional council which would contain representatives of them, of the voluntary medical and allied services and some co-opted members. He appears to favour the view that regional councils should be consultative only, although this idea hardly accords with another suggestion he throws out that semi-autonomous regional bodies might be formed resembling those established nationally in connection with radioactivity, electricity, and broadcasting. Whole-time medical service might come with other post-war social and economic changes, but no answer to this question was needed now. On its merits, such a service might be regarded as more compact, tidy, and economical, but would it have the same value? No profession needed to be so elastic in its government if it was to be dynamic, not static. Its members needed freedom of initiative, unfettered by the formulae of administration. Collectiveness was necessary for its fabric but individualism for its human relationships. In Lord Dawson's view individualism would not flourish easily within the rigid boundaries of a State service but needed the freer atmosphere which belonged to the voluntary hospitals' tradition.

Here, then, are two attitudes of mind which, if not diametrically opposed, are difficult to harmonise. It may be that economic conditions will force the issue in one direction, but that may not, in the long run, be the best way of solving these difficult problems. There is much truth, though not the whole truth, in some of the arguments of both sides. Why

* *The Hospital Services*, by Somerville Hastings. London: The Fabian Society. Research Series No. 59. Pp. 24; 6d.

† *The Times*, Tuesday, March 24th, 1942.

should statutory administration be more rigid than voluntary? Is it not possible by devolution of authority to leave scope for initiative under government to a much greater extent than individualists usually suppose? Is this not already the practice of the wise medical administrator in local government? Does not the greatest output of medical research, which of all pursuits is the most individualistic, come from whole-time workers, especially in universities and laboratories? Is it not also, unfortunately, true that clinicians in whole-time public service, with the possible exception of fever hospital workers, have made less contribution to the advancement of knowledge than they ought? If the answer to the last question is in the affirmative, what is the reason? As regards voluntary hospital managers it is quite fair criticism on the part of Mr. Somerville Hastings to say that "a desire for service does not of necessity imply either a capacity to serve or experience of hospital management." But does the argument not apply with equal force to the elected representatives of the people with whom he seems to assume wisdom and capacity to inhere? Without doubt much of the thoughtful opposition to an extension of statutory management of hospitals and whole-time medical service would evaporate if means could be found of strengthening the personnel of local governing bodies, improving the methods of selecting officers for promotion, and of recognising outstanding individual achievement in all branches of medicine in which men and women work in a whole-time capacity.

Diphtheria Immunisation

Sir Wilson Jameson* has recently stated that since January, 1940, about one-third of the child population of England and Wales have been given injections of diphtheria toxoid (presumably alum-toxoid). In Circular 2627, issued on April 21st, to herald a "spring campaign" against diphtheria, it is stated that three out of every four children should be immunised if incidence and mortality rate are to be substantially reduced.

The faith which medical officers of health have in the soundness of the protection against diphtheria given by immunisation with alum-toxoid is founded on many small series of observations. The general policy of decentralisation pursued in the past has not favoured widespread campaigns of immunisation against diphtheria with careful check of results throughout. Fulton, Wilson and their colleagues† have described a valuable campaign of immunisation with alum-toxoid (A.P.T.) involving about 30,000 children; the inmates of 33 schools in different areas were under detailed observation. The natural Schick-positive rate among 3,800 children between the ages of 1 and 17 was 78·3%. In Croydon in 1941 a rate of 76·4 was found for ages 5 to 19; in Edinburgh in 1924 the rate was 64·4, while in New York only 32·9% were positive. At age 4 in the investigation carried out by Wilson and his colleagues the rate was 97·5%, showing the usual age fall to 84% at 10 and to 50% at 16. More girls than boys reacted positively; presumably the adventurous boy has more chance of subclinical infection with resultant immunity. Pseudo-reactions occurred in 1·2% of 3,392 of the children. The authors considered that the omission of the control heated toxin in the Schick test would have introduced an error of less than 0·2%. After the immunising injections about half the children suffered some degree of redness or swelling, mostly trifling and evanescent. Of 56 naturally Schick-negative children, 16 (28·6%) developed a reaction greater than 20 mm. in diameter. Among the positives the rate was lower; 17 similar reactions occurred in 428 injections of 0·1 or 0·3 c.cm. Calculated in another way, 86% of the Schick-negative group had some degree of reaction but only 42% of the positive group. Schick-positive children—presumably owing to their complete lack of acquaintance with the diphtheria bacillus and its proteins—are not sensitised; positively reacting children under 10 rarely suffer reactions. If pre-immunisation Schick testing is not done, the risk of troublesome reactions among the Schick-negative reactors should restrict the first dose to 0·1 or 0·2 c.cm. The first dose of 0·1 c.cm. caused almost exactly the same amount of reaction as the second of 0·3 c.cm.

The Schick conversion rates were very good when good samples of alum-toxoid were used. Most children received 0·1, followed by 0·3 c.cm. of A.P.T. 4 to 6 weeks later; Schick-testing was mostly done 8 to 9 weeks after the second injection; in some schools the interval was 12 to 16 weeks. Four samples of A.P.T. gave conversion rates of 97·7% to 99·4%. Two samples converted only 68·2% to 74%. These two were found to contain from 13 to 15 Lf units per c.cm., while the four most efficient makes of A.P.T. contained from 23 to 50 Lf. The persistence of the negative state induced by immunisation was good. In the groups of about 100 children tested after the injection of "A," the brand of A.P.T. most used, 91·3 to 100% of the children were still negative 12 to 14 months after the completion of immunisation.

Wilson and his colleagues discuss the statements made—mostly by Bousfield‡—that some of the samples of A.P.T. issued were poor and that the official dosage was too small. The latter suggestion is not confirmed by the evidence obtained in this investigation. One A.P.T. used by the Wilson team gave a conversion rate of only 51·9%. Even an increase of dosage five times above that used as a routine failed to yield a satisfactory rate.

The authors quote the apposite statement of Dudley that, provided it is known that the Schick test has once been negative in an individual, a relapse of Schick or antitoxin immunity is really of little consequence, for such subjects possess a remarkable power of regaining rapidly their immunity on exposure to virulent diphtheria bacilli. Wilson ends by recommending a first dose with a slight safety margin above the first dose of 0·1 c.cm. he used; thus each child should receive 0·2 c.cm. as a first dose and 0·3 to 0·5 c.cm. not less than four weeks later. The most convenient age for immunisation is at one year; the immunity should be reinforced by 0·3 to 0·5 c.cm. on entering school at 5, and again at 10 years.

Many of our readers will be perturbed to note that poor preparations of A.P.T. have been in use. The authors tell us that laboratory tests are being sought to control A.P.T. more efficiently, and add that immunity should be adequate "provided that in future only preparations of A.P.T. of guaranteed potency are issued." Medical officers of health would have felt happier if they had been assured that the proviso had already been safeguarded.

Work of the Ministry of Health

The very much abbreviated "Summary Report" recently issued by the Ministry of Health* covers the work of public health directly concerning the Ministry for two years, during eighteen months of which the country has been at war. Almost half the text consists of descriptions of the emergency services which the Ministry itself administers with the assistance of other central departments, local authorities, or voluntary bodies. These include the emergency hospital scheme, which utilises 80 per cent. of the hospitals in the country and provides for the fighting services, the personnel of civil defence, civilian casualties, evacuees, transferred war workers, and other special categories of civilians; the civil defence organisation of local authorities, with its first-aid posts, first-aid points, mobile units, ambulances and gas-cleansing centres; the public shelter health service, which has reached its greatest development in London; the evacuation scheme, with its ebb and flow of people as air attack waxed and waned, and the complex social problems arising out of it; and the service for the homeless consequent on air-raid destruction of dwelling-houses. The account of the problems and of work done in each of these provinces will be useful to those concerned with their local management.

As regards health generally the information is necessarily circumscribed, but it is now available in one publication for the first time since war broke out, and some of it is brought forward to dates in advance of the period which the report nominally covers. An increase in the enteric fevers from 1,479 cases in 1939 to 2,833 in 1940 is recorded. It was not due to damage to water-supplies or drainage systems. The cases were mostly of paratyphoid and the deaths rose only from 112 to 135. Diphtheria was down slightly, but the notification of 46,281 cases in 1940, with 2,480 deaths, is disappointing when the disease could be eradicated by immunisation. Partly as a result of the Ministry's campaign, organised through the Central Council for Health Education and local authorities, about one-third of the children under 15 are believed to have been immunised by September 30th, 1941. The most striking epidemic prevalence was that of cerebro-spinal fever, reflected in a sudden jump to 12,771 cases in 1940 and only a comparatively small recession in 1941. The deaths in 1940 numbered 2,584, giving a fatality rate of 20 per cent. based on notifications.

Of the less acute diseases, tuberculosis quickly showed the influence of war conditions, the death-rate rising from 618 per million (new classification) in 1939 to 679 in 1940; the rate per million for respiratory forms rose by 51 (or 9·8 per cent.) and for non-respiratory by 10 (or 10·2 per cent.). Venereal disease, as measured by new cases of syphilis, increased by 12·5 per cent. in 1940, or, if Service infections are included, by 23 per cent. Infant mortality, which had reached the record low level of 50 per 1,000 live births in 1939, rose to 56 in 1940. On the other hand, the maternal mortality fell to its lowest recorded figure in 1940, at 2·61 per 1,000 total births. The report describes the measures taken to preserve the lives and health of mothers and children in these difficult times. It also contains useful information as to such problems as the supply of nurses, the repair of damaged houses, the progress of national health insurance (including the new income limit of £420 for non-manual workers and increased benefits), and improvements in contributory pensions.

Health Education

At the suggestion of the Ministry of Health the Central Council for Health Education will, as from April 1st, 1942, take over from the British Social Hygiene Council responsibility for conducting in Great Britain and Northern Ireland popular health education relating to venereal diseases.

The British Social Hygiene Council will continue its existence as a voluntary organisation, but will in future confine its activities to such matters outside the field of general health education as the application of biology to human welfare and the social implications of sex conduct.

Dismissal of a County Medical Officer

After an inquiry lasting nine days, during which 30 witnesses were examined, an application by the Northumberland County Council to the Ministry of Health for sanction to terminate the appointment of Dr. John Walker as county medical officer has been granted. The Ministry stated in its letter announcing its decision that "while the charges against Dr. Walker have not in every case been established, the doctor has been shown to have been seriously at fault in the administration of his office."

The inquiry was conducted by Mr. Gerald R. Hill, with the assistance of Dr. F. J. H. Coutts. The Northumberland County Council was represented by Mr. C. B. Fenwick and Mr. E. G. Sykes, and the respondent by Mr. A. H. Pereira, instructed by the solicitors to the London and Counties Medical Protection Society.

The inquiry terminated on January 29th, and the decision of the Ministry giving sanction to dismiss Dr. Walker was made known on April 9th.

Owing to the serious shortage of paper it will not be possible to provide authors with more than 50 reprints of any article published in this journal. It is fully realised that in many instances information is usefully disseminated by the circulation of reprints. Authors are asked, however, not to order reprints for the sole purpose of following the pleasant peace-time custom of sending complimentary copies to their friends and colleagues.

The Ministry of Food has arranged for the distribution under the *Milk in Schools Scheme* of full cream dried milk to schools in remote areas where liquid milk cannot be obtained, or where a supply would involve uneconomic transport. The full cream dried milk powder will be supplied at 11s. per 14 lb. tin, and this will enable the school to sell the reconstituted milk at the Milk in Schools Scheme rate of ½d. per one-third pint.

* *Brit. med. J.*, 1942, 1, 346.
† *Brit. med. J.*, 1942, 1, 315, 349.
‡ *Med. off.*, Nov. 15th, 1941.
* Cmd. 6340. 52 pp. 1942. London: H.M.S.O. (9d., post free 10d.).

OBITUARY

ALFRED ERNEST WILLIAMS, M.D., D.P.H.

We regret to record the death on March 26th of Dr. A. E. Williams, County Medical Officer for Flintshire.

Alfred Ernest Williams received his medical education at Edinburgh, qualifying M.B., C.M. in 1896, and taking the M.D. in 1904. He was awarded the D.P.H., Liverpool, in 1907. Among his appointments, Dr. Williams held those of resident medical officer, New City Hospital for Infectious Diseases, Liverpool; assistant surgeon, East District, Liverpool; and assistant medical officer, Glamorganshire County Asylum. In the last war he served as Captain in the R.A.M.C. (T.) in the sanitary service. Dr. Williams was a Fellow of the Society of Medical Officers of Health. He published articles on epidemic diarrhoea and on the medical treatment of school children in rural districts. We are indebted to a colleague for the following appreciation:—

By the death of Dr. Williams, Wales has lost one of its outstanding personalities in public health work. He came to Flintshire as its first school medical officer in September, 1908, and in 1911 was appointed their first county medical officer of health. He has accordingly been responsible for the growth of the health services of the county from their infancy and has watched and tended carefully each new development of public health activity. He was particularly interested in maternity and child welfare, and through his efforts substantial reductions in maternal and infant mortality have occurred in the county. Similarly, he loved school medical work, with its opportunities of improving child life from childhood to adolescence and beyond. Throughout the years he has given unsparing service to the duties of his office, and in recent years has spent himself in arranging and improving the casualty services of the county. His interest in health matters was not confined to the county for his advice and experience were available to all who sought them, and at one time he became President of the Welsh Branch of the Society of Medical Officers of Health.

His life was gentle—that kind of gentleness that hid firm resolve, dissolved opposition, and made difficulties disappear. His natural friendliness always stripped official contacts of formality, and ideas were exchanged in an atmosphere that made co-operation simple, natural, and effective. He hated ostentation in any way, never paraded his good work, and was content that his schemes worked smoothly, efficiently and without show. His colleagues both within and without the county will miss him sadly. His work will always be an abiding memory.

JAMES GAIRDNER, M.D., D.P.H.

Dr. James Gairdner (Dr. "Jamie"), who claimed to be the oldest M.O.H. in Britain and possibly in the world, died on February 24th at the age of 96; with his passing the country practice which had been carried on by himself and his father for 103 years closes down.

James Gairdner was born in Crieff, his father, Dr. Matthew Baillie Gairdner, having set up in practice there in 1839. He was one of the first pupils to enter the new secondary school, Morrison's Academy, in 1860, and at the age of 15 he was dux medallist of the school. He qualified M.B., C.M. of Edinburgh University when he was 21, and six years later passed to the M.D., taking the D.P.H. of St. Andrew's University in 1912. He entered practice with his father, and 75 years ago, at a special meeting of the Crieff Parochial Board, he was appointed medical officer for the Parish "owing to the appearance of cholera in one or two places in the kingdom." Dr. Matthew Gairdner was Crieff's first M.O.H. when it became a burgh under the Burgh Police (Scotland) Act, and when he died in 1880 at the age of 80 his son, "Dr. Jamie," took over the post and held it for 62 years. He was proud of his age and was looking forward to being 100.

ARCHIBALD BISSET SHED, M.B., CH.B., D.P.H.

The death has taken place at Cowplain, Hants, of Dr. A. B. Shed, who had been a member of the Society of Medical Officers of Health since 1915.

Archibald Bisset Shed received his early education at Berwick Grammar School. He qualified M.B., Ch.B., Edinburgh in 1899, and took the D.P.H. of St. Andrew's University in 1903. He was for many years assistant medical officer and tuberculosis officer for Hampshire, and had previously been assistant medical officer of Darwen.

TRANSMISSION AND PREVENTION OF SCABIES*

By KENNETH MELLANBY, Ph.D.,
Sorby Research Fellow of the Royal Society

I have already published some results of preliminary experiments in which human volunteers were used to test the possibility of infection with scabies of contacts of various kinds (Mellanby, 1941, *a.c.*). It appears that the chances of infection from fomites are comparatively small. In my original experiments the men used as sources of infection were unselected soldiers sent for treatment; the presence of living acari on them was confirmed, but no assessment of the parasite population was made. Blankets recently used by these patients were used by clean volunteers, and in twenty-five such experiments not one new case of scabies was produced.

In more recent experiments, volunteers who were known by experience to be readily susceptible to scabies (there is no reasonable evidence to show that immunity to the parasite exists, but in experiments like this the possibility must be borne in mind) have slept in beds vacated a few hours previously by selected scabies patients. Further quantitative work on the numbers of the parasite *Sarcoptes scabiei* present in patients is being carried out by my colleague, Major C. G. Johnson, R.A.M.C., and myself, and full results will be available shortly; it is at present possible to say only that infestations as great as those employed as sources of infection in these experiments would be found in only about 15 per cent. of the cases normally treated, and 75 per cent. of cases have much less than half the number of parasites. At this moment it should be noted that a high parasite population may not be correlated with gross clinical symptoms, and that frequently patients with widespread secondarily infected lesions have very small numbers of living *Sarcoptes*. On the other hand, a very few patients, at any rate at one stage of their infection, are "carriers" and have large numbers of parasites with few clinical symptoms. These people may not even complain of itching, and are likely to escape diagnosis or to be considered as "very lightly infected" and little source of danger to the community.

Infection by Bedding and Clothing

On 272 occasions uninfected volunteers slept in beds vacated that morning by these heavily infected patients and only four times was *Sarcoptes* picked up. This implies a risk of infection from bedding of about 1 in 70, and if the risk of infection is proportional to the parasite population of the individual who previously slept in the bed, then taking unselected cases of scabies, one might expect the disease to be transmitted in this way approximately once in 200 times. If bedding is stored for even a day or two the risk will be considerably less. I have been unable to make a comparable series of trials with infected underclothing. I can only refer to my original data, which show that the disease was transmitted twice in 38 occasions by this means. It would be unwise to assume from this that underclothing is about eight times as apt to cause infection as is bedding, though in view of the intimacy of the contact in the two cases one might expect the underclothing to play the considerably greater part. It is perhaps fortunate that underclothes are seldom exchanged, but sports clothes are often worn by several individuals in one day and may occasionally spread the disease. Further evidence on this point is required.

I am not prepared, on these results, to make any dogmatic statement on the necessity or otherwise for disinfesting clothing and beds. Not to disinfest is a risk, but as most people seem well satisfied with a 90 per cent. success in a treatment for scabies the risk of reinfection due to lack of disinfestation would appear, in comparison, to be negligible. (I may add that under controlled conditions, using an efficient treatment, there is no reason to be satisfied with so low a percentage cure as 90.) Personally, I would suggest that a patient should be advised to don clean underwear after treatment and have clean sheets on his bed, but I am convinced that the risk of infection by leaving a member of an infected household untreated is considerably greater than that from failing to treat the bedding, etc. This conclusion is one with which those dealing with scabies have been familiar for many years, and it is, like so much that has also been forgotten by recent workers, a view expressed by Hebra nearly a century ago. Hebra (1844, 1868) states that he never disinfested bedding or clothing and yet obtained a negligible proportion of reinfections. Those who are familiar with the reliability of his work in other directions should have little difficulty in accepting his conclusions. Results from different parts of this country, in some of which disinfestation is practised, in others in which it is not, are generally of questionable value, because, as a rule, where disinfestation is practised more attention is devoted to the complaint and the standard of treatment is higher than in the other areas where no disinfestation is practised and where little importance is attached to scabies. Quite recently a few medical officers of health who have themselves taken a considerable interest in the problem have discontinued disinfestation and at the same time ensured efficient treatment in their areas, and in these circumstances favourable results appear to be obtained. Statements such as those that people fire-watching have become infected due to communal blankets are seldom reliable, because scabies is at present a disease on the increase and many people are becoming infected for the first time, and among these new cases some have used communal blankets while fire-watching; others have contracted scabies while continuing to live much as before.

Personal Contact

All the available evidence suggests that personal contact is the usual means of transmission, but it appears that this contact has to be of a comparatively intimate nature. For over a year infected and uninfected individuals have been living together in one house, eating at the same table, using the same bathroom and w.c., and living a normal social life together, except that close personal contacts have been avoided. Not one single case of scabies has appeared in the "control" individuals. On the other hand, when two volunteers have shared the same bed transmission has been readily effected, so that if this occurs in the case of adult males, both wearing pyjamas, there seems little doubt that sleeping conditions of greater intimacy should prove highly favourable to the transmission of the parasite.

Periodicity of Scabies

The prevention of scabies is difficult without a proper understanding of the reasons for the present increase. It cannot be too strongly stressed that if scabies is now epidemic this is not due entirely to war-time conditions, for the increase in the disease was causing considerable alarm in 1937 and 1938. This point is fully brought out in the detailed reports of Glover (1937, 1938), and some data which I have produced on the incidence of the disease also show that it was increasing in pre-war times (Mellanby, 1941*b*). The blame given to life in shelters and war-time crowding is probably unjust, because the disease has increased equally rapidly in areas where there has been little enemy action and where a negligible proportion of the community has ever lived in shelters. In fact, I am almost prepared to suggest that living in the better-conducted metropolitan shelters gives so few opportunities for intimacy of conduct that it is unlikely that scabies has been frequently transmitted in these places.

We shall probably never know fully why scabies has increased in recent years any more than we understand the fluctuations of most infectious diseases, but I consider the following three points may be significant:—

1. For many years after the last war scabies became very rare and most younger doctors were unfamiliar with the disease. It was thus frequently not diagnosed for long periods, during which time transmission could take place.

2. The general populace became unfamiliar with the disease and considered the itching and other symptoms due "to the blood being out of order," etc., and so never sought medical advice until the disease had been suffered for long periods, during which time they would be sources of infection.

3. In experiments in which over 30 volunteers were infected, in each infection there was reason to believe this was their first infection, the victims neither felt any immediate irritation nor developed rapidly any easily recognisable symptoms of scabies; periods of several weeks or even months have usually gone by before the typical symptoms of clinical scabies have appeared. During at least the latter part of this period these volunteers could be described as "carriers" and were probably dangerously infective. Later on the volunteers became sensitised and fully aware of the *Sarcoptes* in their epidermis. Under normal conditions, until this occurs the patient is unlikely to seek medical attention. On the other hand, if such a man is treated and reinfected he is already sensitive to the presence of the parasite and rapidly develops itching and other symptoms. I would suggest that people suffering from scabies for the first time are much more likely to be dangerous as "carriers" than those who have had the disease before and become sensitised, because not only may the sensitised individual develop symptoms which will cause him to seek medical attention, but also the extent to which he scratches produces conditions unfavourable to the parasite and reduces its numbers.

These three reasons suggested above should probably suffice to account for the periodicity in the disease without calling into question any marked change in social habits, though conditions encouraging greater intimacy and promiscuity would no doubt assist the development of a scabies epidemic.

The Clean and the Dirty

It is difficult to suggest how scabies may be prevented from spreading and how the disease may be controlled. In the past the view has commonly been held that the principal reason for contracting scabies is insufficient cleanliness on the part of the victim. I think there is very little evidence to show that this idea is valid. It is true that the majority of persons suffering from scabies are dirty individuals, many of whom are of no great intelligence, but at the same time one frequently sees patients of irreproachable cleanliness who have nevertheless become infected. I think it is probably the case that the dirty and feeble-minded patients come from overcrowded conditions where personal contacts are more numerous and therefore scabies infection is more likely, but it would appear that once a parasite is introduced into the epidermis its development will proceed irrespective of the cleanliness of the outer surface.

Volunteers who were infected with scabies, and in whose cases the actual sites of the parasites were known, were given daily baths, and at the end of periods up to a fortnight it was found that the female parasites in their burrows had not been dislodged and that new burrows had also appeared. It is possible that frequent washings may sometimes prevent a parasite from establishing itself, as it takes the mite about an hour to submerge itself in the cuticle, but if infection takes place during contact in bed the chances of removing the burrowing creature by washing would not be very great. The immature mites appear to occur more superficially, and it is probable that frequent washing will destroy a proportion, though it is also possible that in a very dirty skin, particularly if the dirt is of a greasy nature, the conditions will be equally unfavourable to the larvae and nymphs. But even in the most favourable cases only a very small proportion of the immature stages ever reach maturity, so that if there is an additional loss due to washing its results may well be negligible. Experiments with volunteers who washed, or did not do so, during the course of the development of an infection support the view that bodily cleanliness has little effect on the parasite population. Scrubbing alone, provided it is sufficiently thorough, will sometimes dislodge the parasite (Dixon, 1941), but something much more severe than the processes necessary for ordinary cleanliness is required. Scabies is contracted by picking up a *Sarcoptes*, probably a fertilised adult female, and conditions which make such infection likely may be independent of measures of hygiene.

Most cases of scabies are diagnosed not because of their *Sarcoptes* but because of the amount of secondary infection which exists. Cleanliness would appear to be deterrent in the production of impetigo, and it therefore probably discourages the development of secondary infection in scabies and thus prevents the condition being diagnosed. It should be noted, however, that these clean individuals without secondary infection are dangerous "carriers" and more likely to spread scabies than the more seriously secondarily infected cases, although the latter provide the more serious problem from the point of view of treatment. Thus, in some ways it is possible that scabies may be transmitted more easily in a cleanly than in a dirty community.

Control

The only way in which scabies can be controlled is by ensuring that it is diagnosed as early as possible and that every case is rapidly and successfully treated. It is probably always advisable to treat every member of the household even if many of the individuals show no symptoms, for, as I have stated above, these may take several weeks to develop. In the case of animal scabies the disease has been exterminated in many countries by "dipping" of sheep at regular intervals. We have yet no practicable method by which the whole human population of a country could be rapidly treated, but something on these lines might in the end be the simplest method of dealing with the problem. At present the most important step in the right direction would be one that ensured that medical officers, school nurses, and others concerned with problems of public health were able to recognise the condition, particularly in its early stages.

The expenses of these investigations was paid by the Ministry of Health.

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*This and the paper by Dr. N. D. Begg were read at a combined meeting of the Home Counties and Metropolitan Branches and the Fever Group of the Society, in January, 1942.

TREATMENT OF SCABIES

By NORMAN D. BEGG, M.D., D.P.H.,
Medical Superintendent, Eastern Hospital, L.C.C.

Any direct observations that I may have to offer are based on the general, almost fortuitous, experience of scabies amongst infectious patients, which, incidentally, is much greater than we would wish, and on the fact that the in-patient treatment of scabies as scabies has to a certain extent been centralised at the Eastern Hospital during the last six months. Scabies is, however, no new problem in fever hospitals. Almost four years ago I learned from the hospital figures the unpalatable truth that minor skin sepsis, including scabies, was one of the biggest single causes of prolonged hospitalisation of measles cases, carrying with it all attendant risks to the patient and the addition of yet another potential reservoir of streptococcal infection in the ward. Skin diseases are, to say the least of it, not attractive to the average nurse or, for that matter, to the average medical officer. Life is not threatened and treatment occasionally tends to be either purely perfunctory or applied with such misguided zeal as to make the original condition worse. In these conditions impetigo and scabies particularly can acquire something of the characteristics of an incurable disease. This is an exaggerated experience, which you probably do not share, but I mention it because I have witnessed such a transformation in results recently as to convince me absolutely in the belief that the most important attribute to success in the treatment of minor skin diseases is an alert and knowledgeable staff prepared to pay meticulous attention to detail at all stages of treatment—and to this scabies is certainly no exception. Such improvement has not been achieved without trouble. After focusing attention by lectures, demonstrations, and detailed written advice on treatment, the general supervision of all skin cases was put in the hands of an

experienced medical officer, and I would like to pay tribute to much painstaking work by Dr. Alex Steigman, of the American Harvard Unit, in the early stages of the present investigation.

Transmission of Scabies

Recently, all disinfection of bedding and clothing at the Eastern Hospital has been abandoned. On the contrary, staff are encouraged to keep patients in their presumed infected surroundings for as long as possible during and after treatment, and apparently there has been no increase in the relapse rate. This, of course, proves little, because with efficient treatment the relapse rate is normally so low as to require many more observations than I have made so far before any significant difference could be detected. At least there is no evidence that clothing and bedding play any important part in re-infection. The problem is one which should be settled, on the grounds of economy if nothing else.

There is no doubt that the acarus can find its way on to objects in intimate contact with active scabies patients. Dr. Steigman has demonstrated them alive on hairy toys such as teddy bears recently fondled by a scabies patient, but everything points to the viability of the acarus away from the patient as being very poor.

Incubation Period of Scabies

Authoritative opinion has tended to be vague on the incubation period, but generally it has been assumed to be short, somewhere in the region of 14 days. During the last six months a careful scrutiny for evidence of scabies has been made of all cases on admission, and seven have been observed to develop the first signs of the disease at long intervals up to 35 days after admission, although these had not been in even remote contact with scabies since admission. This is in agreement with the long incubation periods observed by Dr. Mellanby, and carries the unpleasant implication that the interval between apparent clinical cure and relapse may also be long, certainly much longer than the period over which scabies patients are normally observed. This is, in fact, the case. We have noted, for example, in long staying cases like diphtheria, that scabies may lie dormant for three weeks or longer before showing signs of renewed activity. Nevertheless, I am not persuaded that this dormant phase cannot be detected clinically and treated.

Some Diagnostic Points

The complete diagnosis of scabies depends on the recovery of the acarus. Certainly the attempt should be made and percentage success undoubtedly mounts with experience, although repeated search may often be necessary. Secondary coccal infection adds greatly to the difficulties, and it is often advisable to defer search for the acarus until this has been cleared up. I realise, too, the difficulties of needling and microscope work when large numbers of cases are involved, but, in failing to do so, I think we must recognise that a proportion of cases will be wrongly diagnosed and hence wrongly treated. That this proportion is considerable is evidenced by the fact that of 183 cases certified to be suffering from scabies on purely clinical grounds there was a diagnostic error of 21 per cent. The commonest mistake is, of course, to regard treatment dermatitis as active scabies, but almost any pruritic condition can simulate scabies, particularly in the aged. No other laboratory test was found to be helpful in diagnosis. Eosinophilia was present in about half the cases investigated, but eosinophilia is common to a number of skin diseases and the acarus appears not to evoke a significantly high response.

Treatment

Any discussion on treatment must include the important subject of pyodermia. It has been suggested that secondary infection may be ignored until after the acarus has been dealt with. I think this is a mistake, particularly in children. All acaricides are irritants, and to apply them direct to a secondarily infected skin much increases the risk of treatment dermatitis. A useful method of clearing up secondary infection before the treatment of scabies is with a simple ointment containing 5 per cent. sulphathiazole in vaseline. The details of this treatment were described recently in the *British Medical Journal* (1942, **1**, 12) by Dr. Steigman in connection with the management of impetigo. There is no doubt, too, that this preliminary treatment and softening of the skin much facilitates subsequent application and penetration of an acaricide. In uncomplicated scabies, also, the question of penetration is very important. In spite of claims to the contrary, I think there is no acaricide which is reliably effective without preliminary opening up or at least softening of the burrows, although occasional success may be met in the thin, finely textured skin of children. It does seem to me, however, that some of the published advice on preparation of the skin is much too drastic, leading to trauma and hence to increased liability to treatment dermatitis. After a trial of various methods and some unhappy experience, I think the important phase of preliminary treatment can be met by liberal inunction with soft soap followed by five minutes precisely in a hot bath, during which time the skin, particularly afflicted areas, is rubbed firmly with a flannel. If a scrubbing brush is necessary at all it would be on the hands and feet of adults, certainly not on the delicate skin of children.

It has been suggested that this preliminary treatment and opening up of the burrow might suffice alone to effect cure. I have tried this recently on eight children with comparatively mild scabies. As long as daily treatment was being given activity of the acarus appeared to cease, or at least greatly diminished, but when treatment was discontinued all except one case relapsed. Application of an acaricide therefore appears necessary, although efficient preparation is none the less an essential part of treatment. Given this, a growing number of substances are capable of killing the acarus more or less rapidly. Unfortunately all are irritants, and it would seem of first importance to decide which and in what form combine high acaricidal properties with the least liability to provoke unpleasant reactions. Other considerations—such as ease of application, etc.—are also important.

Results of Treatment

So far during the present investigation over 200 cases of scabies have been treated as in-patients. I propose to confine my remarks to the completed records of 157 of these, in which the important phase of preliminary bathing and opening up of burrows had been standardised on the lines indicated. A variety of acaricides were used, but the discussion of these we can leave for the moment. The standard of cure adopted was a skin free from burrows and follicular papular eruption and without evidence of treatment dermatitis. I would like to emphasise the importance of the follicular papular eruption. From prolonged observation of diphtheria cases with scabies, I believe that those which relapse after an interval are just those in which an unobtrusive papular eruption was regarded as unimportant.

With these standards, and allowing a few days for certainty, I find that the average period of in-patient treatment required for all the 157 cases was just over 20 days, and that 77 per cent. were cured with one course of treatment, 17 per cent. required a second course and 6 per cent. required three or more courses —*i.e.*, 94 per cent. were cured with one or two courses of treatment. I suspect, and in some cases I am certain, that the small proportion requiring multiple courses include examples of inefficient treatment, although I suppose a particularly resistant acarus might be encountered occasionally. The figure of 20 days does not give a complete picture. For example, a case of simple scabies could be discharged in 15 days, whereas secondarily infected cases require 28·5 days on an average; it would be difficult to over-emphasise the importance of treating scabies before gross secondary infection can occur. Age has also an important bearing on the duration of treatment required, the average for all adults and children over 7 years being 16 days, whereas children under 7 years required 25 days. In almost all respects the child with scabies is a much more difficult problem than the adult, but, contrary to what might be expected, this cannot be explained on an increased liability to develop treatment dermatitis. Dermatitis does undoubtedly prolong treatment (on an average I find for about one week, although extremes from a few days to 7 weeks were encountered), but the incidence in children under 7 years and older patients was practically identical, nor could any significant difference be detected between blondes and brunettes, as has also been suggested. Much the most important factor in determining the incidence of dermatitis in my experience is the particular acaricide used, including the form and manner in which it is used.

One factor that does play a great part in the difficulties of treating children is their liability to a troublesome raised vesicular eruption just at the point when they appear to have recovered from scabies. These vesicles, which are symmetrically distributed on the hands, feet, wrists and ankles, mainly, do not contain the acarus (or for that matter any other organism) and cannot be transplanted. They do, however, readily become infected and break down. Individual crops can be controlled fairly well by binding on a dressing soaked in 1 in 4,000 hydrarg. perchlor. or 1% monsol solution, but cropping goes on for a considerable time in most cases. Eleven children who developed this complication required an average period for treatment of 51 days. Adults are rarely affected, and in children the complication is twice as common after combined scabies and impetigo than after scabies alone; but there appears to be no particular association with treatment dermatitis. The aetiology of the vesicular eruption is uncertain. Dr. Steigman considers that it may be a sensitisation response to the acarus comparable to the general epidermophytid reaction found in association with ringworm infection of the toes. Certainly the condition merits further investigation.

Some Acaricides

Finally, I would like to make some comments on the acaricides investigated so far in this experiment:—

Sulphur.—The use and limitations of the common sulphur preparations are well known. Sulphur is an excellent acaricide and a fairly powerful irritant. In ointment form it cannot be said to be anything but a malodorous and messy substance. This latter disadvantage appears to be overcome by the use of sulphur lather tablets, but I have found sulphur in this form a rather feeble acaricide, whereas over 40 per cent. of cases developed dermatitis, although not of the most severe type.

Derris Products.—I have used derris root in soap solution as recommended by Saunders in only a few cases until, in fact, I encountered an example of scrotal dermatitis which proved very intractable to treat. I cannot think any advantages of cheapness or ease of application justify this risk. On the other hand, the incidence of dermatitis with 2 per cent. rotenone lotion was trifling, but I have not cared to risk it in male cases. There is no doubt that rotenone is an efficient acaricide but not more so than others, whereas the risk of scrotal dermatitis is always present; added to which, treatment is too expensive for general use.

Benzyl Benzoate.—Most cases in this group were treated with the lotion containing equal parts of spirit, soft soap, and benzyl benzoate. Its acaricidal properties are high, but dermatitis occurred in 20 per cent. of cases. In addition, the treatment is painful. Children particularly object strenuously to the stinging effect of the spirit. Another disadvantage is that benzyl benzoate tends to settle out of the solution fairly rapidly, so that if the lotion is not mixed constantly during application an undue strength of benzyl benzoate could be applied. An attempt was made to get over this by incorporating the substance in the proportion of 28 per cent. in a vanishing cream base, but the incidence of dermatitis, if anything, was increased. Generally speaking, I think fluid applications are to be preferred to ointments in the treatment of scabies. They are much more pleasant to apply and remove, but I think their main advantage lies in the fact that they maintain contact long enough to kill acari with the minimum risk of prolonged contact and dermatitis. Benzyl benzoate applied as a proprietary preparation in watery solution had a dermatitis incidence of 10 per cent., which is an improvement on other preparations, but similar results can be achieved, and more cheaply, by a simple emulsion of 25 per cent. benzyl benzoate and 3 per cent. lanette wax in water, as used by Dr. Gray at University College Hospital. I think, on the whole, benzyl benzoate gives the most uniformly good results of the preparations available at present, but the perfect acaricide cannot be said to have been produced yet. Possibly, we tend to use all acaricides in too strong a concentration. Certainly an unexampled opportunity exists for investigating this and other even more vital problems of scabies in which the general public health and hospital services working in close co-operation with research units (including research pharmacists) could surely achieve much.

Summary

1. Emphasis is laid on the importance of trained personnel in the management of scabies.
2. Re-infection from clothing and bedding is not shown to be a common cause of relapse.
3. Examples are cited of prolonged incubation periods in scabies and of intervals up to three weeks between apparent clinical cure and relapse.
4. The necessity for preliminary preparation of the skin by hot baths, etc., is discussed. Scrubbing is not recommended.
5. Age, associated skin sepsis, treatment dermatitis, and the vesicular eruption of convalescence in children are shown to be important factors in the period of treatment required.
6. The effectiveness of certain acaricides is discussed—the preparation recommended for general use being a 25% watery emulsion of benzyl benzoate.

CONTROL OF SCABIES*

By T. Lloyd Hughes, M.D., D.P.H., Barrister-at-Law,
Medical Officer of Health, Barnsley

The known increase in the prevalence of scabies during the last few years has been recently officially recognised by the Ministry of Health in its issue of the Memorandum on Scabies (Memo. 229/Med) in January, 1940, and in the more recent Circular 2517 drawing attention to the Scabies Order, 1941, made under Regulation 33*a* of the Defence Regulations, 1939.

In September, 1939, in many cities in Britain, scabies affected nearly 1 per cent. of the population. In 1941 this incidence had risen to between 2 and 4 per cent. There is no evidence to suggest that scabies is any more common among Army personnel than it is among the civilian population. In fact the position appears to be that the majority of the Service cases are derived from the civilian population.

Cause of Increased Incidence

In considering the control of scabies it is obviously important to consider the source of the infection, together with any known factors likely to contribute to the increased incidence. War conditions cannot be entirely to blame, although in the last two years they have obviously played a part. Many references to the increased incidence were made in annual reports in the middle and late 'thirties. This was most marked, or was, at least, more noticed among the school population. A reservoir of infection often exists in the persons and clothing of those who live in an infected household and remain untreated. School medical officers know that children who have been treated and cured may become re-infected by some other member of the family—either a child below school age who has eluded the health visitor, or other children above school age who do not come under medical supervision, or the parents.

Dr. Francklyn (1937) is reported as giving the following list of sources of re-infestation following a survey in London on the incidence and spread of scabies among school children: (1) The children of the family not all treated simultaneously; (2) adult members of the family suffering from scabies; (3) bedding not disinfected, or not disinfected during treatment; (4) all articles of clothing, woollen toys, etc., not sent for disinfection; (5) chronically dirty families; (6) irregular attendance at the baths.

These circumstances, however, have existed for many years, and the incidence still increases in spite of our improved housing conditions and bathing facilities, our improved school hygiene, and our much vaunted health and cleanliness propaganda. Improved diagnosis and improved facilities for recognising the incidence of the disease may be responsible for bringing some additional cases to light, but still the answer is incomplete. Does the itch mite become more active and increase in virulence like some bacteria, or is the population

* Paper read before a meeting of the Yorkshire Branch of the Society on January 30th, 1942.

becoming more susceptible? Animal contact, again, plays only a small part. Prof. P. A. Buxton states that, although the human being is normally infested from another human being, many records yet exist in which the infection was clearly traced from animals. "The disease is an occupational one among those whose pleasure or profession it is to breed dogs, nurse cats, milk cows, groom horses, tame lions, box with kangaroos, or tend llamas."

Infection is normally transmitted through the transfer from one person to another of a fertilised female mite, which moves with comparative rapidity and burrows in the horny layer of the skin, where the eggs are laid. Larvae hatch out from the eggs and in two or three days emerge and move to a hair follicle, where they remain in the horny layer. They emerge from the hair follicle as adult males and immature females wandering over the surface of the skin. The female does not begin to burrow until fertilised, and the period of life cycle permits the emergence of a fully fertilised female mite in ten to fourteen days, but it may be a month before the first fertilised female of the second generation establishes herself. Bearing these facts in mind, it is easy to see that reservoirs of infection occur in untreated and unsuitably treated cases and where treatment, particularly in the early stages of infection, is not sufficiently thorough. The lack of proper bathing and cleansing facilities is an important contributing factor, because bathing would obviously remove those mites that are wandering on the surface of the skin.

I think it is important to stress this role of the untreated or incompletely treated patient and personal contact therewith in the spread of the disease. Public health departments (and sanitary inspectors especially) have in the past paid excessive attention to fomites and disinfection of the bedding and blankets rather than to the more active and potent reservoirs which we have mentioned. Although Hebra in 1868 stated that he found disinfection of blankets unnecessary, yet MacCormac in 1917 and Munro in 1919 tended to a view that blankets were the biggest source of infection in the Army. This view is still held apparently in the Army, for Lydon stated in 1941 that blankets are the chief means of spread of scabies. Mellanby's recent experiments indicate where we should direct our main activities in exterminating the scabies mite. His conclusions were that under normal conditions blankets can seldom be responsible for the transmission of scabies and that contact with another case is the normal means of transmission. (One interesting point which one might make here with regard to the infection of children is the frequent way which children play with their arms round each others neck.)

From these experiments it can be seen that one of the most important methods of preventing scabies from spreading extensively is in its early diagnosis and treatment.

Finally, does defective nutrition play any part in the increased incidence? It is known that deficiency experimental animals have an increased number of parasites on the surface of the skin.

Methods of Control

While rejoicing in the spirit behind and the powers given in the Scabies Order of 1941, I think it justifiable to remark that as medical officers of health we would have wished the powers had been conferred under the more familiar and permanent Public Health Acts rather than under the Defence Regulations which are concerned with war-time conditions and are (one hopes) temporary. The powers given to the Medical Officer of Health under the new Order are wide and cover other verminous conditions; they are additional to the powers given under Sections 83, 84 and 85 of the Public Health Act, 1936. One hopes much from this new legislation, but is it really new legislation that is required? I was interested to see that at a recent meeting of the Association of Scientific Workers, where a discussion occurred on health in industry, the general feeling was that the mere enforcement of the existing powers under the Factory Acts would produce great improvement in the health of the workers. Similarly, I feel that a vigorous enforcement of the powers in Sections 83, 84 and 85 of the Public Health Act by public health departments would do away with the need for these new powers. It is not new legislation that is required, but the heart and the will to apply existing legislation.

A vigorous policy of compulsion might show some immediate results, but a more lasting effect will be obtained by continuous education and individual propaganda. Applying compulsion to a few refractory cases, however, might serve as a useful example to other persons who will not submit to either examination or treatment. The activities of medical officers of health, school medical officers, health visitors, and sanitary inspectors to secure attendance at cleansing centres are the requisites for a successful attack on scabies in any locality.

Two points in the new Order may be mentioned: first, that the power given to require a person to attend for *examination* is new; secondly, that the new powers are specifically given to the medical officer of health himself, and not to the local authority. While our responsibilities are increased, as our powers are increased, there is no doubt that this new Order, if properly applied, will make for more expeditious compulsion.

I believe that all medical officers of health should become familiar with modern researches in the mode of transmission and the treatment of scabies, so that their activities are directed in the right quarter, and also that they should make themselves aware of the penal sanctions which they can apply if the requirements of the Order are not fulfilled.

It is believed that actually finding the living mite in the burrows is the only accurate method of diagnosis, and it is interesting to observe how trained laymen can do this with comparative ease. This point, in relation to diagnosis, is very important, because even in adults maintaining a fair standard of hygiene infection may persist for months without producing many recognisable lesions. The condition is variously diagnosed as dermatitis, etc., unless the actual burrow is looked for.

If patients refuse to come up for treatment, the medical officer of health will have to make up his mind what line of action he should take. It must be remembered that powers under the new Scabies Order are given under the Defence Regulations and can be applied without the machinery laid down in the Public Health Acts—*i.e.*, obtaining an Order from a Court of Summary Jurisdiction. Under the Defence Regulations the following powers can be exercised: Regulation 89 provides that where by virtue of any of the Defence Regulations a person has any power to enter premises, he may use such force as is reasonably necessary for the purpose of exercising that power. Regulation 88A gives power, on information before a Justice of the Peace for a Search Warrant to be issued to a constable, together with the person authorised to enter and search the premises and detain and seize and, if necessary, destroy certain articles. Regulation 92 provides penalties on summary conviction of three months' imprisonment or a fine not exceeding £100 or both.

Some Points in Administration

Approach to the local general practitioners is obviously important, for with the school nurses and the school medical officers they form one of the main sources of information.

I have found that many practitioners appreciate information as to these new powers and, in the main, are prepared to co-operate. Many have expressed the opinion that notification of scabies should be compulsory. In an extended campaign I think this would be of value, and, in fact, under Section (2) Sub-section (1) of the Scabies Order, 1941, it is within the power of the medical officer of health to make scabies voluntarily notifiable in his area ("upon information given by a registered medical practitioner, or otherwise"), but mere notification will not cure scabies. It is much more important that the cases should be treated early and adequately, and stress should be placed upon early and accurate diagnosis. I would plead again that all medical practitioners should have experience in the diagnosis of scabies, as there is a tendency on the part of some to diagnose all skin spots as scabies, and on the part of others to diagnose scabies as skin spots. One has even seen cases of scabies diagnosed as measles and scarlet fever. Of the Army cases diagnosed as scabies, 75 per cent. turn out to be accurately diagnosed, and the majority of the remaining 25 per cent. are cases of body lice. (This may be the reason why the Army authorities stress the importance of blanket disinfection.)

The services of a consultant dermatologist should be available in all areas to advise on the treatment and to observe the results of treatment.

The following-up of contacts of all cases brought to light is another important administrative method of control. In my district the health visitor, who is also the school nurse, is informed of all contacts of scabies in her area, and she attempts to secure the attendance of all such contacts with symptoms and signs of infestation. These can attend for baths at various places—school clinics, public baths, or first-aid posts—and treatment is provided free. This applies to all contacts of whatever age. A list of cases failing to attend is kept, and follow-up visits take place, either by another health visitor or by the medical officer of health or one of his staff; if necessary the assistance of the patient's general practitioner is secured. I think this careful follow-up is essential in any serious attempt to control scabies.

Treatment

Discussion of the various methods of treatment forms no part of this paper, since the choice of treatment will depend upon the facilities available, relative cost, speed of results, and many other factors. It is obvious, however, that bathing facilities should be supplied by the local authority, since the mechanical opening up of the burrows is an important part of the treatment, whatever the application. Indeed, Dixon considers that this would very probably suffice without any parasiticide.

The type and site of the bath will depend upon local circumstances. They may be in school clinics, specially provided centres, first-aid posts, public baths, fever hospitals, etc. Dr. Percival, of the Edinburgh Royal Infirmary, in a recent issue of the *Edinburgh Medical Journal*, makes a special plea for cleansing stations, for he states that home treatment generally fails, except in families where the cosmetic drawbacks of scabies are fully appreciated.

Summary

1. It is important to recognise reservoirs of infection among the personnel of an infected household, and not to be pre-occupied only with fomites.

2. The results of modern researches on the subject should be appreciated.

3. There should be vigorous use, where necessary, of the powers granted to the medical officer of health.

4. Complete schemes should be established, with the assistance of consultant dermatologists, and the use of all available cleansing facilities.

5. Follow-up of contacts should be made by the school nurse, health visitor, sanitary inspector, and, if necessary, by the medical officer of health himself.

6. There should be accurate diagnosis of early cases, and correct lines of treatment.

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The Building Research Board of the Department of Scientific and Industrial Research have appointed a Committee on Plumbing with the following terms of reference. (i) To review existing scientific information and practice in this country and abroad on plumbing (including the underground drainage forming part of normal building works), with particular reference to the supply of cold and hot water in buildings and the removal of soil, rainwater, and waste therefrom. (ii) To make recommendations for practice in post-war building. (iii) To make such recommendations for further research as may suggest themselves in considering (i) and (ii). Dr. Charles F. White, M.O.H. to the City of London, is serving on the Committee.

BOOK REVIEWS

Handbook of Hygiene for Students and Practitioners of Medicine. By JOSEPH W. BIGGER, M.D., SC.D. London: Baillière, Tindall and Cox. Second edition, 1941. Pp. xxi+414, with 18 illustrations, including one plate. Price 12s. 6d. net.

The first edition of this little book was published in 1937, and it has evidently met a need. The author intended it primarily for medical students, and it may be said that it contains sufficient material to introduce the student to the principles of public health and to whet his appetite for more knowledge. It was hoped that the book would also be useful to practitioners of medicine who are not specialists in public health, but the matter is perhaps not sufficiently detailed to be of great service in this direction. In preparing the second edition good work has been done in preventing the book from expanding unduly, and there are only ten pages more than in the previous edition. This has been accomplished mainly by exclusion of the chapter on war gases, which did not appear to find any rightful place in a textbook on public health.

Although most aspects of hygiene are dealt with, emphasis is placed rather on diseases of public health interest than on any other branch of the subject. Indeed, about 180 pages are devoted to these diseases. The text of this section is fairly detailed, but the interest of the student might possibly have been increased if the author had mentioned a few more names of investigators who have been responsible for many of the classical investigations mentioned in the text. In comparing this section with the corresponding pages in the first edition, it may be said that the main changes are the inclusion of references to the use of the sulphonamides in the treatment of infectious diseases and their complications. There is an excellent photograph of the result of a sneeze, but the photograph or its implications are not mentioned in the text of this edition. Diphtheria immunisation is adequately dealt with, but the section on immunisation against pertussis might have been extended with advantage. An excellent section on miniature radiography of the chest has been included. Other new sections are those dealing with disinfection of the air and with infection in hospitals. A feature of this book is the number of brief references to classical outbreaks of infectious disease, and in this edition recent outbreaks—such as the Croydon typhoid epidemic—also receive mention. In a later edition the author might with advantage say more about methods of treating and controlling scabies and the section on lice might also be extended.

To this edition Dr. C. J. McSweeney, the Medical Superintendent of Cork Street Hospital, Dublin, has contributed a chapter on the general practitioner and the public health service. While this chapter gives a good summary of the main contacts between practitioner and official medicine, it is hardly full enough to serve as an actual guide in practice.

The book is excellently produced, and it will no doubt continue to be popular with the class of students for whom it is intended.

MORE ABOUT FIRST AID

First Aid to the Injured and Sick: An Advanced Ambulance Handbook. Edited by NORMAN HAMMER, M.R.C.S. 18th edition. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Ltd. 1941. 336 pp. Illustrated. Price 3s. 6d. net.

First Aid for War Casualties. By NORMAN HAMMER, M.R.C.S. Second edition. London: Dale, Reynolds & Co., Ltd. 1941. 78 pp. Price 1s. 6d. net.

250 A.R.P. Questions Answered. By R. F. REYNOLDS, A.R.P.S., R. D. WORMALD, M.A., L.A.R.P., and J. M. YOUNG, M.A., L.A.R.P. Third edition. London: Jordan & Sons, Ltd. 75 pp. Price 1s. net.

First Aid. A Synopsis of War-time Training. By JOHN FENTON, M.B., B.CH., and L. A. H. SNOWBALL, M.R.C.P., F.R.C.S.ED. London: Dale, Reynolds & Co., Ltd. 30 pp. Price 8d. net post free.

First Aid to the Injured and Sick is an excellent textbook on first-aid and ambulance work. The subject is comprehensively

covered and the book is written in straight-forward language, with valuable illustrations and a good index. If the mass of first-aid workers recently trained in the country absorbed a textbook of this character, there can be little justification for the doubts that are sometimes cast upon the value of this training.

First Aid for War Casualties deals mainly with first aid applied to wartime conditions and requirements, being written from the standpoint of the First-Aid Party and Rescue Party. It is a useful complement to the handbook by the same author and is written in the same practical and commonsense manner. Some of the writers of Ministry of Health circulars might profit by a study of his style.

For those who like the question-and-answer method, 250 *A.R.P. Questions Answered* will help them to learn like any other good parrot. *Synopsis of War-time Training* reads like a series of telegrams. It has the advantage of the telegram in that the book is short and therefore takes up little room and can be quickly read. The matter in it is, however, sketchily treated.

Medical Man Power

The Minister of Health (Circular 2624) and the Board of Education (Circular 1586) state that, as the pressing need for doctors in the medical branches of the Navy, Army and Air Force makes it necessary to secure the release from civilian duties of an increasing number of doctors, they consider that some further contribution towards this number must be made out of doctors employed on public health duties, other than whole-time staffs of hospitals, who were referred to in the Ministry of Health Circular 2553 dated January 16th last. In considering the contribution to be made, the local authority should have regard to the relative urgency of, and pressure upon, the individual services in the area. Among forms of relief to be considered are: (i) The making of co-operative arrangements between authorities. (ii) Unless arrangements can be made for the discharge of this service by a woman doctor, the partial replacement of medical sessions at infant welfare clinics by non-medical sessions at which health visitors can take a greater part of the total work. (iii) The concentration of the time of medical officers on medical work, to the exclusion of administrative and clerical duties that can be delegated to lay staff. (iv) The substitution for the services of full-time members of the authority's medical staff of the part-time services of general practitioners not liable for military service. (v) The employment of Dominion or alien doctors in the authority's service on the lines indicated in circulars already issued with reference to hospitals in the Emergency Scheme.

The Board of Education Circular 1559 (July 16th, 1941) indicated ways in which certain economies in medical man-power engaged in the School Medical Service could be effected. These were briefly—the pooling of staffs of adjacent areas, the omission of certain age groups from routine medical inspection, and the delegation of certain duties now undertaken by School Medical Officers to School Nurses. Until now, most authorities have been able to maintain a more or less complete school medical service, but in view of the present need for doctors in the Forces authorities should now consider further whether they could reduce their medical staff by putting the above suggestions into effect.

With regard to Dominion or alien doctors, it will be recalled that the Medical Register (Temporary Registration) Order, No. 2, 1941, S.R.O. No. 1484, and the earlier Order of January, 1941, S.R.O. 24, provide *inter alia* for the temporary admission to the Medical Register of over-sea practitioners selected for appointment in a hospital or service which is for the time being approved by the Minister of Health for the purposes of the Order. With a view to obviating the need for approval in individual cases, the Minister in Circular 2264 has given a general approval to local authority hospitals, hospitals in the Emergency Scheme, and the first-aid post services of scheme-making authorities. The Minister has now decided to give similar general approval to the public health and school medical services provided by local authorities, including County Councils. Accordingly, in pursuance of his powers under article 2 (*d*) of the Order of September, 1941, he has approved these services until he otherwise directs, for the purposes of the Order.

Authorities should submit proposals based on the foregoing suggestions to the Regional Medical Officers of the Ministry, who have been instructed to review, in conjunction with officers of the Board of Education, the number and distribution of medical staff remaining in the service of the authorities. Doctors of military age whom it is thought possible to release will become available for selection, in common with local practitioners of military age generally, by the appropriate Local Medical War Committee to meet further quotas imposed on them by the Central Medical War Committee.

American Canned Meat

New forms of canned meat from North America have recently made their appearance in this country, and almost without exception they are of high quality. It is not always appreciated, however, that they differ in the method both of manufacture and of packing from the canned meat from South America to which the public is accustomed. The gelatine is not derived from the meat itself, as is the hard gelatine of corned beef, but is added at the time of packing. It is often soft. This softening, we are informed by the Ministry of Health, is not a sign of bacterial infection as is sometimes thought, and naturally does not justify condemnation of the article. Occasionally also, some discoloration is noticed on the surface of the meat under the plate beneath the soldering vent hole. This is a sulphide deposit caused by chemical action between the meat and the raw edge of the tin plate. Although aesthetically objectionable it is harmless and does not justify condemnation of the contents of the tin, although butchers and housewives would naturally remove it for the sake of appearances.

Economy in the Use of Bactericides

The following statement has been issued by the Therapeutic Requirements Committee of the Medical Research Council.

The present position regarding supplies of materials used as bactericides and disinfectants is such that every economy must be effected. In the national interest it is necessary not only to select those materials which are most readily available but also to reduce the total consumption. Large quantities of disinfectants are used in hospital and private practice under conditions in which they are not likely to be effective. Unless efficient mechanical cleansing of utensils which have contained infected material is carried out, subsequent treatment with a disinfectant may be useless. Sterilisation by heat is always preferable to the use of disinfectants and should be employed whenever practicable. Two usual types of disinfectants are the mercurial compounds and the phenolic group. Mercury has to be imported and it is in heavy demand for the manufacture of munitions. We must therefore rely mainly on the indigenous coal-tar disinfectants. Phenol itself, and certain of the constituents of cresol B.P., which is the basis of disinfectants of the lysol type, are urgently wanted for the manufacture of plastics used in aircraft construction. There is, however, no reason to fear any shortage of disinfectants provided the more highly purified substances are not used for purposes for which the cruder materials would suffice, and provided the coal-tar disinfectants are replaced, where possible, for special purposes by disinfectants such as formaldehyde, hypochlorites, and chlorinated lime.

It would be in the national interest if phenol and cresol could disappear as completely as possible from medical practice. For general disinfection the use of cresol with soap solutions, of the lysol type, should be reduced to a minimum and replaced by the cruder disinfectants of the "black" fluid or "white" fluid type, or, for certain purposes, by chlorinated lime. The same is true of the chlorinated phenols, for, though they are highly efficient for special purposes, such as disinfection of the skin, it is wasteful to use them where the cruder disinfectants can be employed. M.R.C. War Memorandum No. 6—Prevention of Hospital Infection of Wounds—Appendix C—contains details regarding the use of disinfectants of the phenolic type for various purposes, and the recommendations which follow are partly based on the information there given.

Recommendations

In general, bactericides should not be used when disinfection by heat is possible. Heat treatment is more efficient and reliable. Infected matter should be removed, with all due precautions, by scrubbing and scouring, where practicable.

Storage of Instruments and Suture Needles.—These may be kept in Liquor Boracis et Formaldehydi N.W.F. and rinsed with sterile water before use. This method should not be used for hypodermic needles.

Rubber Tubing.—This should be sterilised by boiling at the time of using. If it is thought necessary to keep sterile tubing ready, it can be autoclaved and kept in a sterile towel.

Rubber Sheeting.—Scrubbing with soap and water is all that is necessary unless the sheeting is known to be contaminated in an exceptional way. Heavily contaminated sheeting should be scrubbed and then boiled or autoclaved; if this is impossible it should be scrubbed and sponged over with rag soaked in Lysol (½ fl. oz. to 1 pint of water) and then rinsed thoroughly with tap water.

Linen.—This should be boiled if possible, otherwise it should be soaked overnight in a dilution of a "white" fluid disinfectant having a Chick-Martin coefficient not lower than 3·0 (1 fl. oz. to 1 pail of water is usually strong enough with a good "white" fluid).

Baths.—Lysol, undiluted, should be rubbed thoroughly over the surface, using a mop or rag in a gloved hand, for at least one minute. The bath should then be washed well with tap water.

Other Surgical Utensils: arm-baths, bowls, dishes, etc.—These should be boiled whenever possible, otherwise they should be disinfected as for baths, and washed finally with sterile water.

Bed-Pans.—If sterilisation by heat is impracticable, thorough mechanical cleansing by flushing and scouring, followed by the use of a "white" or "black" fluid disinfectant is recommended.

Excreta.—When direct disinfection of excreta is necessary a "black" or "white fluid," having a Chick-Martin coefficient not lower than 3·0, should be used in accordance with the instructions issued by the manufacturer (1 fl. oz. to 2 quarts of water is usually advisable).

Sinks, Drains.—Thorough flushing is most important. Chlorinated lime is a cheap and efficient disinfectant. Washing soda, 1 oz. to 1 quart of hot water may be used for cleansing glazed earthenware. A "black" fluid, 1 fl. oz. to 1 pail of water, may be used as a deodorant.

Floors.—As a deodorant a "black" fluid ½ fl. oz. to 1 pail of soapy water may be used. For local pollution a "white" fluid or a "black" fluid, 4 fl. oz. to 1 pint, should be used.

Phenol Antiseptics

"Black" fluids and "white" fluids are emulsions of phenolic substances. For most purposes "black" and "white" fluids, if of the same efficiency as judged by the Chick-Martin coefficient, are equally suitable. The tendency of "black" fluids to cause staining, however, may be a disadvantage in some cases.

Black Fluids.—The British Disinfectant Manufacturers' Association state that the following British proprietary disinfectants are of the "black" fluid type: Antifect; Bactocene; Coetas; Disolite; Exenol Superior; Hycol; Hygenol Fluid Disinfectant; Ialine Special; Jeyes Fluid; Kilcrobe 10/12 Black; Killgerm 10/12 Black; Lawes; Metro; Monsanto Black Disinfectant No. 4; Sanitas-Bactox; Septol; Special Creitas; Cooper's Standard Fluid; Vitalin No. 99.

White Fluids.—The British Disinfectant Manufacturers' Association state that the following British proprietary disinfectants are of the "white" fluid type: Baxol K; Betazone No. 1; Exenol D.A. White; Ialine No. 8; Izal; Jeyes White Cyllin; Killcrobe 18/20 White; Killgerm 18/20 White; Lawes L.W.4; Monsanto White Disinfectant Fluid No. 1; Sanitasokol; Sa-hycol; Star White; Sterilite; Superlin White; White Bactocene; White Kerol; White Septol; Wrights Vetersol; Voxsan M.A.F. Disinfectant Fluid.

Recent Appointments in the Public Health Service

The following are some recent appointments in the health departments of various local authorities.

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

CHESTER C.B.: Temp. Deputy M.O.H., Dr. Jessie M. R. Tytler. Salary £600 p.a. plus £50 p.a. car allowance.

EAST RETFORD M.B.: M.O.H. & S.M.O.; EAST RETFORD & WORKSOP R.D.s: Dr. W. Campbell Davidson (A.M.O.H., Isle of Ely C.C.).

EVESHAM M.B. & EVESHAM & PERSHORE R.D.s: M.O.H., Dr. J. J. Murray (M.O.H. Darlaston U.D.). Salary £800 plus travelling allowance £140 p.a.

HOLLAND (LINCS) C.C.: A.M.O.H., Dr. Patrick Coffey.

LANCASHIRE C.C.: A.M.O.H., Dr. Hedley Boardman.

LEEDS C.B.: A.M.O. M. & C.W., Dr. Roberta M. C. MacLean.

SPALDING & EAST ELLOE R.D.s: M.O.H.; HOLLAND (LINCS) C.C.: A.M.O.H.: Dr. Iris M. Cullum (A.M.O.H., Ipswich C.B.).

STOKE-ON-TRENT C.B.: Temp. A.S.M.O., Dr. Rosemary Richards. Salary £500 rising to £700 p.a.

WALTHAMSTOW M.B.: Temp. Deputy M.O.H. & Deputy S.M.O., Dr. W. H. Brodie (Supt. M.O., Penang). Salary £750 rising to £800 p.a.

*The War-Time Nutrition Bulletin** for March-April, 1942, states that milk consumption in this country has risen from 754 million gallons in 1938 to 945 million in 1941. The real rise may be less than is suggested, as liquid milk is to some extent merely replacing tinned. Milk production during the winter has been about 3% below the pre-war level, which is an improvement on the position in the winter of 1940-41. The distribution of milk has lately been more equitable.

The following figures of bread and meat consumption in different European countries, published in the *Bulletin*, may be of interest. The ordinary consumer in Germany gets 5 lb. a week of bread, though heavy workers receive more than 10 lb. The average Pole receives just over 3 lb. and the average Greek just under 3 lb. Consumption in Italy and Spain is about 50 oz. and 20 oz. per week respectively, but there are probably supplements of flour, rice and other cereals. In Britain the consumption can be taken as between 5 and 6 lb. per head per week. Germans, drawing on the reserves of the occupied countries, eat 14·1 oz. of meat per head per week—a reduction from 17·6 oz. in the summer of 1941 and comparing with 8·8 oz. in 1916. Holland has an average meat ration of 2·5 oz. a week, Belgium 8·6 oz., France a nominal ration of 8·8 oz., and Finland 2·5 oz. In Poland there is no regular meat available. The figures are approximate and should be accepted with caution.

Some readers may like to know that the *Bulletin of War Medicine*, which is issued by the Medical Research Council, contains a public health section. In the March issue there are abstracts of seven items under the heading of "Public Health Administration and Casualty Organisation," including an abstract of the article by M. A. C. Atkinson on welfare in public shelters, which appeared in PUBLIC HEALTH for October.

The Ministry of Food has arranged for the distribution under the Milk in Schools Scheme of full cream dried milk to schools in remote areas where liquid milk cannot be obtained, or where a supply would involve uneconomic transport. The full cream dried milk powder will be supplied at 11s. per 14 lb. tin, and this will enable the school to sell the reconstituted milk at the Milk in Schools Scheme rate of ½d. per one-third pint.

* Published by Children's Nutrition Council, 6, East Common, Harpenden, Herts.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the branch was held at Newcastle-upon-Tyne on February 14th, 1942. The President and 17 members were present. The minutes of the meeting held on December 13th, 1941, were read, confirmed, and signed.

Dr. Raine, opening the discussion on the second section of Dr. Buchan's memorandum—namely, "Hospital Planning"—suggested that there should be three grades of committees to govern the hospital services of the country: a central committee, regional committees, and a hospital committee for each individual hospital. He did not think that a State medical service should be worked under the local authority system, and suggested that the domiciliary as well as the hospital services could be integrated into one scheme under the three grades of committee he advocated. Dr. J. A. Charles drew attention to the fact that from 1930 onwards a series of *ad hoc* bodies had been created and were setting out to do the work which local authorities—separately or jointly—were competent to undertake. Dr. Charles, himself, favoured a form of regional government, and discussed the position of the hospital in that scheme. Hospitals would come within the regional governance, and the regional health committee would consist of medical men, nurses, and laymen. He felt certain that under such guidance and direction the hospitals would reap the advantage of intelligent co-ordination.

YORKSHIRE BRANCH

President: Dr. J. F. Galloway (M.O.H., Dewsbury C.B.).
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

An ordinary meeting of the Branch was held in Leeds on January 30th at 2.45 p.m. The President was in the chair and was supported by 25 members and one guest. The minutes of the last meeting were read, approved and signed.

Upon the recommendation of the Council, the Branch instructed the Secretary to write to the Secretary of the Society of Medical Officers of Health, asking that the Council of the Society should consider the advisability of taking action with a view to obtaining for all medical officers of health at least that degree of security of tenure of office which is ensured by the condition which is attached to the present appointments of certain medical officers of health—namely, that they cannot be dismissed without the consent of the Ministry of Health.

The President then called upon Dr. T. Lloyd Hughes, Medical Officer of Health for the County Borough of Barnsley, to read his paper on the control of scabies (published in this issue of PUBLIC HEALTH). In the discussion which followed, Dr. Irvine thought movements of the population were important. In his own area all juvenile labour transferred from other areas through the Labour Exchange was examined, and very many cases were found. He believed the common towel was an important factor. Dr. Hill considered that scabies was frequently wrongly labelled, with the result that children were unnecessarily excluded from school. This difficulty should make one very chary of taking legal action. He was convinced that in his rural district incoming evacuees were responsible for the increased incidence. Treatment was difficult in rural areas because of the absence of treatment centres. He thought all bedding should be disinfected at the conclusion of treatment. Dr. Elder thought scabies should be regarded more as a public health than a dermatological problem, and medical officers should be as capable of recognising the eruption of scabies as those of measles or scarlet fever. Dr. Lomax said that in Doncaster sanitary inspectors visited the homes of all cases, and then close contacts were required to attend for examination. They disinfected clothing only in those cases where there had been a recurrence. Col. Bates said that in his experience the old sulphur treatment was successful in 99% of cases in three days if it were properly supervised and skilfully carried out. Dr. Wood-Wilson considered lack of cleanliness to be the decisive factor in the spread of the disease. The classical site in the webs of the fingers was not common now because of the habit of hand washing. His own recommendations were a daily bath, a nightly change of clothing, and weekly laundering. He did not think inadequate nutrition could be a factor, because the army was well fed and yet scabies was common. Dr. Macdonald said that in Rotherham infected families were taken into an old smallpox hospital and treated until clear, wage earners being allowed to go out each day. He asked if they were to exclude from school affected children whose hands and necks were free from eruption. If so, some teachers would be out of work.

Dr. Gibson thought first-aid posts were an excellent place for the treatment of scabies, and the personnel liked doing it. Children

attended in the same clothes for three days, getting a bath and sulphur ointment inunction, and on the fourth day they brought a change of clothing, which they put on after a bath. On the fourth morning, also, the bedding was disinfested.

In reply, Dr. Hughes said that he had found the discussion helpful. Dr. Mellanby had suggested that the hands might be anointed, say, once weekly with, for example, a B.B.C. inunction. In treatment, merely dabbing the affected parts with sulphur ointment was useless. The whole skin must be thoroughly treated. In diagnosis, the services of a dermatological consultant were very important. He thought underclothing should be disinfested.

DENTAL OFFICERS' GROUP

President: Capt. A. Quentin Davies, L.D.S., Army Dental Corps. (Asst. Dental Officer, Glamorgan C.C.).

Hon. Secretary: A. Gordon Taylor, L.D.S. (Dental Officer, L.C.C. Hospitals and Institutions).

A meeting of the Dental Officers' Group was held at Wakefield on September 27th, 1941, at 2.30 p.m. In the absence of the President, Mr. G. S. Cubitt, L.D.S., took the chair. There were also present 25 members and visitors.

Miss Rachel Sclare, L.D.S. (Dental Officer, Yorks West Riding), in the course of an address on the dental profession and post-war reconstruction, said she thought that post-war society would demand a high quality of dental service for the whole population throughout life, rather than as at present, when treatment was available only in a series of inco-ordinated periods with serious breaks in continuity, under separate schemes administered by different bodies. Miss Sclare considered that the economic factor, already an obstacle in the way of proper treatment, would be an even greater deterrent after the war. She thought that a State dental service was inevitable and essential, and that the most satisfactory method of ensuring such a service was the establishment of a system of clinics, staffed by whole- or part-time salaried officers, such clinics to be run in conjunction with other health service centres. Dental manpower was barely sufficient for present demands and would be still less so for the demands of post-war society. The impoverishment of the individual which Miss Sclare foresaw as a result of the war would enable few parents to afford the long and expensive training for their children which the dental curriculum necessitates. She therefore called for more State bursaries and scholarships, so that any student with the ability and desire to enter the profession would not be debarred from doing so by lack of means. Miss Sclare concluded with a plea for autonomy for the dental profession and unity within its ranks.

Mr. A. Gordon Taylor, speaking on the same subject, did not consider that anything like a majority of the profession would be directly employed by the State. A post-war extension of the existing services was a *sine qua non*, but even so only a small proportion of the population would be provided for; the greatest number of the insured population would still have to be served by the private practitioner. Mr. Taylor thought some inflation after the war was inevitable, and that as a result of this, and also because of the increasing popularity of dentistry and the shortage of practitioners, fees would be forced up. This situation would invite Government intervention, and the most important step would be the enrolment of more dental students and the provision of State subsidies, scholarships and bursaries. Other reforms would be the making of dental treatment a statutory benefit, and he thought that this should be on a capitation basis. There would also still be with us the problem of the cause of dental disease.

Mr. Pilbeam, Senior Officer, Middlesex C.C., was the third speaker. He thought that almost before new towns had been erected to replace devastated areas there would be a State medical and dental service, which would continue to be largely under the control of local authorities. The school dental services and maternity and child welfare dental schemes would be expanded, and a scheme for the treatment of adolescents developed. The insured population and their dependants would be catered for by the institution of primary and secondary health centres. The primary centres would be a non-hospital service, and treatment would be carried out by private practitioners appointed as whole- or part-time salaried officers. At the secondary centres would be facilities for pathological, histological, and X-ray investigations. They would provide a hospital service with dental specialists. The effect of such schemes on private practice might perhaps be seen in Bermondsey, Battersea and Shoreditch, which already had municipal dental centres where all local inhabitants might attend if they so wished. Here private practice certainly survived and, the speaker believed, even flourished.

Mr. John V. Bingay, L.D.S. (Senior Dental Surgeon, Twickenham M.B.) was awarded the M.B.E. on October 10th, 1941, for the valuable assistance and advice given by him to the Bomb Disposal Squads and for the part he took in rescue work whilst acting as Chief Incident Officer to the Civil Defence Services of the Borough of Twickenham.

The Board of Education (Administrative Memorandum No. 367) have decided to set up a new Division to take over administrative responsibility for the work hitherto dealt with by their Elementary and Medical Branches in connection with war-time nurseries and other facilities for the children of women in employment. For convenience this Division will also deal with certain other services affecting children under five, and the following subjects, in so far as they fall within the administration of the Board, will come within its purview: (*a*) War-time nurseries (in collaboration with the Ministry of Health. (*b*) Nursery classes in public elementary schools. (*c*) Recruitment and training of staff for certain war-time nurseries and nursery classes. (*d*) The care of children of women in employment before and after school hours on "play centre" lines. (e) Residential nurseries for evacuated children (in collaboration with the Ministry of Health). (*f*) Nursery Schools recognised under Grant Regulations No. 19. The Division will be in the charge of Mr. C. W. Maudslay, C.B., formerly Principal Assistant Secretary of the Medical Branch of the Board.

As from April 1st, vitamin preparations are to be issued free only to children whose parents' income is within the present limits prescribed under the National Milk Scheme. The charge for vitamin preparations for eligible children who are not entitled to free issues will be: cod-liver oil, 10d. per bottle (6 weeks' supply); blackcurrant syrup, 5d. per bottle (2 weeks' supply); orange juice, 5d. per bottle (2 weeks' supply); black-currant purée, 2½d. per tin (1 week's supply). Supplies of cod-liver oil will be restricted to children who have not attained the age of 5 years, and supplies of fruit juices to children who have not attained the age of 2 years. Liquid or dried milk will be available as at present; entitlement to cheap or free liquid milk will cease at the end of the month in which the child reaches the age limit.

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EDITORIAL

Views on the Health Services

A contribution to the literature on the future of our health services comes from Dame Janet Campbell and Dr. H. M. Vernon, and is published in a pamphlet* issued by the British Association for Labour Legislation. Dame Janet deals with the structure of the component parts of our health organisation and Dr. Vernon confines his attention to preventive measures not directly dependent on medical aid but capable of causing improvement in the average standard of national health. The two parts form a document of social significance.

The present structure of the national health services is considered unsatisfactory both for the people and for the medical profession. The growing complexity of medicine, together with the poverty of many patients, has caused the position of the family doctor to be gradually undermined. The assistance of a radiologist, biochemist, bacteriologist, etc., is to-day often needed. Diagnosis and treatment are in consequence more exact but more expensive. An increasing number of the middle classes are unable to meet these costs, and tend to take advantage of publicly provided services. Panel practice, though an improvement on contract practice, has defects. It is largely concerned with minor diseases and makes no provision for un-insured wives or for children. The essential condition for a reorganised service is thought to be dissociation from the Approved Societies and sickness benefit. The proposal is made that a team of doctors, who will apparently be whole-time State employees provided with a well-equipped clinic, will undertake the ordinary medical practice of a district together with minor specialities not requiring hospital treatment. They should also carry out certain clinic duties at present undertaken by the public health services. The plan is sketchy and seems to indicate limitation of choice of medical attendant.

There are remarks on the growth of the Public Health Service, particular attention being paid to the school medical, maternity and child welfare, and tuberculosis branches.

The provision of hospital accommodation after the war is discussed. "Hospital planning can only be done economically and satisfactorily if there is a single hospital authority in each area (which must be a large one) to decide upon reorganisation and development of the Service, and with power to implement its decisions." This seems to fit closely into the framework outlined recently by the Minister of Health. Stress is laid on the necessity for maintaining the independence of the great teaching hospitals, whilst providing for the support and control of many of the lesser "voluntary" hospitals by the large local authorities. In fact, as in Mr. Ernest Brown's pronouncement on behalf of the Government, a good deal of obscurity remains regarding the relationship of local authorities to regionalisation.

A properly organised profession of nursing is indispensable, and attention is drawn to the unsatisfactory conditions and remuneration. Young women must be convinced that nursing is a profession that will give them not only a human and scientific interest in life, combined with security, but also a professional status carrying a salary commensurate with the importance and responsibility of their work. It is difficult to see why at the present time nurses are paid less than, say, teachers.

Another proposal is for a sort of reorganised Ministry of Health, which would be relieved of all non-medical problems, but would include school medical work (at present dealt with by the Board of Education) and industrial health.

Dame Janet shows some concern about finance, and thinks no schemes will be successful which impose unduly heavy charges on the taxpayers. But this surely is living in the financial past. Only if we can make money the servant of the community will we be able to set about building our new world. Some such idea as this seems to underly Dr. Vernon's contribution, which throws light on the differences that exist in the average state of health of the different social classes. This section should be of particular interest to all public health workers. Dr. Vernon gives evidence to substantiate his thesis. For instance, the mortality of the unskilled worker at the last census, though falling, was still 23% higher than that of the professional class. The phthisis death rate was twice as great and that for bronchitis five times as great. Infants under one year in unskilled workers' homes suffer twice the death rate of infants in the homes of the professional classes, the death rate from bronchitis and pneumonia being seven times as great amongst them. The importance of good food, particularly up to young adult life, is stressed. Poverty is far too common, and though conditions have improved since Charles Booth estimated that 37% of working-class Londoners lived below the "poverty tine," the New Survey of London Life and Labour still puts the fraction at one-eighth. Few amongst those who have the welfare of the mass of our people really at heart will quarrel with Dr. Vernon's conclusion that "as far as can be predicted this can be effected only by a drastic reorganisation of our economic system."

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* National Health Services and Preventive Methods for Improving National Health. By Dame Janet Campbell, M.D., and H. M. Vernon, M.D., with an Introduction by G. H. Graham White, M.P. London: British Association for Labour Legislation. 1941. Pp. 46. Price 9d.

New York Vital Statistics

More than usual interest attaches to the current Annual Report of the Health Commissioner of New York, because now that our two countries are so closely engaged in the same struggle common interests are quickened, and the impact of war upon the public health of our two countries is of the highest importance. Dr. John L. Rice, the Health Commissioner, records "the lowest general death rate New York City has ever known, 9·9 per 1,000 of population. Besides this record low rates were attained in infant mortality (30·8 per 1,000 live births) and in maternal mortality (2·2 per 1,000 births); also in the mortality rates of diphtheria, appendicitis and scarlet fever. The birth rate (15·2 per 1,000 population) is the highest since 1932." Of the acute communicable diseases of childhood measles was by far the most prevalent, with an incidence about double that ever recorded previously, 80,000 cases being reported. By contrast the incidence of scarlet fever was only about one-half that of the previous year. Both diseases were mild in character, and the extensive measles outbreak resulted in only 25 deaths; the case mortality of scarlet fever was in the region of one per 1,000. The incidence of whooping-cough was slightly higher than in the previous year, though again deaths were fewer. Until August, when a sharp rise occurred, poliomyelitis was less prevalent than usual. The disease spread more in September, fell sharply in the next month, and almost disappeared by the end of the year. In the three months of maximum incidence, 360 cases were notified; only 8 of the cases occurring throughout the year proved fatal. The diphtheria fatality rate in New York is representative of that occurring in those areas which have successfully carried out immunisation of the child population. For the years 1910 to 1919 the average annual deaths among 100,000 children under 15 years of age was 83; the corresponding figure for the years 1920 to 1929 was 42. In January, 1929, the Department of Health started its intensive educational campaign to secure the routine immunisation of children. The three years 1930 to 1932, with rates of 11·7, 11·0, and 12·4, were the last in which the rates reached double figures. A bit irregularly the rates declined to reach 0·7 in 1940 and 0·6 in 1941. As Dr. Rice points out, it is perhaps too much to expect a city of 7½ million population to have absolutely no deaths from diphtheria, but of the 30 districts into which New York City is divided for health administrative purposes, five, with populations ranging from 180,000 to 340,000, have had no deaths for the past four years.

Deaths attributable to pneumonia reached the lowest level ever recorded in New York, a rate of 45 per 100,000 population—a figure to be contrasted with one of 116 in 1930 and 88·6 in 1935. The 1941 rate is particularly significant in view of the occurrence of a sharp outbreak of influenza in the first two months of the year. Commissioner Rice attributes much of the reduction in pneumonia mortality to the use of the sulphonamide drugs.

The figures relating to typhoid fever would have been better had they not been adversely affected as a direct result of the war, because refugee ships from some European ports introduced 29 patients, of whom 2 died. In spite of this, though, the total number of cases of typhoid fever occurring during the year was only 193, of which only 13 proved fatal.

Deaths from all forms of tuberculosis in 1941 were slightly in excess of the numbers of those registered in 1940. Most of the recorded increase, however, was due to the non-pulmonary form and was therefore not thought to be attributable to industrial activities. In 1941 the rates were 44·7 per 100,000 population from pulmonary and 4·5 from non-pulmonary tuberculosis. Tuberculosis surveys among apparently healthy persons continued to be undertaken, and since 1933 nearly one-third of a million persons have been X-rayed in this way "Draftees" who had been rejected for service after initial X-ray examination at Army Stations were given thorough investigation, resulting either in a confirmation of the diagnosis or re-certification of the individual for service. About 1% were finally rejected, of whom ¼ were found to have clinically significant tuberculosis and the rest arrested lesions.

The infant mortality rate of 30·8 was a decline from the figure of 34·9 in the previous year. Dr. Rice is not satisfied even with this low rate, as many of the deaths which occurred were due to preventable causes. He also draws attention to the wastage of human life from foetal deaths, of which there were during the year under review some 8,975, many occurring after the completion of 7 months of uterine gestation. For a reduction in the neonatal and foetal deaths Dr. Rice looks to the obstetrician. In the first half of the last decade New York figured in the list of those towns with a high puerperal mortality rate, with a range of from 5·4 to 6·4 per 1,000 live births. Since 1935, when the rate was 5·2, each year has seen a decline until, for 1941, the recorded rate had fallen to the low level of 2·2—probably the result of chemotherapy.

With the progressive ageing of the city's population the diseases associated with later life are assuming ever greater importance. In 1900 only 15·9 per cent. of the population was in the age group of 45 years and over; in 1940 this group accounted for 27·3 per cent., and the proportion is still increasing. This ageing of the population has caused a notable increase in the death rate from diabetes, cancer, and diseases of the heart, arteries and kidneys. The decline in the birth rate has for years been a matter of grave concern. Despite the decrease in the general death rate the natural increase in the population has become ever smaller. In New York the lowest level appeared to have been reached in 1936 with a birth rate of 13·6 per 1,000 population. By 1940 it had increased to 14·4 and in 1941 it was 15·2. The low general death rate of 9·9 resulted therefore in the excess of birth over death rates of 5·3 per 1,000 population.

An Example of Overcrowding

An essential feature of post-war reconstruction must be the provision of suitable houses for families of different sizes, and bearing in mind the progressive decrease in the population and the necessity of offering every inducement to an increase in the size of families, it is obvious that a correct proportion at least of the available housing accommodation should be for fairly large families. It has often been said that an ideal minimum family consists of four children—two boys and two girls—and this figure fits in well enough with the calculated number of 3·43 necessary to maintain the population at its present level. For an increase of population in the future larger families than this would be required, and the inference is that there should be sufficient houses to provide adequate hygienic accommodation without overcrowding for families of six or more persons.

It is often assumed that overcrowding in a large city affects mainly smaller families, and that the really large families generally manage to do very well for themselves. A recent article by Dr. Helen Payling Wright* will upset this idea. The author made use of the census figures for the Metropolitan Boroughs (excluding the City and the Temple) and for the County Boroughs of East Ham and West Ham, and calculated the changes in the degree of overcrowding in the decennial period in families of various sizes. The percentage of persons overcrowded in each borough as a whole was used as a standard with which the degrees of overcrowding in families of different sizes were compared. The author found—not unnaturally, since there are few houses with fewer than two rooms—that in practically all the boroughs families of four persons or under showed less overcrowding than the average for the borough. As the size of family increased the overcrowding position deteriorated, and in families of seven persons and over practically every borough showed that their condition so far as overcrowding was concerned was much worse than the average for that borough. A disquieting feature is that in nearly all the boroughs the state of overcrowding in these large families had deteriorated between 1921 and 1931, and was especially bad in families of eleven and over.

Although substantial improvement has been made since the last war in the provision of cheap houses for the working classes, it is undeniable that the maximum accommodation in many of them is for six persons only. Even the splitting up of large houses into flats does not solve the problem, since each flat is suitable for at most four or five persons. It is probable that the changes in business and social conditions after the war will lead to an increase in this practice.

* *J. Roy. San. Inst.*, 1942, **62**, 23.

REHABILITATION OF THE TUBERCULOUS*

By G. Gregory Kayne, M.D., M.R.C.P., D.P.H.,
Tuberculosis Officer, Middlesex County Council†

The Interdepartmental Committee on the Rehabilitation of Persons Injured by Accident defined rehabilitation as the arrangements for the restoration of the working capacity of persons injured by accidents . . . restoration "to the point when his condition is restored to the pre-accident state and he is able to resume his previous occupation or, in cases where full restoration is not possible, until the fullest possible measure of restoration has been effected." The Committee point out that in the full meaning of the words the definition would cover the whole range of treatment from the time of the occurrence of the accident.

Care and After-Care

The problems of rehabilitation of the tuberculous are the problems of rehabilitation in general. But, in addition, tuberculosis presents problems of its own, because it is a chronic infectious disease for which there is no specific cure; treatment therefore depends largely on mustering the patient's resistance. The modern treatment of pulmonary tuberculosis dates from the end of the last century with the introduction of sanatorium regime—that is, varying degrees of rest, with plenty of nutritious food, in a country institution in which superventilation is practised. To this was added graduated exercise, for which the autoinoculation theory appeared to provide a scientific basis. At that time the criteria of diagnosis were crude, and the patients subjected to sanatorium regime undoubtedly included many who were suffering from non-tuberculous conditions or from quiescent lesions. The regime led to quiescence of localised active lesions, and it improved the general condition of other patients. But it soon became evident that the improvements and even so-called cures were seldom maintained after the patients returned home, and that relapses occurred oftener and sooner the worse the social and economic conditions to which the patient returned.

As sanatorium treatment was the best treatment available at that time, blame for the ultimate bad results of treatment was thrown on the post-sanatorium environment. There followed the conception of "after-care," soon followed by that of "care," when it was realised that unless the patient was looked after immediately the disease was diagnosed he might be unable to avail himself of treatment in sanatorium at all, or at all events to remain there for the period required. But another result also followed, which I believe still to be retarding the full acceptance of new methods of treatment. Sanatoria clamoured for more and earlier cases so as to justify the sanatorium principle. As the number of beds increased, this demand became increasingly difficult to meet, and because radiological examination of the chest was in its infancy, "early tuberculosis" was confused with tuberculosis that will yield to sanatorium regime. Unfortunately this principle is still carried on in many sanatoria. And, presumably because some lip service is paid to bed rest and collapse therapy even by these institutions, we repeatedly hear the importance of after-care emphasised without any reference to treatment, which is assumed to be efficient in all sanatoria. But we cannot begin the study of the problems of after-care and rehabilitation without exact knowledge of what treatment offers.

Arrangements Inadequate

What was the position of care, after-care, and rehabilitation before 1939? Each local authority must provide a tuberculosis scheme which, given some sort of dispensary and institutional beds, conforms to the letter of the law; the extent to which the spirit of the law is applied is left to the conscience, and knowledge or ignorance on tuberculosis matters, of the local authority and its medical officer of health. The Interdepartmental Committee on Tuberculosis stressed the importance of care and after-care, but there is no compulsion on the part of local authorities to provide such arrangements, although they may do so. Care and after-care committees exist, some purely voluntary, others partly connected with public health departments; but their work, with practically no financial backing, is but a drop in the ocean and can do nothing to solve the problem of rehabilitation. Even these arrangements do not exist in connection with half the tuberculosis schemes in this country.

The National Association for the Prevention of Tuberculosis, which stimulated the formation of after-care committees, fails to stress the insignificance of the work that is being done in relation to what needs to be done. The following is a conclusion of the Employment Committee of the Joint Tuberculosis Council in 1935: "The work of care and after-care committees throughout the country is not co-ordinated. In a large number of areas there is no committee functioning at all. There is still evidence of over-lapping in many districts between care committees and public health committees, and no real improvement in the financial provisions for care work has been noticeable during the past five years." Attempts to provide training colonies have proved abortive and, in spite of the enormous and favourable publicity the village settlements of Papworth and Preston Hall have had for so many years, they still remain the only institutions of this kind. The absence of after-care arrangements almost nullifies any results obtained by treatment, and the reasons for this neglect, I think, are two. First, there is confusion as to what and how much is required, because only superficial attention has been paid to the facts on which care and rehabilitation arrangements must be based; these are: the outlook for tuberculous patients in various circumstances, how this outlook may be changed by the application of recent methods of therapy, and for what types of patients and for what proportions of them provision has to be made when treatment is completed. Secondly, under our present system of industrial enterprise and social organisation, a solution to the problem, both satisfactory and comprehensive, may not be possible.

Outlook for the Tuberculous Patient

The reports of the Employment Committee of the Joint Tuberculosis Council on Care and After-Care Schemes in Tuberculosis have exposed the thoroughly inadequate arrangements existing at present. E. Brieger, of the Committee for After-Care and Rehabilitation of the International Union against Tuberculosis, has compiled a report which not only indicates the importance of social and economic factors, but stresses the significance of adequate treatment. Brieger presents a method of statistical analysis on which any practical arrangements should be based now and in the future.

In recent years, during which methods of diagnosis and treatment of tuberculosis and social medicine as a whole have made much progress, the mortality has greatly decreased, but is this result due to lessened incidence or to an improved outlook for the individual tuberculous person? If more tuberculous persons survive, does this mean an increase in the number of permanently disabled or of permanently healed? And does an improvement in the methods and results of treatment lead to a reduction or an expansion of after-care activity?

As compared with pre-sanatorium statistics, no evidence can be produced to show that sanatorium regime by itself has increased the expectation of life. On the other hand there is statistical evidence that the social and home conditions of the tuberculous patient, and his earnings and work after discharge, noticeably influence the expectation of life. But during the last few years another factor has been introduced. In the present state of our knowledge sanatorium regime, generally and unfortunately referred to as sanatorium treatment, retains its place, but only at the stage when treatment proper has been completed or has done the best it can. The treatment proper of pulmonary tuberculosis, termed "combined intensive treatment," is based on three main principles: (1) bed rest until quiescence of the lesions is obtained; (2) collapse therapy as soon as it is indicated, and by this is not meant indiscriminate collapse therapy; and (3) effective

* A lecture delivered on September 4th, 1941, at Harefield Sanatorium during a post-graduate course arranged under the auspices of the Joint Tuberculosis Council.

† The views expressed are those of the author and do not necessarily represent those of the Middlesex County Council.

application of collapse therapy by additional surgical measures at the earliest moment indicated.

Taking into account the evidence available, we can no longer regard those who oppose these principles in full as merely expressing a difference of opinion. We must ask whether laziness for intellectual effort is not sometimes behind the desire for so-called conservative treatment which avoids the decisions and anxieties about when to induce the pneumothorax, at what intervals to have the refills, when to cut adhesions, when to decide on a thoracoplasty. Do we not in fact lean more and more on conservative treatment as we get older, not because we have always learned deep wisdom, but because our mental faculties have become insufficiently elastic to deal with active treatment? Very few institutions as yet apply extensively all the three principles I have indicated. Enough statistical material for analysis is available, and one can state that so far as good immediate results are concerned modern intensive treatment is the most important factor. This is shown by the increasing proportion of patients discharged sputum-negative with increasing application of combined intensive treatment. But we must also determine whether the ultimate results have improved following intensive treatment.

Effect of Modern Methods

Therefore Brieger examined how far the recent changes in diagnosis and treatment of pulmonary tuberculosis have altered the outlook for the patient. The fatality rate in the pre-sanatorium period, in the sanatorium but pre-collapse period, and since 1920, when collapse therapy may be said to have been initiated on a general scale, were all determined. The analysis shows that the increase in survivors after 5 years in the years since 1920 was about 20%. Does this improvement in outlook for the tuberculous patient mean that there is an increase in complete cures, or does it merely mean that the life of still active and therefore infectious cases is prolonged? We must determine the outlook for a patient who is discharged still sputum-positive, and that of the patient with no sputum or sputum-negative. Brieger refers to these cases as ++ cases and + — cases.

TABLE 1

	Sputum + — cases	Sputum + + cases
Alive after 5 years (America)	70%	30%
„ „ 6 „ (Holland)	81%	36%
„ „ 6 „ (Germany)	73%	34%
Expectation of Life		
Midhurst, Frimley	3 years	1 year

The after-history of the + — cases, as based on statistics of certain British, German and Dutch sanatoria, and on collected American statistics (King) shows that they have a good expectation of life. (See Table 1.) But there is a strong tendency for these cases to become sputum-positive again—that is, to relapse. There is little doubt that some of these so-called relapses result from lesions that were not really quiescent when the patients were discharged from the sanatorium (it is in this connection that the new bacteriological methods of culture of the sputum, gastric contents and laryngeal swab examinations are of such help at present); but even in these patients a further spread or reactivation of disease must have occurred. According to most workers one-half of the sputum-negative patients discharged from sanatorium became sputum-positive within 2 to 5 years. But the more intensified the treatment and after-care, the less is the tendency to relapse. Unfortunately only a few institutions give the proportion of + — cases discharged, but if we assume that "quiescent" is the nearest approach to it, we find, for instance, that in England and Wales in 1938, 12% of 25,568 sputum-positive cases (of which 32% were classified as T.B. + 3 on admission) were discharged as "quiescent." In Wales alone, in 1938, not more than 3·8% of 1,746 sputum-positive patients were discharged as "quiescent" (of whom 59% were classified as T.B. + 3 on admission). It is quite evident that the proportion of + — cases is collectively very small though it may be much higher in individual institutions. In 1938, 25% of the T.B. + patients (on admission) were discharged as "quiescent" from Clare Hall Sanatorium, Middlesex, although the material admitted to this institution was very poor indeed: no less than 69% of the T.B. + patients admitted were classified as T.B. + 3. At Cheshire-Joint Sanatorium, in 1938, 54% of the sputum-positive patients admitted were discharged sputum-negative (42% being classified T.B. + 3 on admission), but the term "quiescent" is of course stricter than absence of tubercle bacilli in the sputum.

The outlook for the + + case is, as I have already indicated, bad: 70% die during the first 5 years after discharge from sanatorium. But we must recognise that the bad outlook does not apply to all the patients in the group. Indeed, a small group among them have a very good chance of surviving. Lawrason Brown and Sampson have defined this group as "good chronic cases," and spoken of the others as "bad chronic cases." Table 2 represents a follow-up of these two groups.

TABLE 2
Lawrason Brown and Sampson's Cases

	Alive after 5 Years	At Work after 5 Years	Alive after 10 Years	At Work after 10 Years
Good chronics ...	80%	54%	60%	52%
Bad chronics ...	37%	12%	25%	11%

A good chronic case who has worked for 5 years has the prospect of 5 more years at work, but even a bad chronic case who has been at work for 5 years has the prospect of a further 5 years' work.

Fate of the Discharged Patient

Before we can appreciate the problems of after-care and how these problems may be affected by changes in therapy, we need some precise information as to what happens year by year in these different groups of discharged sanatorium patients as regards survival, fitness for work, and infectiousness. Brieger was able to analyse the material of two sanatoria in these respects. The first study concerns patients discharged from Münchbach between 1920 and 1927, when between 16% and 32% were discharged sputum-negative each year, the condition of patients discharged in these years being known in 1929. The final results in this year were, of course, due to alterations in the proportion of + — cases to + + cases owing to deaths and relapses. (See Table 3.)

TABLE 3 (After Brieger)
Münchbach Sanatorium, 1920-27

	Incapable or only Partially Capable of work	Good Chronics	Stabilised + — cases	Dead
After 2 years ...	36% (all die in subsequent 7 years)	15%	15%	30%
After 9 years ...	10%	10%	10%	58%
	(a percentage of patients were untraced)			

How modern treatment affects the outlook in the above respects is seen from analysis of patients from Bilthoven Sanatorium in Holland. Each year-group was checked year by year, and only 2% of patients remained untraced. The patients can be grouped in three lots: those discharged in 1921-5, those in 1926-9, and those in 1930-2. Since during this time the proportion of patients discharged sputum-negative had greatly increased as a result of combined intensive treatment, it is best to compare the years 1930-2 with those of 1921-5, the proportion of sputum-negative cases being 66% in the latter period and 34% in the earlier.

Let us consider the 1921-5 group first and follow up the + + cases, representing 66% of all patients discharged. Nearly two-thirds of them (representing 40% of all discharged patients) were dead within 4 years; the remaining third, or 21% of all those discharged, were classified as good chronics—after two years only one-fifth were incapacitated or only partially fit for work, but after eight years they were almost all alive, and all those with full working capacity after two years were still capable of full or partial work after eight years. It was found that the outlook for the + + case becomes fairly clearly defined after two years. After eight years we are left with about 12% of the total discharged patients who are "good chronics," the remainder of the + + cases having died except for a small percentage who are entirely or partially incapacitated. (See Table 4.)

TABLE 4 (After Brieger)
Bilthoven Sanatorium

	Incapable or only Partially Capable of Work	Good Chronics	Stabilised + — cases	Dead
Patients Discharged, 1921-5, *when* 34% *Sputum-Negative and* 66% *Sputum-Positive*				
After 2 years ...	35%	15%	20%	26%
After 4 years ...	23%	14%	18%	42%
After 8 years ...	13%	12%	19%	55%
Patients Discharged 1930-2, *when* 66% *Sputum-Negative and* 34% *Sputum-Positive*				
After 2 years ...	34%	6%	38%	16%
After 4 years ...	22%	8%	40%	28%

These results agree with those of Münchbach.

Let us now consider the + — group, which represents 34% of all discharged patients. Two-thirds of the whole group, constituting about 20% of the total discharged, are alive after 8 years, but, of these, some, representing about 5% of total discharged patients, are partially or totally incapacitated, and in fact they became so in the first 2 years after discharge. The relapses, which represent about one-third of the + — cases, take place in the first 2 years after discharge, and the group pronounced stabilised after 2 years remains so.

In the years 1930-2, 33·4% + + and 66·6% + — cases were discharged. At the end of 2 years the good chronic cases formed only 6% of all discharged. After 4 years, 14% of the patients discharged were chronic infectious, 8% good chronics—as compared with 30% and 14% respectively in the 1921-5 group. In the 1930-2 period, after 4 years, the proportion of stabilised cases to relapses in the + — group is 1·6 : 1 as compared with 1 : 1 in the 1921-5 period. The relapses, however, are high: during the first two years they represent 25% of all discharges.

The outlook for the + — group on discharge is "conditional" (Brieger). Of those discharged as fit, nearly half relapse during the first 2 years. But after 2 years a group of stable + — cases was formed and it continues unchanged for the next 2 years. And as a result of combined intensive treatment the number of stabilised cases is doubled. The ultimate, as well as the immediate, results of intensive treatment show a remarkable improvement as compared with results of sanatorium regime alone.

Functions of After-Care

The importance of treatment must be stressed in any consideration of rehabilitation; intensive treatment does not reduce the need for after-care; by reducing the deaths and raising the proportion of + — cases it enlarges the need for temporary after-care for the latter. At the same time it does not appreciably decrease the proportion of those needing permanent after-care, for this group, consisting of all + + cases and relapses from the + — cases, still constitutes after 4 years nearly one-third of all those discharged from institution. But whereas with sanatorium regime as treatment after-care of this class predominated, with intensive treatment it is the temporary after-care of the + — case that does so. In 1921-5, the proportion of + — stabilised to + + stabilised was 1·3 : 1, in 1930-2 it was 5 : 1. Brieger thus concludes that after-care develops a direct connection with therapy, and the need is for arrangements in which treatment and temporary after-care are found in the same institution.

The above results are not an indication of what happens in all sanatoria in this country or abroad. Many factors enter which make strict comparisons impossible. But these considerations detract in no way from the conclusions that can be drawn from the analysis of the case material at Bilthoven. These conclusions are:—

1. With intensive modern treatment some three-quarters of tuberculous patients can be rendered sputum-negative and quiescent.
2. Most of those discharged sputum-positive die off quickly, but an appreciable proportion are able, though bearing active lesions and infectious, to do full work for years.
3. Of those discharged sputum-negative, an important proportion relapse.
4. Stabilisation as regards the permanently arrested and the good chronics is largely determined at the end of two years after discharge.
5. The influence of modern intensive treatment is considerably to increase the proportion of arrested stabilised cases.

After-care has therefore two functions to perform:—

(*a*) In regard to + — cases, to reduce the number of relapses through temporary after-care.

(*b*) In regard to the + + group, to transfer to hospital those very ill; to segregate those less ill in order to prolong life, ensure their livelihood and check transmission of infection; and to rehabilitate the good chronics, that is, those capable of full work but who cannot secure their livelihood without harm to themselves and others.

The more intensive the treatment in sanatorium, the greater the proportion of patients who require temporary after-care as compared with those who require permanent after-care.

(The second half of this paper will appear in our next issue.)

CIVIL DEFENCE IN THE UNITED STATES

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It has been suggested that the Office of Civilian Defence in the United States should work out its own destiny without slavishly following the British pattern. This argument is supported by the statement that American conditions are so different from those which obtain on this side of the Atlantic that inferences drawn from British practice are misleading; but it is based on the premise that the O.C.D. in Washington has in fact copied the English system. This premise is false. Undoubtedly the experience of air raids in this country has been closely studied by administrative and technical officers sent here for that purpose as well as through the agency of visitors from England. The O.C.D. have been constantly aware of the differences in the conditions between the two countries and have modified their practice accordingly. On one early occasion I was asked to write a memorandum for the Washington Office; the Chief Medical Officer returned it to me with substantial corrections: "Your note was readable," he said, "after we had translated it into American." Then I realised that, when a technical officer is privileged to visit the United States and advise on civil defence, his first duty is to learn. His equipment should be a clear and detailed picture of the structure and organisation of the British system, but he must not fall into the error of imagining that his only function is to paint the same picture on a larger canvas. The principles are similar, but the differences in application are wide and deep. The visitor, no matter how highly trained he may be in his own sphere of work, will be able to offer intelligent guidance only when he has made a careful study of the American background and gained a little insight into the political, economic, and social structure of the nation and of its component States. He must travel widely and see things for himself, because no secondhand information can give him any true sense of the outlook of the people in such areas as New England, the South, the Middle West, and the West Coast—so different in tradition, climate, history, and way of life.

Effect of Geography, Race, and Government

Geographical conditions alone play a very big part in civil defence organisation: while the Atlantic Coast looks with

horror at the Nazi plague, the Far West hears only dim echoes of Hitler across the Sierra Nevada but is intensely aware of the Japanese menace; and the great continent that lies between them still hugs its spectre of repose. The stranger who crosses the ocean receives a mild shock when he is told that on reaching New York he is only half way to Seattle. If he has any curiosity, he does his best to digest the fact that New York State is about the same size as England and that Great Britain could be squeezed almost three times into Texas. These facts of geography are of immediate practical importance to defence. When air raid occurs, for example, on an English town, neighbourly assistance can generally be secured at a distance of not more than 50 miles; but what of the position when the nearest helper in time of trouble is 200 miles away, perhaps across a desert or a couple of mountain ranges? Similar considerations apply to the hospital situation: there, as in Britain, the great majority of the first-line hospitals lie in the cities, most of which are in defence areas; and hospital accommodation in the surrounding country is quite inadequate. The nearest institution rendering a full range of medical services may well be a 12-hour train journey from the casualty hospital, if there happens to be a direct line; and in many parts the roads are a pretty heroic method of transport in winter. Distance has therefore two aspects: a general one affecting the outlook, traditions and sentiment of the people who make up the federal union, and a local one related to such urgent problems as mutual aid and the evacuation of casualties to the base. The student has to balance these factors against the changing risks of enemy action in the various areas, and he cannot assume that the United States is in a better position to undertake constructive work than England was at the time of her preparation. Our allies know that offensive works must take precedence.

The U.S. civil defence organisation is faced with some difficulties which loom much larger there than in Britain. The American people is compounded of a large number of nationalities, and an American citizen has just as much right to be proud of a German name as of any other. Even apart from cosmopolitan New York there are city areas in which the predominant language is Italian, and large rural districts, as in Louisiana, in which only French is spoken. Along the West Coast there is a strong admixture of Chinese, and the Japanese also were until recently in considerable force. The overwhelming majority of these folk are good American citizens, but the curse of Babel is a burden to the warden services. In many communities the large element of coloured population raises difficulties of organisation, especially in the South, where formal separation in clinics and hospitals is the rule. And lastly, America is a continent, and inter-State migration still takes place on a big scale. The business of registration in all its branches is therefore beset with the problems peculiar to a partly settled population.

The differences in the structure of government have to be constantly borne in mind: that the United States has three levels of control, the Federal Government, the forty-eight States, and the various units of local government, which are as the sands of the sea in number. Georgia alone has 159 counties and Pennsylvania 67, not counting their cities, many of which are independent units of local government. Moreover, a large number of these communities are what we should call "scheme-making" authorities and have their own civil defence officers. The great cities themselves are often split up into various autonomous authorities, although there is no physical separation; Boston is a good example of this type of polyzoic existence. The variations in development of the local government units range from primitive communities to highly organised counties such as Westchester, near New York, with a population of 600,000. The fundamental difficulty of organisation is to create a framework of civil defence rigid enough to secure a reasonable uniformity and yet capable of modification to suit local conditions. This hard task was made easier by British experience, and in reviewing the American situation I should like to pay a tribute to the pioneers of our own Home Office who, in the days of popular indifference before the war, bravely went about their job of creating a "steel frame" of passive defence into which the A.R.P. schemes have subsequently been fitted. It may be that the original structure was too rigid, but the design of control centres, first-aid posts and anti-gas stations was sound, and the organisation of teaching courses is a model for all time. But for this early planning the United States would have lacked the foundations on which to build. During my tour of U.S.A. I returned again and again to some of the earlier publications of the Home Office and read them with admiration and profit.

Office of Civil Defence

The arrangements of the Office of Civilian Defence in Washington are in many respects similar to our own, but the division of responsibility follows different lines. Following our terms of usage it would be roughly true to say that civil defence as such is under the control of a single department and not parcelled out to separate Ministries. The medical division is closely linked with the public health service and its medical officers are members of its staff and wear its uniform. Like the public health service as a whole, the medical division is a living organism with executive and not merely advisory powers. It "runs its own show"; prepares its own bulletins; instructs its officers in the department and in the field; negotiates agreements with official and voluntary agencies; consults on equal terms with other departments; teaches, makes mistakes, assumes responsibility for its errors, and tries to profit by experience. Under peace-time conditions, however, the public health service does not cover the whole field of what we should call "public health": the Children's Bureau of the Department of Labour is directly concerned with maternity and child welfare, including the care of crippled children; and the Social Security Board is charged with the care of the sick poor and many of the other social activities for which the Federal Government has assumed part responsibility. It is quite logical, therefore, that evacuation arrangements and much of the social work demanded by war conditions should fall to be dealt with by "Social Security." At the local government level, also, the welfare rather than the public health departments have been accustomed to undertake hospital administration in addition to general social work. The medical profession as an organised body takes a more direct interest in public health administration than in this country, and is as a rule well represented on the local health committees. In both States and smaller communities it is often the predominating influence. The leadership of the health officer in civil devence is not therefore regarded as a matter of course and in many areas a prominent practitioner has been appointed as chief of the emergency medical service. On the whole the present tendency, as in Britain, is to place more and more responsibility on the shoulders of the Medical Officer of Health or to secure the appointment of a deputy who devotes his whole time to the medical aspects of civil defence.

The Federal Government does not exercise even such limited direct control as our own central authorities. Much of its work is of course advisory, and the individual States are the executive. The chief object of the O.C.D. is therefore to secure as much uniformity in practice as the wide differences between States will allow. The smaller local authorities, like ours, are jealous of their rights and powers, and the O.C.D. had no easy task in persuading local authorities and even State Councils that war is no respecter of boundaries.

Some Hospital Problems

On the technical side of the emergency services the chief problems have been in relation to hospitals, first-aid posts, and the transport of casualties. It would be quite unreasonable to impose on the United States a detailed full-time service such as has been made necessary in Britain owing to the frequency of raids. On the other hand, it would be dangerous for them to sit back and do nothing, on the assumption that air raids on a heavy scale are unlikely. Readiness is essential, and the main problem is to decide how much preparation should be carried out at the moment and how much can safely be left over until something happens. Take, for example, the protection of hospitals; how far is it necessary to spend sums of money on physical protection such as brickwork or on alternative sources of power and lighting? A great deal of thought was given to this, and it was decided to adopt certain precautions at once and be ready to take further steps without delay, should the occasion arise. The principal immediate measures are: (1) The protection of at least one operating room, obtained if necessary by using a basement as an emergency theatre. (2) Protection of essential services such as telephone room and certain administrative offices. (3) Provision of alternative electric power to operate at least one elevator, and to provide emergency lighting for reception, operating, and shock treatment rooms, essential corridors and administrative offices. X-ray rooms were regarded as of subsidiary importance. (4) Certain engineering works which need not be described in detail.

The great majority of the casualty hospitals lie in "vulnerable" areas. How far is it desirable to create base hospitals for the transfer of casualties? It was agreed at once that plans should be prepared for the construction of temporary buildings to serve as hospitals and the designs have been completed—at considerable variance from the English model, and better. But the principle adopted in England has been followed as far as possible—to make the fullest use of existing buildings which could serve as hospitals and so avoid structural works. Surveys are now being made to determine what buildings can be used and what adaptations will be required in order to bring them up to standard. The Medical Division also relies as far as possible on the system known as "grading-up" by which the Ministry of Health were able to secure a large addition to their base hospital beds. Unfortunately grading-up is not nearly so easy in the States on account of the vast distances between towns, and because there are few ready-made public assistance institutions in the safer areas at a convenient range from the great centres of population. The second of these difficulties arose in Scotland, and the Department of Health showed foresight in undertaking a programme of temporary hospital construction.

The reservation of special units in America offers no great difficulty; there are many fine hospitals in the Middle West, too far away from the coast to serve as base hospitals but admirably fitted and staffed to take long-term cases and to treat cases of special difficulty. One need only mention the great hospital associated with the Mayo Clinic as a case in point. Patients requiring special treatment for such conditions as face and jaw injuries, severe fractures, etc., can be transported long distances without ill-effects, and the air ambulance may prove a useful means of transport for such cases.

The method of payment to hospitals has now been settled on a "customer" basis, without any reservation fee. In addition, if a hospital has been obliged to spend money in order to fit itself to receive war casualties (*e.g.*, by grading-up or minor structural alterations), the Federal Government assumes responsibility for the cost of the alterations. The Medical Division also assists in the provision of medical and nursing staff in so far as additions are made necessary by the demands of the casualty service. The methods of appointment differ considerably from our system: a reserve of physicians and dentists available for active duty in the emergency base hospitals has been created, and these officers are commissioned in the Public Health Service, but not called up for duty until the need arises. The general policy is to rely on the older age-groups and on women, and "to solicit primarily the medical staffs of the leading civilian hospitals so that balanced professional units may be available to staff Emergency Base Hospitals. . . . Physicians and dentists in general practice will also be encouraged to apply for reserve commissions." In addition provision has been made for the appointment of part-time consultants on a sessional basis, and of general practitioners who are called upon for part-time service, as in a reception area. The Regional Medical Officers, whose functions are very similar to ours—except of course that they have much greater freedom of action—are all commissioned in the Public Health Service. Commissions are also available for State Health Officers who take part in the civil defence scheme.

I was in the United States long enough to form the opinion that technical co-operation is more readily sought and more highly valued than in this country. This is not a new phenomenon, nor is it confined to any one service or profession. It is in harmony with the scientific tradition of the American people and is as widespread as their hospitality. The official agencies also tend to give more support to voluntary bodies which undertake technical work; the Red Cross and the many welfare associations are highly developed and powerful and take a larger share in both public health and civil defence. I note these points without critical comment, because conditions are so different in the two countries that comparisons might be misleading. The one positive suggestion that I should like to make is that there should be a more frequent interchange of professional men and women between the two countries, for we have much to learn from each other and much to give. It is of the utmost importance that officers visiting the United States should stay long enough to understand the pattern of their life and work and that they should travel far afield to gain a variety of experience.

DIPHTHERIA IMMUNISATION

THE SOPHISTICATION OF PUBLISHED RESULTS

By GUY BOUSFIELD, M.D., B.S.

From time to time widely divergent results of immunisation campaigns have been published from various sources which should, on the face of it, have been equally reliable. Two or more workers may have used the same dosage of the identical type of antigen on populations which might be expected to be comparable as regards age and basal immunity, yet one report will show 100% of success while another may disclose marked failure to reach the generally accepted standard of immunity to diphtheria. Some of the published reports vary alarmingly, but this is not surprising if one considers all the factors which may lead to such divergence. It may be of interest to examine in detail the causes which can contribute to this phenomenon. The best way to approach the problem seems to be to set down faults in technique or reasoning which lead to excessively successful or unduly pessimistic reports under those two main headings. It will surprise a few people to hear that there are more than twenty such possible sources of error, every one of which is liable to be important.

Factors Favouring Apparently Successful Findings

IN THE PROCESS OF IMMUNISATION

1. The use, on the whole, of a rather larger dose of antigen than that entered on the record card. For example, when the original dose to be administered is 0·1 c.cm. of A.P.T., the amount is so small and difficult to measure accurately in some syringes that the conscientious operator, who is anxious to do satisfactory work, is apt to err on the generous side and to inject something more like 0·15 or 0·2 c.cm. A genuine initial dose of 0·1 c.cm., followed by 0·3 c.cm. one month later, may not produce optimum results. If, however, the first dose is even slightly increased, infinitely better results are obtained (author's recent research, not yet published.

2. The use of a batch of antigen derived straight from the source of manufacture. If a laboratory is asked to supply a large batch of material for investigation by some prominent authority, it is likely that something approaching a *best* sample will be issued. This would not always happen, but when it did it would have an important bearing on results in any experiment in which a small dosage of A.P.T. was being used. The figures obtained might well not represent the average expectation of success.

3. Injection of excess of the precipitate of A.P.T. by drawing the deposit into the syringe without proper mixing with the supernatant fluid. If such an error is made, some of the subjects inoculated from a given bottle would receive an excessive dose of antigen, and some would be injected chiefly with an undue proportion of the vehicular fluid. All samples of A.P.T. sediment fairly rapidly, but the rate at which this takes place has been observed by the writer to vary with different brands. All of them sediment sufficiently rapidly

to make an injection unreliable if rather more than the necessary dose has been drawn up into the syringe and this is laid down slightly sloping down towards the needle end for a few minutes before use. The danger is even greater when a syringe with an eccentric needle boss is employed. The statement can readily be confirmed by anyone who cares to make the simple syringe experiment, and the necessity for continual mixing will become evident.

4. The nature of the injection. It is possible that A.P.T. given subcutaneously may prove slightly more effective in a given dosage, especially when minimal amounts are being administered, than if a similar quantity is injected intramuscularly. Absorption may be rather slower by the subcutaneous route, and therefore the stimulus is more prolonged, possibly with greater success. There are, however, objections to the subcutaneous route, as undesirable reactions are more obvious and more painful than when deeper injections are given. It seems necessary that the method of administration should be stated in relation to every series which is to be used for comparative purposes.

5. Conducting of experimental work on groups of children who have not been pre-Schick-tested, or only on a sampling basis. These may have a high degree of basal immunity, or contain a considerable percentage of subjects who are naturally Schick-negative before they are treated. Also, in general terms it may be said that work performed in large towns will usually show superior results as compared with those obtainable from rural children treated by the same means. The above factors have all to be weighed in the case of super-satisfactory reports.

When Schick-testing After Immunisation

1. The performance of the tests by an operator not sufficiently practised in the technique of intradermal injections. This is important when dealing with numbers of small and wriggling children, or if the sight of the doctor is not perfect or the light bad. The injections are then apt to be given too deeply or in deficient amount, with consequent production of false negative results. Also, graduation marks may lose their paint in the course of boiling, and the syringe thus becomes awkward to handle with precision when 0·2 c.cm. has to be delivered accurately. Any of these factors may lead to the production of false negative readings, liable to be construed as evidence of successful immunisation. Another occasional trouble is a defective syringe plunger or needle boss, which allows toxin to leak away when the considerable pressure needed to make true intradermal injections is applied.

2. The use of Schick test material which is weak in indicating toxin. This will naturally give an excessive proportion of false negatives if the indicating toxin has become mainly converted into toxoid. Readings which would be strongly positive with an active test material would only be seen with difficulty if deteriorated toxin were used. In the latter case, weak re-Schick-positive readings may be missed entirely, giving a false impression of successful immunisation. Each bottle of toxin used for post-Schick tests should also be used in parallel for a few primary tests on children of susceptible age. If good, clear, positive readings are not seen among these, the production of a long series of negative re-Schick results may be quite valueless. It is the writer's experience that even reputable brands of Schick toxin occasionally vary considerably in the amount of indicating toxin remaining "untoxoided" at the time of use, even though the weak samples are used well before the specified expiry date.

3. When inspection of the arms is made in poor, yellow, or artificial light, a faint or even moderate positive reading may appear to be negative, as the pink tint of the reaction is killed by yellow rays. If artificial light is necessary, a daylight bulb or one having a slightly blue tint will be found best.

4. Tension of the skin at the time of making the reading may reduce the hyperaemia of a positive result to such an extent as to make it appear to be negative. This is liable to happen when a parent or inexperienced nurse, in order to display the forearm, pulls up a tight sleeve or jersey which will only just pass over the elbow. Arms must always be inspected free from the slightest tension by the clothes and with no manual pull on the skin. Failure to observe this precaution may lead to spurious negative readings.

5. Unduly optimistic or hasty inspection of Schick readings may result in missing faint positives.

6. The length of time at which Schick tests are performed after final immunising injections are completed. Imperfectly immunised cases may give a negative Schick test, say, two months after the course, but some of these cases do not seem to stand the test of time. It is maintained that if a small proportion of these relapse to Schick-positive within the year it is not clear that adequate treatment has been provided. It is not safe to assume that the body has received enough training in antitoxin production to ensure that it will be able to produce adequate amounts rapidly in case of need. The performance of immunity may well relate partly to the training of the kidneys in autogenous antitoxin retention, and that when this degree of kidney training is reached the antitoxin-producing mechanism also seems to be educated adequately. Such sparsely immunised cases as are prone to relapse within the year can not be taken as evidence that a sound procedure has been employed, as judged by the conversion rate at the first post-Schick test.

7. The allowance of too short an interval between the test and the time of making the reading. If only one inspection is to be made, probably a week is the ideal interval. Readings taken at four or five days may well miss the occasional late positive reaction, which sometimes becomes manifest only at about the end of a week.

Now we may consider the factors which tend to produce pessimistic reports on the same methods of immunisation as have been adopted in a successful series.

Factors Favouring Apparently Poor Results

During the Process of Immunisation

1. The general use of a smaller amount of antigen than that indicated on the record card. Also, strictly accurate dosage will produce an inferior result compared with a successful series based on a slightly larger first injection. Deficient dosage may result from leaking syringes or needle bosses, or from the escape of some A.P.T. through the needle puncture in the skin after withdrawal. This is sometimes caused by pressure on the arm, as when a tight garment is pulled up just sufficiently to expose the area where the injection is made.

2. Failure to mix the antigen properly and withdrawing the doses mostly from the supernatant fluid, or allowing a syringe containing much more than the full dose to stand for some time, so that very little of the actual precipitate finds its way out through the needle. The evil is greatest when the syringe has an eccentric boss and this is in the upward position when the syringe is laid on the table. It may also occur when an ordinary syringe is used, especially if the internal diameter is large.

3. When using very small initial dosage such as 0·1 c.cm., dilution of the antigen to the extent of about 25% may easily occur if a needle is taken from the steriliser and care be not taken to expel any water before the small amount of A.P.T. is drawn into the syringe. Even such a small factor as this may affect results adversely when minute dosage is employed.

4. The use of samples of antigen which happen to be somewhat, or even markedly, defective in potency, as compared with those employed in a more satisfactory series of investigations. A further danger of this type is the use of antigens improperly stored or nearing their expiry date, or containing a preservative unsuitable from the point of view of retention of potency of the antigen. The last condition relates more particularly to A.P.T. than to other antigens such as T.A.F. or F.T. Even though a sample of A.P.T. is known to be of the same Lf value as one used in a satisfactory experiment, this is no guarantee that, other things being equal, a similarly good result can always be obtained again. It is now well recognised that, although the flocculating value of an antigen may appear to be satisfactory, it is no certain criterion of the immunising power of the preparation, though it does serve as a general indication of the probable degree of potency of A.P.T.

5. The use of too short an interval between injections of prophylactic. In the case of A.P.T. it is probable that 14 days is the absolute minimum really effective interval.

6. The conducting of investigations in an unfavourable area having little experience of diphtheria, a low general basal immunity, and a very low natural Schick-negative rate. Though this has been rather discounted by some writers, my experience is that such areas tend to produce relatively poor figures for Schick conversion rates as compared with congested localities and slum districts. The difference is more obvious when minimal dosage methods are being used.

In the Process of Schick Testing

1. Failure to adopt a definite standard site for making a first, second, and third Schick test respectively. The stain of an original strong primary test may persist up to and beyond the time of a post-Schick-test. Therefore it is advisable to adopt, say, the outer side of the forearm for first tests, the inner side for second, and a lower central position for a third. There can then be no danger of reading the residual stain of a strongly positive primary test as a positive post-Schick test. If this error were continually made it would lead to poor statistics.

2. Pessimism in reading post-Schick tests. It is important not to be hypercritical, yet one must not pass over any definite circumscribed stain of reasonable size that is even faintly visible in the region where the text toxin was injected. Too critical reading of such tests leads to pessimistic reports on conversion rates.

3. The publication of figures from children who were all originally found Schick-positive, before the immunising course, without making this fact clear in the report. Such figures are rarely as impressive as those obtained from groups in which the state of immunity before treatment was unknown. In the latter case, one child in three may be immune before the injections are given, but if the results are called a conversion rate, which of course is inaccurate, a genuine conversion rate experiment is likely to compare unfavourably. The post-Schick test will always reveal a higher percentage of positives in a true conversion rate investigation.

4. Failure to give a control injection into the right arm of older children or adults. A pseudo- and negative reaction may then be read as positive, more especially by an inexperienced worker. The pseudo-reaction is very rare among children, but as it is desired to mention all possible sources of error, even uncommon mistakes must be set down.

Some Other Points

There are other technical points which may confuse the issues, such as the ages of the children in different groups, which, treated by the same means, yield divergent results. In some areas the older children may have acquired a small degree of immunity as a result of contact with endemic or epidemic diphtheria, while younger children, who were not born at the time of the outbreak, may have missed that priming experience. Similarly, the presence at the present time of evacuated children in country areas may present a false impression of rural expectations if the children are all immunised together and treated as a single group at the re-testing. To obtain reliable statistics for the country area it will be necessary to consider the local inhabitants entirely separately from their town-bred visitors. Another point is that a primary Schick test will occasionally act as a priming dose and may favour a successful result of treatment.

It is hoped that the above remarks will remind some readers of the large number of fallacies which may lie behind a simple report that such and such a percentage of children was Schick-negative or positive after a specified course of injections. I am not aware that anyone has, as yet, marshalled these facts, so it is considered worth while to place them on record. Probably the only observations of value for purposes of strict comparison are those made in the course of prolonged researches into various methods and antigens by single individuals. Here, any factor of error, wherever it may lie, is likely to remain a constant throughout. It will be noted that all the faults in post-Schick testing tend to produce favourable but false results, and optimistic conversion rates are thereby obtained. Conversely, good and reliable Schick work always presents the blackest aspect of the case.

If one considers all the permutations and combinations of errors that may conceivably occur, it will not be regarded as so strange that reports which on the surface should be comparable are in fact grossly different. There is at least 1% or 2% of subjects who resist ordinary routine courses of immunisation and who require one or more good-sized doses of antigen to produce the desired result. When, therefore, one meets with any series of reasonable length for which 100% conversion rate is claimed, it is almost certainly unreliable, for one or more of the reasons suggested above. A short series showing unbroken success is equally misleading if it is expressed in terms of 100% success, for it may miss the inevitable quota of failure which would present the true picture. A very short pessimistic series also gives a false impression unless the failure to convert runs to considerable figures, as by the law of chance twenty cases might show three or four re-Schick-positives, whereas if the numbers had run to 150 or more no fresh failures might have been encountered. Finally, optimism is likely to give rise to imperfect and temporary immunisation. More critical and pessimistic work leads only to search for a method which provides a greater factor of safety.

Conclusion

Unreliable figures are apt to be quoted and re-quoted *ad infinitum*, to prove any particular point. It is a pity that we cannot start now with a clean slate and in future publish only figures based on the following considerations :—

1. The average age of the children, nature of locality and natural Schick negative rate of the area to be stated.
2. For conversion-rate figures, all cases to be pre-tested and a different standard site adopted for 1st, 2nd, and 3rd tests.
3. The brand of A.P.T. to be named wherever possible, and this material to be thoroughly mixed in bottle or syringe immediately before the injection. In the case of 1 c.c. ampoules the greatest care to be taken to mix in all precipitate in the neck of the ampoule.
4. Only high-quality, adequately calibrated syringes and perfectly fitting needles to be used throughout.
5. Interval between injections and dosage to be stated, and mode of inoculation, subcutaneous or deep intramuscular route, specified.
6. An interval of from 3 to 5 months to be adopted as standard between final injections and post-Schick tests.
7. Each bottle of toxin used in re-tests to be shown to be fully active by the production of one or two strong positive readings to primary Schick tests conducted in parallel. Readings to be taken at the end of one week.
8. Readings to be made in a good light and free from any tension on the skin of the arms. All readings of less than 5×5 mm. to be ignored.
9. The operator to have adequate experience before placing his results on record. It must be realised that immature experience will lead to confidence in unusual results which longer acquaintance with the subject would cause to be treated with the greatest reserve.

By such means as these it would be possible slowly to build up some literature which would stand the light of criticism.

In a memorandum issued from the Ministry of Health by Sir Wilson Jameson on May 8th, attention is drawn to the increase in the recommended dosage of alum-precipitated toxoid (A.P.T.), namely, 0·2 and 0·5 c.c. at intervals of not less than four weeks, instead of doses of 0·1 and 0·3 c.c. The work on which this recommendation is based was discussed in an editorial in the May issue of Public Health. A further notice is added in the memorandum about an unsatisfactory preparation of A.P.T. The issue of the preparation was stopped when it was realised that only a low Schick-conversion rate was being obtained, and "further tests on the same preparation showed that its unsatisfactory performance in the field was due not to the relatively small dosage employed but to a fundamental defect in its antigenic potency." The Chief Medical Officer at the same time recommends that susceptible nurses working in hospitals, nurseries, and elsewhere, should be immunised by toxoid antitoxin floccules (T.A.F.), in three doses of 1 c.c. each at intervals of three weeks. For this purpose T.A.F. is recommended because reaction is less than with A.P.T.

In view of developments in the use of live abortus vaccines which have taken place since the Milk (Special Designations) Regulations, 1936, was made, it has been decided no longer to prohibit their use in tuberculin-tested milk herds, subject to the approval of the Minister of Agriculture and Fisheries, who must approve any vaccines used for the purpose.

OBITUARY

RICHARD KING BROWN, M.D., D.P.H.

Dr. R. King Brown, formerly M.O.H. for Bermondsey, died at his home at Goring-by-Sea on April 28th. He was born in 1864 at Athlone, Co. Roscommon, and was educated at Coleraine and the University of Belfast. In 1891 he graduated B.A., M.B., B.Ch. of the old Royal University of Ireland. In 1891 he proceeded to the M.D., with gold medal. In 1894 he had taken the D.P.H., R.C.P.S., London, and was a fellow of the Royal Institute of Public Health and Hygiene. While serving as M.O.H. and bacteriologist for Bermondsey he also lectured on public health at Guy's Hospital and examined for the M.D. in State Medicine of London University, and also for the B.A. (Architecture). He was a member of the Sanitary Inspectors Examination Board, and medical editor of the *British Journal of Physical Medicine*.

Dr. King Brown was one of the early workers in actinotherapy, and edited the English edition of Bach's *Bestrahlung mit Quartzlampe*. He had travelled widely, knew German well, and translated several books on similar subjects, including *Sunlight in Surgery* by Dr. Bernhard, of St. Moritz, and Schliephake's *Short-wave Therapy*.

BOOK REVIEW

When We Build Again. A Study Based on Research into Conditions of Living and Working in Birmingham. A Bournville Village Trust Research Publication, with a Foreword by Lord Balfour. London: George Allen & Unwin. 1941. 138 pp., 7 plans, 37 tables, 9 plates, 11 pp. illustrations. Price 8s. 6d. net.

This beautifully produced book will be of great interest and value to all those concerned with public health. In 1935 the Bournville Village Trust inaugurated a programme of research into housing in Birmingham. The terms of reference were, roughly, to inquire into the housing conditions of the city and to examine the effect of past policy, in order to plan future policy. The method was to collect information on the basis of visiting every thirty-fifth address of all working-class houses. In all, 7,161 householders were questioned. At least one-third of the interviews had to be with men. Besides the question of accommodation, etc., which all housing inquiries deal with, special attention was paid to gardens and the journey to work. The 42 photographs, showing examples of housing types in Birmingham, are a most admirable beginning to the book; straight away one has a lively picture that serves as a background to the whole argument, which is actually no more than a statement of plain facts—some of these startling enough.

The first public park was not opened in Birmingham until 1846. The first, entirely purchased by the Corporation, was Highgate Park, opened by Joseph Chamberlain in 1876. The first provision of playgrounds was in 1877, and it was in 1879 that George Cadbury moved his firm out of the city; the Bournville Village Trust, responsible for an estate of 1,100 acres, was set up in 1893. This was a bright spot in Birmingham housing history, another good feature being that by 1938 one-third of the working-class population were living in houses built since the end of 1918. Except for the newer houses, however, the words of the recent Summary Report by the Ministry of Health—"In housing, as in other Public Health services, the nation began this war well equipped"—are hardly applicable to Birmingham. The 1935 overcrowding survey, for instance, revealed that the city still contained 38,733 back-to-back houses, 51,794 houses without a separate w.c., and 13,650 houses without even a separate water supply. It was in 1841 that Lord Normanby, then Home Secretary, moved a Bill in the House of Lords that houses were not to be built back to back, yet they did not become illegal until 1909; another 30 years later there were still nearly 40,000 of them in one city alone. A survey of housing needs in Birmingham under the 1919 Housing Act estimated that 14,500 new houses would be needed in the ensuing three years: 10,000 were planned, 3,234 were actually built between 1919 and 1923. At their meeting in December, 1938, the City Council adopted a report of a joint committee which proposed building 25,000 houses in the next five-year period. Even this total "was actually 5,000 less than the very conservative estimate of the minimum actually required . . . ." to abate slums, overcrowding, and to meet the normal need for new municipal houses.

The problem of housing is not solved by erecting a large number of well-planned houses at economic rentals. Two major aims are to clear central slums and to develop outlying parts without creating new problems. Questions of sites, transport, and relation to areas outside the city have to be considered. Very properly these research workers included a survey of an area round the city totalling 1,000 square miles or so. As they wisely point out, "The whole lesson of the modern world is the explosion of the fallacy of isolationism."

Finally there are their recommendations, or rather suggestions. There must be a National planning authority, under whose aegis local planning would be carried out, and this authority must control the use of land in the public interest. Birmingham, they think, is big enough, and those industries that must be removed from the centre of the city to ease congestion should be set up in satellite towns 20 or 30 miles outside. A further interesting industrial suggestion for smaller firms is the building of flatted factories, on the same system as blocks of dwelling flats. They recommend also the adoption of the principle of licensing the life of buildings as a method of facilitating and of synchronising ordered reconstruction. The remainder of their suggestions follow more standard lines. Throughout the book the facts are simply and plainly stated and frequently illustrated by charts.

MASS MINIATURE RADIOGRAPHY

In June, 1940, the Medical Advisory Committee appointed to advise the Minister of Labour and National Service made a report on the detection of pulmonary tuberculosis in recruits for the armed forces in which it came to the conclusion that the adoption of mass miniature radiography was impracticable at that time. A further report on the subject was issued two months ago by the same Committee, which met on both occasions under the chairmanship of Lord Horder. The concluding paragraph to the 1942 report states: "The Committee have accordingly come to the definite conclusion that they must confirm their previous recommendation in this matter." In the evidence leading up to this conclusion, the Committee observe that the carrying out of the recommendations made to Medical Boards in 1940 has reduced to an almost negligible figure the number of cases of tuberculosis passed into the armed forces—namely, making available to the Boards information in the possession of tuberculosis authorities; careful questioning of recruits about previous history of tuberculosis; reference to tuberculosis officers in any case where a previous history of the disease had been elicited; and reference by Boards to tuberculosis officers of cases of general ill health to which no specific cause could be assigned. According to sample statistics which have been taken, it is stated, these measures have resulted in the rejection of about 1% of recruits on account of pulmonary tuberculosis. Referring to the experience of mass miniature radiography in the Navy, R.A.F., and Army, the report observes that active pulmonary tuberculosis has been found by this method in about 0·3% of 100,000 naval personnel, and it is stated that naval experience shows it to be more important to examine trained men than recruits "as the majority of non-symptomic carriers of tubercle bacilli are found after they have been some time in the Service rather that at the time of joining." In the R.A.F. an X-ray examination of about 12,000 new entrants for air-crew duties disclosed pulmonary tuberculosis in less than 0·2%.

The report points out that under their terms of reference the Committee's concern was with the methods employed by the Medical Boards in the examination of persons before entering the Forces, and it believes that a decentralising of examinations at over 200 places throughout the country militates against the use of mass miniature radiography. They therefore consider that the most satisfactory alternative is to undertake radiological examination to the greatest extent practicable after entry of recruits into the Services, and accept the view that the method of mass miniature radiography is the best means of conducting radiological examinations where there are large numbers to be examined. The Committee repeats the observation made in 1940 that there would be delay in acquiring a sufficient number of X-ray units, and that a sufficient number of experts capable of interpreting the films does not exist.

SCABIES ORDER, 1941

We print below the substance of the first eight paragraphs of a Circular (2645) just issued by the Ministry of Health.

1. In some counties doubts have arisen as to the respective functions of the County Council and District Councils in giving effect to the Scabies Order, 1941, referred to in Circular 2517 of November 14th, 1941. County Councils and District Councils have concurrent powers under the Scabies Order and the proper distribution of functions should therefore be that which is most convenient and effective in the circumstances of each County. It is for the County Council and the District Authorities to decide in collaboration on the most appropriate arrangement and the following general suggestions are made in the hope that they may be of some help in resolving local difficulties.

2. In general, the Minister considers, the onus for initial action under the Scabies Order should rest with the District Authority, and

the local Medical Officer of Health should be the first recipient of all information necessary to initiate it. The initial action will be inspection of premises under paragraph 2(1) of the Order and it may be followed by medical examination and, if necessary, by cleansing or treatment as provided for in paragraphs 2(2) and 2(3) of the Order. If the information on which this action is based comes to light through the machinery of the County Council—*e.g.*, the School Medical Service or the Maternity and Child Welfare Service—it will generally be preferable that it should be brought to the notice of the local Medical Officer of Health, for initial action.

3. The local Medical Officer of Health, it is suggested, should be responsible for securing the requisite inspections; cleansing and treatment of persons affected (up to the point at which, in a small proportion of cases, admission to hospital for in-patient treatment may be necessary); and cleansing, treatment or destruction of verminous articles. Duplication of provision, however, should be avoided as far as practicable. If, for instance, facilities are already provided by the County Council for the cleansing and treatment of children in connection with the school medical or child welfare service, these facilities should be utilised to the full for dealing with verminous children discovered through inspections carried out under paragraph 2(1) of the Order.

4. For the initial work under the Order (referred to in paragraph 2 above) it would be advantageous to employ the services of a Health Visitor (including a District Nurse who acts as a Health Visitor) or School Nurse. If the District Authority is not itself the Maternity and Child Welfare Authority or the Education Authority the County Council may be able to make available the services of Health Visitors or School Nurses. If the services of these officers are not available, the work should be undertaken by Sanitary Inspectors. There will, in any event, be from time to time questions connected with the administration of the Order for which the special experience of Sanitary Inspectors will be necessary.

5. The places where treatment of scabies (short of in-patient hospital treatment) may be undertaken must largely depend on local circumstances; but mutual help between neighbouring districts, and the assistance of the County Council in placing any facilities of its own at the service of local authorities, will be invaluable. Existing cleansing stations which can conveniently deal with cases from a wider geographical area than the particular administrative area which they may have been first set up to serve, should be so used and no obstacle should be put in the way of this development. Civil Defence First Aid Posts that possess suitable facilities may also be used, subject to reasonable precautions to avoid infection of persons who may have to be treated at such posts when they are used for Civil Defence purposes. Part-time Civil Defence volunteers at First Aid Posts should not be compulsorily required to deal with cases of scabies or other verminous conditions, but they may be asked to volunteer for this work.

6. The Minister would not rule out the use of emergency sick bays for this purpose where they have suitable bathing facilities that could be advantageously used; nor of isolation hospitals that have reception blocks with suitable baths, although the admission of cases of scabies to isolation hospitals as in-patients is not recommended.

7. It will be necessary, in some cases, to provide temporary accommodation for people who have to leave their homes while the premises are being cleansed. Local arrangements for dealing with "bombed out" families may be useful for this purpose but the use of emergency rest centres should if possible be avoided. In this matter also the County Council may be in a position to help, by making temporary provision in suitable institutions.

8. Where in-patient hospital treatment for scabies is necessary the responsibility for providing it will largely rest on the County Council. The extent to which such treatment is required should not be considerable, and in many counties it may present no serious problem. If acute difficulty arises in providing sufficient beds for scabies cases requiring admission to hospital at a given time, the County Medical Officer of Health should consult the Regional Medical Officer of the Ministry, who will take steps to see whether any E.M.S. beds can be made available temporarily. If such beds are used it must be on the understanding that they will be released at 24 hours' notice if the Hospital Officer of the Ministry of Health requires their release in emergency for their primary purpose.

A conference on maternity and child welfare will take place on July 3rd, 1942, at British Medical Association House, Tavistock Square, London, W.C.1. The Minister of Health, Mr. Ernest Brown, has consented to act as President. Sir Alexander Macgregor will be chairman. The subject chosen for discussion is: mothers and woman power in relation to (*a*) industry, (*b*) nurseries, foster-mothers, and daily minders, (*c*) the women's services, and (*d*) education for parenthood. Admission will be by ticket, price 2s. 6d., which may be obtained from the Secretary, N.A.M.C.W.C. & P.I.M., 117, Piccadilly, London, W.1.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

MIDLAND BRANCH

President: Dr. Ethel Cassie, O.B.E. (Senior A.M.O., M. & C.W., Birmingham).

Hon. Secretary: Dr. R. H. Jolly (M.O.H., Wolverhampton C.B.).

The fifth meeting of the session was held in Birmingham on March 5th. The President and 16 members were present. The minutes of the previous meeting were read, confirmed, and signed.

Dr. F. Brockington read a paper on the effects of wartime nutrition on children, which it is hoped will be published in PUBLIC HEALTH. The speakers in the subsequent discussion agreed with Dr. Brockington's recommendations and congratulated him on his review of the subject.

Dr. Paul called the attention of members to the fact that the Scabies Order of 1941 provided no penalties for non-compliance. As it had been made under Regulation 33*a* of the Defence (General) Regulations, 1939, he concluded that it could be enforced only by the persons charged with the duty of enforcing the regulations themselves—*i.e.*, the Police or the Director of Public Prosecutions. Other members supported this view and explained the procedure they were adopting in their own areas.

A special meeting of the branch was held in Birmingham on April 16th, the President and 26 members being present.

The question of wartime increases in the remuneration of public health officers, both whole- and part-time, and of a revision of the Askwith Scale, was discussed. It was pointed out that M.O.sH. who were required to provide office accommodation and clerical staff out of their gross remuneration were being severely penalised, that varying scales of war bonus were operative in adjoining areas, and that some chief officials' salaries were excluded from the war bonus scheme, and others not. The following resolution was carried by a large majority: "That the Midland Branch urges the Council of the Society to press for uniformity in the conferment of a war bonus on public health officers as between one authority and another, and for the whole of the salary to be taken into consideration in the award of such bonus."

The following motion, in the name of Dr. Cassie, was unanimously approved: "This branch of the Society urges the Council to make formal representation to the Ministry of Health against the admission of children under 3 years of age to nursery schools and nursery and infant classes, on the grounds of health, hygiene, and psychological unsuitability."

It was agreed to support Dr. Cyril Banks's nomination for the office of President of the Society, and to endorse the further action recommended by the Branch Council.

The President announced that it was proposed to hold the annual meeting at Birmingham on the last Thursday in June.

YORKSHIRE BRANCH

President: Dr. J. F. Galloway (M.O.H., Dewsbury C.B.).

Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse, M.B.).

An ordinary meeting of the Branch was held in Leeds on February 27th at 2.45 p.m. The President was in the chair and was supported by 18 members. The minutes of the last meeting were read, approved, and signed.

The Secretary was instructed to convey to Mrs. Buckell the sympathy of the Branch on the death of her husband, Dr. M. A. C. Buckell, City of Bradford Pathologist, who had been a member of the Society since 1924. The Secretary was also instructed to send to Capt. Elliston the sympathy of the Branch in his illness, and their good wishes for his recovery.

The Secretary reported that the General Purposes Committee of the Society felt that the resolution of the B.M.A. referred to in the minutes of the meeting held on November 28th had been neutralised by a later resolution of the same meeting of representatives of the Home Division of the B.M.A.

NUTRITION AND WAR

Dr. W. J. Frain, Medical Officer of Health, Batley, then read a paper on war nutrition and community feeding. After reviewing the history of nutrition, he compared the diet of the eighteenth century working man in the North of England with a modern estimate of the adult requirements, and showed that it was superior in calcium, iron, and vitamins A, B, and C. Such a diet consisted largely of whole-grain bread, vegetables, potatoes, milk, cheese and butter, and was still consumed by many strong, hardy and healthy peasant peoples. The industrial revolution had, however, brought about a dietetic revolution, involving the substitution of white flour for the old wheaten flour, increased consumption of meat, and decreased consumption of milk and vegetables. Since 1913, however, the people of this country had increased their con-

sumption of fruit by 88%, of vegetables other than potatoes by 64%, and of milk by about 50%. The present German diet was based on the principle that wholemeal bread, vegetables, potatoes, and some dairy produce contained all the essentials for nutrition. He showed, however, that the wartime German diet was below modern estimates of requirements in calcium, vitamin A and vitamin C. He then spoke of the great benefits that had resulted from the introduction of the Oslo breakfast, consisting of wholemeal rolls, butter or vitaminised margarine, milk, cheese, and a salad or fruit depending on the season. He said that communal restaurants were undoubtedly a valuable wartime measure. Restaurants for the children should be kept separate from those for the general public and, if possible, should be established on the school premises. He thought school dinners had come to stay but that it was doubtful if the British restaurant for the general population would continue in peace time. Community feeding should be extended as far as possible in order to help to ensure final victory in a war of blockade and counter-blockade.

Opening the discussion, the President remarked upon the striking deterioration which had occurred in the peoples' dietary since the eighteenth century. Dr. Irvine thought that communal feeding introduced the valuable possibility of providing meals for special groups such as expectant mothers, but he pointed out that it made control of food infections very important. Dr. Fraser said that soya bean was an excellent food, and suggested that the Branch might support the campaign for the greater use of the national wheatmeal loaf. Dr. Gall had had experience of a Bradford nursery where the children did very well on a so-called vegetable diet which included soya flour. She drew attention to the fact that peasant peoples the world over tended to produce and to eat the foods best suited to their needs and climate. Dr. Payne deplored the recent Board of Education circular, which, as a temporary measure, advised that only one-third of a pint of milk could be given in school except in necessitous cases. Dr. McNaught reported that during the last year there had been a falling off in the gains of height and weight of York school children. Dr. Pickup said that, in Wombwell, for every one person who took the meat course at the British Restaurant two took the sweet. He felt that this was nutritionally unsatisfactory, Dr. Sutherland spoke of having found several early cases of scurvy and stomatitis during the winter of 1940, which had responded to treatment with vitamin C, and loss of weight ranging from 4½ to 9½ lb. within a period of eight months in 10% of the school children employed in the delivery of messages and newspapers, and an increased incidence of high myopia and of increasing myopia. This last development was specially significant, because it was a reversal of the pre-war tendency.

TUBERCULOSIS GROUP

President: Dr. T. R. Elliot (T.O., Salop C.C.).
Hon. Secretary: Dr. R. L. Midgeley (Medical Superintendent, Devon C.C.).

Dr. Ernest Ward took the chair at a meeting of the Group which was held at the Society Offices on February 28th. The minutes of the last meeting were read and confirmed.

A memorandum on "unrest in the tuberculosis world" was presented by Dr. Jessell, and the following resolutions passed: (1) "In the opinion of this Committee the time is inopportune for drastic alterations in the organisations dealing with the varied aspects of the tuberculosis problem. The organisations existing prior to the war are considered to be fully capable of discharging these important functions if adequately supported." (A copy was sent to the Tuberculosis Association.) (2) "To avoid multiplication of committees, this group committee recommends that the work of the Standing Advisory Committee should be transferred to the Joint Tuberculosis Council, which is fully representative of all the organisations dealing with the many aspects of tuberculosis work."

HOME COUNTIES BRANCH

President: Dr. D. H. Geffen (Enfield U.D.).
Hon. Secretary: Dr. C. E. E. Herington (Dagenham M.B.).

A meeting of the Home Counties branch was held at Tavistock House, Tavistock Square, on March 13th. The Metropolitan Branch had been invited to attend the meeting, and some 60 members of the branches were present.

WAR-TIME NURSERIES

The Marchioness of Reading, who was the first speaker, dealt with the establishment and work of the war-time nurseries and stressed the need for them to-day. She advised the use of radiant heat in addition to the use of central heating by radiators. She thought gas fires suitable provided they were properly protected. An efficient nursery teacher could be of great help, not only as an instructress but also as assistant matron. Play things were important, particularly indestructible and soft toys. Lady Reading said that "hutted" premises took about three months to erect, whereas for adapting premises six weeks were usually enough. All drainage and provision of services should be attended to before building was begun. It was important to order fittings to be ready for the hut as there was often a delay in supply. It was valuable for the matron to have had some experience as a health visitor. The deputy matron was usually in charge of the infant feeding. The proportion of untrained staff should be roughly one for each 10 children to be accommodated. Young probationers from 15 to 17 years of age would be obtained through juvenile employment boards. As an alternative to probationers the Child Care Reserve could be utilised, the member of which should be between 30 and 50 years of age. First-aid personnel had been employed with success in some boroughs. Occasionally staff could be obtained from the W.V.S. Lady Reading finished her address with a plea that Medical Officers of Health should give this question their close attention.

Dr. G. H. Hogben said that the voluntary associations who gave assistance were the National Society of Children's Nurseries, the National Baby Welfare Council, and the Nursery Schools Association, the last named under the presidency of Lady Allen of Hurtwood. There was difficulty in some districts in persuading mothers to allow children to go to the nurseries, and propaganda films were necessary. He thought sick-bays were needed to accommodate all sick children except those suffering from an infectious disease or otherwise considered as hospital cases. In his experience first-aid personnel were very helpful in staffing sick-bays. Dr. Hogben said that, though it was difficult to obtain women who were prepared to give their whole time to minding children, they were often willing to transport them to and from nurseries.

At the April meeting of the branch, also held in conjunction with the Metropolitan Branch, 16 members were present. The minutes of the meeting of December 12th, 1941, and on January 9th, February 13th, and March 13th, 1942, were confirmed.

A reference from the Society of Medical Officers of Health to consider the desirability of recommending a wartime increase in remuneration was debated, and it was resolved: "that the time is now opportune to press for war-time increase in the remuneration of whole-time public health officers and practitioners employed on a part-time basis by local authorities in public health or associated services."

The branch decided to support the candidature of Dr. Cyril Banks, of Nottingham, for the Presidency of the Society.

The Hon. Secretary reported that Dr. T. Puddicombe, D.S.O., had now retired from public health, and it was unanimously agreed that his name should be forwarded to the Council of the Society with a recommendation that he be elected a life-member.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

The annual meeting of the Council of the branch was held in Newcastle on October 25th, 1941.

The retiring President, Dr. J. Grant, the President-elect, Dr. G. Hurrell, and 11 members were present. The minutes of the meeting held on February 14th, 1941, were read, confirmed, and signed by the chairman.

The annual report of the Hon. Secretary and Treasurer was read, and it was agreed that this be adopted and submitted to the branch as the Council's report. Drs. James Grant and George Wilson were re-elected as auditors for the Session 1941-42.

The Hon. Secretary read a letter which he had received from the Secretary of the North-Eastern Regional Hospitals Advisory Council, asking whether the Northern Branch would accept rotation with regard to its nomination of representatives on the Medical Advisory Committee. The Council gave careful consideration to the inquiry, and expressed the opinion that in view of the fact that appointments from the branch to the Medical Advisory Committee are renewable annually by the branch, it could be submitted that the principle of rotation was to a certain extent met. The Hon. Secretary was instructed to inform the Secretary of the Hospitals Advisory Council accordingly.

A meeting was held at Newcastle-upon-Tyne on March 28th.

The President was in the chair, and 16 other members were present. The minutes of the meeting held on February 14th were read, confirmed, and signed by the chairman.

The Hon. Secretary read a letter which he had received from the North of England Branch of the British Medical Association agreeing to the request of the Northern Branch to be allowed three representatives on the Regional Medical Planning Committee. The following members were selected: Dr. Ian McCracken, County Medical Officer, Durham; Dr. J. Grant, Medical Officer of Health, Gateshead; Dr. G. Hurrell, Tuberculosis M.O., Newcastle.

The Society of Medical Officers of Health had asked for the names of one or two members of the branch who would be willing to serve on the Central Council for Health Education. Dr. Ian McCracken, County Medical Officer, Durham, intimated his willingness to do so.

Mr. W. E. M. Wardill, F.R.C.S., delivered an address on recent developments in prostatic surgery. Subsequently certain members of the party attended a ward demonstration which had been arranged by Mr. Wardill.

MIDLAND MATERNITY AND CHILD WELFARE GROUP

President: Dr. V. Mary Crosse (Deputy Asst. Senior A.M.O., M. & C.W., Birmingham).
Hon. Secretary and Treasurer: Dr. Elsie Cooper (Asst. M.O., M. & C.W. (part-time), Birmingham).

The ninth general meeting of the group was held on March 14th, 1942, in Birmingham. Dr. Agnes Young presided, and 19 other members were present. The minutes of the previous meeting were read and adopted.

A recommendation was put to the meeting by Dr. Young that this sub-group be revived; it had been dormant owing to hostilities, and no meeting had taken place since the clinical meeting at Dudley Road Hospital in May, 1940. At present, the main group was in London, and a good sub-group in the Midlands was of importance. It would be proposed to hold one meeting in summer and a second in winter. The meeting agreed to this.

The Committee proposed the following office-bearers, who were accepted unanimously: Chairman, Dr. V. Mary Crosse; Vice-Chairman, Dr. Katherine Scott; Ex-Chairman, Dr. Agnes Young; Hon. Secretary and Treasurer, Dr. Elsie Cooper; Representatives to Group Committee, Dr. Crosse, Dr. Scott; Representative to Midland Branch Committee, Dr. Ethel Cassie. Committee: Dr. Dickson (Northampton), Dr. Grant (Wolverhampton), Dr. Findlay (Stafford), Dr. O'Brien (Birmingham), Dr. Hallum (Birmingham).

Dr. Crosse then took the chair.

DAY NURSERIES

Dr. Margaret O'Brien, in a paper on day nurseries, spoke of the early difficulties experienced in providing them, saying that it was not until last autumn that adequate powers were granted to local authorities. Birmingham was aiming at providing 100 nurseries; the care of the child whose mother is engaged in war work was also being met by other measures such as a children's home service, and arrangements made privately by the mother with friends or relatives. Particulars were given of the lay-out and requirements of a typical nursery in an adapted house. Dr. O'Brien presented statistics showing the numbers at present cared for in Birmingham, and discussed the advantages and disadvantages of this new social

war measure, drawing attention to the fact that, whilst there was an undeniable loss in the home atmosphere for the child, children attending the nurseries were assured of receiving proper care and education and were taught self-discipline; these all-important factors in the after life of the child were often sadly ignored by mothers.

Dr. Crosse then gave an address on daily minding of children, with special reference to the "Birmingham children's home service," which was introduced to improve the Child Minding Scheme. The improvements were threefold: (1) Payment increased from 6s. per week weekly to 14s. (10s. by mother, 4s. by Government); (2) less complicated application forms; (3) dual control by Labour Ministry and Public Health Department was replaced by that of Public Health Department only. The house of the home service member was inspected by an infant life protection supervisor before a child was received. Payment was made through the infant welfare centres monthly, and the child was seen at the centre, thus being kept under supervision. This was an important part of the scheme. The response to the scheme was good, and Dr. Crosse concluded by reviewing the place which the scheme took in plans for the care of children of women factory workers.

DENTAL OFFICERS' GROUP—YORKSHIRE SUB-GROUP

President: B. R. Townend, L.D.S. (Senior Dental Officer, Yorks W.R.).

Hon. Secretary: Miss R. Silare, L.D.S. (Dental Officer, Yorks, W.R.).

The President was in the chair at a meeting in Wakefield on March 28th. Nine members and six visitors were present. The minutes of the previous meeting were read and confirmed. Mr. A. Gordon Taylor, Secretary of the Dental Group, has been nominated representative of the Dental Group on the British Medical Association Planning Committee.

Lady Ramsden, Regional Officer, British Red Cross Society and Order of St. John, gave an interesting account of the ramifications of the work of the Red Cross Society and Order of St. John. She described how the International Red Cross Society came into being less than a hundred years ago as the result of the work of a Swiss who felt the necessity for the establishment of some international organisation to relieve the sufferings caused by the wars then raging in Italy. The Council was composed of representatives of every nation in which there was a Red Cross organisation. The Committee, however, was composed of Swiss representatives only. As a result of the Geneva Convention, 1934, ascribed to by all countries with the exception of Japan, prisoner-of-war camps could be inspected by members of the Committee, who could demand that certain requirements be maintained. Lady Ramsden described the invaluable work which was being carried out by the British Red Cross and Order of St. John. Convalescent homes, hospital trains and hospital supplies had been furnished by this organisation. Work done for prisoners of war include the provision of clothing, food, comforts, books, and medical supplies. Parcels were sent each week at the rate of one for each prisoner. They had also forwarded medical supplies and woollen comforts to the Russians. Everything that had been asked for by the U.S.S.R. had been sent.

The Annual General Meeting of the Fever Hospital Medical Service Group will be held at the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, London, W.C.1, on Friday, June 12th, at 3 p.m., when a discussion will be opened by Dr. E. H. R. Harries on "Typhus Fever—Clinical Aspects and Control."

A meeting of the Group Council will be held at 2 p.m., when Medical Planning will be discussed.

Meetings of the General Purposes Committee and the Council were held on Friday, May 15th, when much business was transacted.

On the unanimous recommendation of the Branches, Dr. Cyril Banks was nominated by the Council for election as President of the Society for the session 1942-43. This recommendation was approved by acclamation at the subsequent Ordinary meeting.

Minutes of the above meetings will appear in a subsequent issue of PUBLIC HEALTH.

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EDITORIAL

Population and Fertility

Concern about the continued fall of the birth rate in Great Britain began to be felt some 15 years ago, when it was realised that a level had been reached which would not suffice to maintain a stationary population, once the present generation had passed away, unless in the meantime rates of survival improved considerably. This was the situation round about 1925, and the decline in the annual number of live births continued until 1933, by which time the birth rate had fallen to 14·4 per 1,000 population. From that year onwards the rate increased slowly to 15·1 by 1938. During the decade before the war the women of this country, as in Scandinavia, France, and some other countries, were not producing enough female children to replace them when the new generation would in its turn be ready for motherhood. This did not mean, however, that an immediate fall in the total population would result, for the declining number of children was expected to be more than offset for many years to come by increases in the number of people of advanced age. The pre-war population contained an unduly large proportion at the working ages, owing to a more than adequate birth rate in the past coupled with the effects of advances in social and medical science in reducing mortality before 60. It was estimated in 1938 that if fertility rates did not decline any further, and if death rates at each age continued to fall, the total population would not drop below its 1937 number before 1965. Unless in the meantime fertility was raised considerably, however, a rapid and serious decline in population would set in after 1970, which it would not be possible to arrest within the course of a generation. Such was the position as defined in 1938 by the Registrars-General in their evidence* to the Royal Commission on the Geographical Distribution of the Industrial Population.

It will be recalled that early in 1938 the Population (Statistics) Act was placed on the statute book, enabling the Registrar-General to obtain at the birth of every child confidential information for statistical purposes about the mother's age, and at the birth of every legitimate child about the previous fertility and duration of marriage of the mother. The Act came into force on July 1st, 1938, and the first report for England and Wales, analysing the data for the second half of 1938, has just been issued.† Since 1938 was the last year undisturbed by war, and also the first since 1911 for which there are any adequate national statistics of fertility, this report should prove useful to those who will have to plan a population policy. The mothers who gave birth to live or stillborn children in the latter half of 1938 numbered approximately 310 thousands, and their distribution by age last birthday is shown by the following percentages:

Type	Under 20	20-24	25-29	30-34	35-39	40-44	45 up	All ages
Legitimate ...	3·5	23·1	32·5	23·7	12·7	4·1	0·4	100·0
Illegitimate...	18·0	31·4	22·0	14·4	10·0	3·9	0·3	100·0

Rather more than a quarter of the married mothers confined were under 25 years of age and one-sixth were 35 and over.

The numbers of living children born in the year to each 1,000 married women of the specified ages were:

Age Group	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Per 1,000 wives	521	270	172	110	59	20	2

Allowing for some multiple births, this means that half of the married women under 20, a quarter of those aged 20 to 24, a sixth of those aged 25 to 29, and a tenth of those aged 30 to 34 produced a living child during the year. From indirect calculations from census data in 1931, it is estimated that the married fertility rate at ages under 20 must have risen considerably by 1938, whereas it fell at ages over 25, the relative decline increasing with advancing age from about 8% at 25 to 29 to nearly 40% at 40 to 44. Married fertility is estimated to have declined since 1921 by about one-fifth at 20 to 24, the fall increasing with age to about two-thirds at 40 to 44; this suggests that the motive of family limitation after the birth of one or two children has been an important factor. Reduction in the rate of childbearing has occurred in the first few years of married life as well as later, however, as may be seen by comparing the average numbers of births (live and still) per 100 wives within 2½ years of marriage in 1938 and 1911 at certain ages:

*Current Trend of Population in Great Britain (Cmd. 6358, H.M. Stationery Office, York House, Kingsway, London, W.C. Price 2d., post free 3d.).

† Registrar-General's Statistical Review for 1938, Part II, Civil. (Limited issue, not on sale.)

Age at marriage	21	23	25	27	29
Births per 100 wives in first 2½ years 1911	112	100	89	82	80
Births per 100 wives in first 2½ years 1938	65	64	60	61	58
% fall in 1938	42	36	33	26	27

The relative fall in this initial fertility of marriage was more pronounced for those who married between 20 and 25 than for those who married later. For all ages 15 to 45 and all marriage durations combined the decline in fertility amounted to about 42%.

The report contains a table of fertility rates in 1938 of wives of each year of age in each of the first 10 years of marriage, from which a condensed extract is given below :

Age in 1938	Estimated births (live and still) in the year, per 100 wives in the year of marriage indicated									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
16-19	43	21	21	20						
20-24	29	27	22	20	18	16	16	16	(21)	
25-29	23	26	21	19	16	15	14	12	11	10
30-34	23	25	20	17	15	13	12	11	10	9
35-39	16	16	15	12	12	10	10	8	8	7
40-44	7	6	5	5	4	4	4	3	3	3

This shows that (1) the rate of childbearing in 1938 of wives who had married in any given year since 1928 decreased progressively as the wife's age advanced from 20 to 24 onwards, and (2) the rate of childbearing at any given age decreased progressively as the interval since marriage increased. The first of these conclusions is well known ; it does not need statistics to prove it but only to measure the real effect of age on fertility. The second finding denotes an important change since the period preceding 1911, when the downward trend of fertility with marriage duration among women of a given age was little if at all greater than could be explained by sterility resulting from accidents in childbirth. In 1938 marriage duration had become a factor of such importance that wives in their eighth year of marriage were bearing children at only about half the rate of wives of the same age in their second or third year of marriage. Such a change in the course of a generation cannot have been biological ; it can only be explained by an increase in the desire for family limitations or in the means for attaining it.

Some facts brought to light by the analysis of first births after marriage reveal the extent to which extra-marital conceptions were regularised during the pre-war period by marrying before the birth occurred. The intervals between marriage and the first birth in 1938 show that about 40% of women who married before 20 years of age must have been pregnant before marriage ; the proportion was about 30% for those who married at 20, about 20% for those who married at 21, and declined with advancing age at marriage to 8% at 30 to 34 and 5% at 35 to 39. The number of illegitimate births registered in 1938 was 27,753, but more than twice this number of conceptions were followed by marriage before the birth resulted, thus making it legitimate. Two-thirds of all irregular conceptions not terminated by abortion were therefore regularised by marriage ; at ages 20 to 24 the proportion was as high as five-sixths and at 25 to 29 it was three-quarters. The rise in illegitimate births which is noticed during wars is not necessarily indicative of any increase in such conceptions ; for it may be due to circumstances preventing or delaying many of the marriages which would normally have been arranged before the child was born.

The report gives, for the first time, national statistics of twins and triplets, which numbered 7,440 and 81 respectively in the half year, 6,946 being live-born and 575 stillborn. One of every 42 children born was a twin and one in every 3,873 a triplet. The expectation that a confinement would produce more than one child increased with advancing maternal age to a maximum at 35 to 40, as was found to be the case in Australia.

Multiple confinements out of each 1,000 at various ages

Under 20	20-24	25-29	30-34	35-39	40 and over	All ages
5·6	9·1	10·9	15·0	17·2	12·1	12·1

The risk of a multiple birth was twice as great for a woman confined between 35 and 40 as for a woman confined about 20 years of age. The increase in twin frequency with maternal age applies only to the unlike or fraternal type of twins, the frequency of occurrence of the so-called identical twins being estimated at about 3 per 1,000 confinements whatever the mother s age.

The early part of the war period witnessed a remarkable increase in the number of marriages of young women, which continued throughout 1940. This was in part due to the unusually large number of girls reaching the ages of 19 and 20 owing to the high birth rate which immediately followed the last war, but more important, perhaps, was the incentive to marriage provided by allowances for wives of men joining the Services. It may be noted that the birth rate for the first quarter of 1942 was higher than in any other first quarter since 1931.

A few words may be said about the conclusions as to the future of the population drawn from the 1938 statistics. If fertility at each age continued as in 1938 each 100 women would produce sufficient female children to replace themselves by 90 women of the same ages in the next generation, supposing that the children suffered no mortality in the process of growing up ; in technical terms the " gross reproduction rate " was 0·897. But when allowance is made for the girls born in 1938 who, according to the death rates at successive ages for that year, would not survive long enough to take their places in the next generation of mothers, the so-called " net reproduction rate " was 0·805. This allowance for future mortality is too large, however, if death rates continue to decline as in the past, and when the calculation takes this into account the " adjusted net reproduction rate " is found to be 0·84. In other words, the expectation in 1938 was that 100 women would be replaced by 84 of the same ages in the next generation, whereas if we are to ensure the future maintenance of the population once the present excess of middle-aged people has ceased to keep up the numbers (a position likely to be reached after 1965) the replacement rate should be 100%. This means that fertility of the female population as a whole needs to be raised within the next few years to a point about 19% above its 1938 level if population stability is to be secured. A decline in potential mothers during the next 20 years is now inevitable from the numbers of girl children already in existence, from which it follows that their fertility must be correspondingly raised if it is desired to avert a fall in the annual number of births and the eventual fall in population which would automatically follow.

Tuberculosis Control in Ontario

A recent article by Dr. G. C. Brink*, the Director of the Division of Tuberculosis Prevention in the Department of Health of Ontario, gives some interesting comments on the scheme which has been adopted to overcome certain problems which have been frequently met with in that Province, and which are of interest to us because they are also found in this country. It should be borne in mind that the Province of Ontario is approximately a thousand miles wide and that there are considerable distances between the different centres. In the past the control of tuberculosis was regarded as almost a local problem, although the Province contributed approximately one-third of the cost of hospital treatment for indigent patients. In 1936 only 60% of persons who died from pulmonary tuberculosis had had sanatorium treatment, and only about half of those who were found to require this treatment had entered an institution within one year of diagnosis. An investigation by the Department of Health showed that the number of sanatorium beds was adequate, but that the duration of sanatorium treatment was often unnecessarily long owing

* *Canad. publ. Hlth J.* 1941, 32, p. 502.

to the lack of an organised programme of post-sanatorium care, such as facilities for outdoor pneumothorax refills. There were also marked differences in the cost of sanatorium treatment in different areas. It was shown that many of these problems were due either to failure on the part of the local authority to fulfil their obligation or to a stringent interpretation of indigency on the part of the authorities or of the patients themselves. In 1938 an amendment to the Sanatoria for Consumptives Act was passed, the practical effect of which was that the 901 organised municipalities were made responsible for post-sanatorium care only. This includes transport from the sanatorium to the patient's home, the provision of proper accommodation, food and clothing, and the necessary out-patient treatment. A municipality which fails to remove a patient within thirty days from the receipt of a notification that he is fit for discharge from sanatorium is liable for the sanatorium charges until he is removed. An important part of the scheme was the organisation of local medical and hospital associations into pneumothorax treatment centres, of which there are now 60 in the Province. An approved physician is paid up to $3·00 for a refill, of which the patient contributes a portion according to his means. In addition, tuberculin for diagnostic purposes was placed on the free list of biological products issued by the Department. An Act of 1939 gave medical officers of health power to examine any person suspected of being tuberculous, and subsequent legislature has given powers of detention of tuberculous persons in sanatoria.

A three-year trial of the new policy has shown that there is now a much shorter delay between diagnosis and admission to sanatorium. Patients are no longer retained unduly after a period of maximum sanatorium benefit has been reached, and the percentage of re-admission has decreased. As compared with the 1936 figure of 60%, 75% of persons who died from pulmonary tuberculosis in 1939 had received sanatorium treatment. The cost to the municipalities has very greatly decreased, and patients are now relieved of the financial worry associated with treatment. The expense of sanatorium treatment is spread uniformly throughout the Province. As the government contributes over 90% of the cost of this treatment, officials of the Department of Health visit each sanatorium periodically and carry out an inspection of patients and institution. An important result of the scheme is that a uniform system of accounting and of medical statistics has been introduced throughout the Province ; this should much facilitate clinical and epidemiological research in the future.

Birthday Honours

Medical Officers of Health will be pleased to note the inclusion of three of their number in the list of Birthday Honours published in the *Supplement* to the *London Gazette* on June 11th. Wyndham Parker, M.C., M.B., CH.B., M.O.H. for Worcestershire, receives the C.B.E. (Civil Division), and Charles Francis White, M.D., M.O.H. for the City of London, and Ernest Kenneth Macdonald, M.D., M.O.H. for Leicester, receive the O.B.E. (Civil Division). All three of these honours were for services to civil defence.

Sir Henry H. Dale, President of the Royal Society, will retire from the post of Director of the National Institute for Medical Research on September 30th, 1942. To succeed him the Medical Research Council have appointed Prof. C. R. Harington, F.R.S., present Professor of Chemical Pathology in the University of London and Director of the Graham Medical Research Laboratories in University College Hospital Medical School.

Dr. Thomas Phare Puddicombe, Deputy County Medical Officer of Health, Essex County Council, retired on March 28th, 1942, on reaching the age of 65. He has had 35 years in the Local Government Service and came to Essex in 1920. He is a Fellow of the Society of Medical Officers of Health and for many years represented the School Medical Group on the Executive Committee of the Society. He gave loyal and devoted service during his 22 years in Essex, particularly in connection with the school medical service and mental deficiency. The County Medical Officer, Dr. W. A. Bullough, and his staff made him a presentation as a token of their esteem.

Miss E. E. P. MacManus, O.B.E., Matron of Guy's Hospital, has been elected President of the Royal College of Nursing for the year 1942-43.

EFFECTS OF WAR-TIME NUTRITION ON CHILDREN

By C. Fraser Brockington, M.D., D.P.H.,
*County Medical Officer, Warwickshire**

Some consideration of dietetic standards is essential to a discussion of the effects of war-time nutrition on children. In a desire to find an intelligible formula, however, we must not blind ourselves to the fact that the subject is complicated and our knowledge meagre. But some sort of guess as to the human requirements of known essentials must be made for without a yardstick measurements for comparison are virtually impossible. What does a child require in the way of protein, fat, carbohydrates, minerals, and vitamins for really good health ? As Sir John Orr (1942) has said, " there is all the difference in the world between a diet which will just prevent pellagra, gross scurvy or rickets, and one which gives perfect health."

Requirements

A child of 10 years needs approximately first-class protein, 50 g. ; phosphorus, 1 g. ; calcium, 1 g. ; iron, 15 mg. ; vitamin C or ascorbic acid, 50 mg. ; vitamin D (1, 2 or 3), 15 mg. ; vitamin B_2 or riboflavin, 3 mg. ; vitamin A, or carotene, 2 mg. ; vitamin B_1 or thiamine, 1 mg. Fat and carbohydrate will be required in sufficient quantities to make up the necessary 2,500 calories. On present knowledge, neither fat nor carbohydrate in themselves can be reckoned as essentials ; we have at last realised that we do not live by calories alone. But on the other hand something more is needed than protective elements alone, and fat, to say the least of it, may be necessary for faeces formation and for palatability. When fat is present carbohydrates must be included in the proportion of not less than 10 to 15% of the total energy requirements in order to prevent ketosis. No mention has been made of vitamin P, or of nicotinic acid, the anti-pellagra agent, or of any of the rarer or less well-understood vitamins.

Pre-War Diets

Such a standard as the one outlined is greatly in excess of anything achieved before the war for most of our children. The provision of first-class protein was known to be low. Where the family was large and the income small, first-class protein to all intents and purposes disappeared from the diet, so that the child of 10 might have as little as 5 g. daily (the so-called bread-and-sugar diet). This essential material, upon which the child's structure is built, was shown to decline in direct relation to the increase in size of the family. Something like 50% of our child population (Brockington, C. F., 1938) before the war received less than the amount of first-class protein in the B.M.A. diet, which for a child of 10 has been conservatively placed at 35 g.

With minerals the same sort of picture prevailed. Helen Mackay and others have shown that anaemia was common and iron intake deficient. Calcium and phosphorus deficiencies were prevalent. Sherman placed the calcium requirements of children from 3 to 13 years of age at 1 g.—that is, an amount provided by a quart of milk. It should be remembered that calcium from any source other than milk is, according to present evidence, poorly utilised. How many children in England have ever had a quart of milk a day ? Potts (1939), in his analysis of 205 families in Yorkshire in 1939, showed that the consumption of milk per head averaged less than a quart a week, and Khan (1940), studying the families attending a dispensary in Newcastle-on-Tyne, showed that in unemployed families the amount was less than half-a-pint a head a week.

All the other essential vitamins have been found by various workers to be lacking in varying proportions, with particular reference to large families. Deficiency of vitamin A has been widespread. As one example of many, Jeans and Zentmire (1934) observed that 45 out of 213 children had subnormal

* An address delivered to the Midland Branch of the Society of Medical Officers of Health on March 5th, 1942.

dark adaptation which recovered on a good diet with cod-liver oil in an average of 12 days. No reliable figure for the average intake of vitamin A has been given, but it is certain that it is considerably less than 2 mg., which make up 6,000 international units. The almost universal deficiency of vitamin D is similarly a well-established fact. Calciferol is found to any great extent only in eggs and fish oils, which were entirely absent from the diet of a large part of our child population before the war. As a consequence, rickets—or many of the lesser effects of rickets—was very common.

The main source of the vitamin B group, the germ of wheat, had for long been denied to our population owing to the practice of extraction to obtain a white flour. The position with thiamine is complicated because larger amounts are required in proportion to the amount of sugar eaten, and also because it is not stored to any extent in the body. Probably, although accurate figures are not available, the diet of our children before the war contained no more than a fraction of the minimum 1 mg. of thiamine a day. In this connection it should be remembered that, although beri-beri is rarely seen in England, other manifestations of thiamine deficiency are not difficult to find, and it is particularly important, following the discovery that thiamine is the natural producer of appetite (McCollum, E. V., Orent-Keiles, E., and Day, H. G., 1939) to note to what an extent anorexia has been prevalent among our children. Very much the same can be said of vitamin C. A careful experiment by Elizabeth Murphy (1941), of the Maine Agricultural Experimental Station in America, showed that only one child in seven attained the minimum dietary standard of one good vitamin-C food daily. Scurvy has not, of course, been commonly seen in recent years in this country, but it is fair to assume that many of the ill-effects of a low intake of vitamin C have been evident among our children, particularly a lowered resistance to infection.

Changes During the War

The complex situation of war has brought about profound changes both as regards the quantities and qualities of our foodstuffs as well as in our attitude towards them. The three most important factors affecting the distribution of food to our children are probably (1) rationing, (2) dispersal of children to new homes, and (3) improved wages (even the wages of the farm labourer have increased). As regards rationing, Dr. Widdowson (1942) stated recently that if children consumed their rations those up to 8 would be as well off as before the war, and those over 8 would be less well off; adolescents in theory suffered considerably. As to the dispersal of children, we have unfortunately little absolute evidence of its effects, but it would appear reasonable to suppose that many children, particularly those from the slums, must have benefited greatly by improved feeding in new homes. As regards the improvement of wages, this must be taken in conjunction with the Government scheme for controlling food prices, and it is clear that many children must be obtaining food to-day which their parents would have been unable to afford before the war.

Except in the ways mentioned, the Government has moved only slowly in taking positive action on the food front. This may be due in some measure to an absence of medical advisers. Chemists and other scientists, however eminent, cannot be expected to appreciate the importance of nutrition to quite the same extent as would a physician. There has also been a conflict of views from the various interested bodies. Despite these handicaps, the Government has recently taken action. The National Food Education Campaign was an early attempt to interest the public in the newer knowledge of nutrition. The introduction of a scheme for a priority class for milk has been a significant step, and children are benefiting more since the milk supply has been restricted than they did when supplies were more abundant. Mothers now stop the school doctor with a request that little Tommy should have a second bottle of milk, whereas in the past they resisted the suggestion that he should have milk at all. The significant change in attitude towards milk has been well demonstrated by a survey carried out in Aberdeen last year by the local Child Nutrition Council. This showed that 100% of women and children eligible for milk under the National Milk Scheme had availed themselves of it, thereby increasing the average per head consumption from 2·7 to 4·1 pints per week. It is clear that the past two years have made us more milk-minded. The Orr policy is now followed by the Government—*i.e.*, dairy animals are increased at the expense of cattle as fast as is practicable, a rate which, I am told, amounts to about 15% gain a year. The Government have also at last recognised the value of dried milk and taken steps to increase our imports. A shipload of dried milk will very considerably exceed in value a similar load of meat; in fact, the stores of calcium and phosphorus and the first-class protein—to say nothing of vitamins A and D if it is a whole milk—make dried milk the most valuable of all foodstuffs.

The Government have now restricted manufacture of bread to their "wheatmeal loaf," 85% extraction flour, which they intend to fortify with calcium. In November of last year the *Lancet* (1941) published an indictment of the methods of the provision of wheatmeal bread, showing that there was no uniform specification and that often bad baking had prejudiced the public against it.

Then we have school meals. After the famous Circular 1771 of November last year it became clear not only that local authorities were to be urged to extend their scheme of school meals, but also, and more important, that at last official recognition was being given to the importance of a properly balanced meal. The Circular states, for example, that the meal should contain 20 to 25 g. of first-class protein, thus ensuring that this one meal would provide something like half the day's requirements. This was to be done by providing 2d. worth of meat, one-fifth pint of liquid milk, 1 oz. of dried milk and one-tenth oz. of cheese. All must agree that this would constitute a tremendous advance on many of the school meals that have been given. Personally, I am a little doubtful about the 2d. worth of meat, and in my county we have increased the amount of dried milk and provided only 1½d. worth of meat. This gives a better result at a slightly less cost. It is doubtful to what extent this Circular has affected the situation generally, as it has not been in operation very long. In the county of Warwick the number of meals now being given is approximately 3,000, being 8% of the total of children, and the increase as a result of the Circular has been from 4 to 8%. There have been great difficulties in obtaining premises and equipment. In Leicestershire (Brockington, W. A., 1942) the present number is 30% and plans have been put forward to increase the meals to 75% of the children, so that out of every 4 children 3 would receive a midday meal.

Then there is the Government Scheme for fruit juices, which is an extremely enlightened attempt to provide children—in the first place the babies and toddlers—with vitamin C and vitamins A and D. In the county of Warwick there has been certain reluctance on the part of many of the mothers to make use of the scheme, and there have been considerable administrative difficulties in arranging for distribution. But the idea is right, and once the machinery is in operation there should be great possibilities.

Effect on Physique

Jenss and Souther (1940) have pointed out, after a long and exhaustive analysis of the literature, that none of the known indices for comparing nutrition in children are of any value, and that the clinical judgment of the paediatrician is also liable to considerable error. There is much truth in this, as all of us who have been associated with the Board of Education A.B.C.D. gradation of nutrition would agree; yet comparisons by simple height and weight over a period of time can be relied upon, and there is conclusive evidence that the physique and general condition of our children over the past twenty years has much improved. Martin (1940) showed that in London school-children the numbers classified as of poor nutrition declined from 10·2% to 4·6% between 1911-14 and 1930-35. It has also been shown that there was before the war a striking difference between physique of public and elementary school-children, and that the rate of growth of public school-children exceeded by 50% that of elementary school-children (Brockington, C. F., 1939).

What has happened since the war? Unfortunately we know very little. Medical officers of health have been overwhelmed with work and have been unable to undertake the necessary research; moreover, the effects of good and bad feeding are not immediately evident and may take years to show. There are a number of *ex parte* statements but very few definite figures. Dr. Glover (1942), for example, said there was reliable evidence, obtained from observations from school doctors, nurses and teachers, *against* the suggestion of a deterioration of child health following the war. Dr. Cassie (1941) said that "on the whole children are not losing weight and there is no increase of rickets although there is some increase of anaemia." Dr. Helen Mackay (1942) has said that in the winter of 1940 there was some increase of rickets in her clinics but no signs of scurvy, of angular stomatitis, or of conjunctivitis.

Some actual figures were supplied by W. W. Payne, and E. Topley (1941) for vitamin-C deficiency. In a base hospital in the spring of 1941, 14 out of 27 children did not become saturated with full saturation doses after three days, and the hospital diet averaged only 6 mg. of ascorbic acid on average helpings of vegetables. These figures have been corroborated by L. J. Harris (1940), of the Dunn Nutritional Laboratory, Cambridge. He said that of 35 elementary school-children, 14 were deficient, 5 severely, although none of the children from a neighbouring institution, where the feeding was good, were found to be deficient in this vitamin. Perhaps the only two investigations of any magnitude are those of Dr. E. C. Downer (1940), M.O.H. Chorley, and Lockhart (1941), Deputy M.O.H. in Gloucestershire. Downer observed that 549 out of 2,776 children presented evidence of under-nourishment. Analysis of these figures, however, showed that only 70 of the 549 were due to shortage of food and 90 to improper or inappropriate feeding. Following Spence, in his survey of pre-school children in Newcastle, Downer emphasises that past illness accounts for much malnutrition. Downer also stated that "of the 50 in which the under-nourishment was due to sheer poverty, and the 99 where it was due to improper or inappropriate feeding, there was also a lamentable story of parental ignorance"; and he added: "this state of affairs has been so aggravated since the war that malnutrition has risen to 10·6% in 1939 and 19·7% in 1940." Lockhart (1941) found there had been a deterioration in health in the elementary school children in Gloucestershire, which, he said, was due mainly to a shortage of protective foods. An interesting statement was made by a Manager of a Co-operative Store in the district that the quantity of food passing through his hands was less than 50% of the pre-war supply and that eggs, fruit and cheese were always difficult to obtain.

So far, therefore, as we have it, the evidence suggests not that the health of our children has improved but that it has deteriorated. I think, however, that we should remember that these investigations were made in the early part of the war, and it is difficult to believe that they do really present the true picture for the whole country.

Long-term Policy

It remains to discuss what more the Government might do to improve our children's nutrition and general condition. I should like to suggest the introduction of family allowances. It is evident that as more children are added more money is required to support them. A scheme of insurance in which parents and industry and the Government participated should make it possible to provide a reasonable additional sum of money for every child, so that the chances of a child growing up fit and strong would be as great in a large as in a small household. I place this proposal first, because I believe that such a measure alone would have an almost revolutionary effect upon the physique of our nation. It has been resisted largely on political grounds.

Secondly, there seems to be no reason why a midday meal should not be provided for every child at school. The sight of children eating a piece of bread or a morsel of cake while playing in the school ground would disappear for ever; so would stories of country school-children who after walking a considerable distance to school on a partly-filled stomach in the morning eat their scraps in the playground at midday and arrive home in the evening too fatigued to eat enough of the hot meal the mother has prepared. Once we can get this question of growth into a proper focus we shall no longer talk about the dangers of lessening parental responsibility by giving meals at school.

Thirdly, I advocate the compulsory provision of wheatmeal or, better still, wholemeal bread. Wholemeal flour, if properly prepared and baked, cannot have an unpleasant taste even to the most fastidious.

Fourthly, I think that the value of the Oslo breakfast should be recognised. A succession of experiments both in Norway and in London have shown that the rate of growth of children fed on a midday Oslo meal, as opposed to the usual hot meal, was much greater than that of children fed on an ordinary hot meal. But due to our conservatism we are loath to take it up. W. M. Wright (1940) said that where the Oslo meal was offered to industrial workers in place of the hot meal they continued to choose the hot. But a recent communication to the *Lancet* (1942) showed that this certainly was not the case in a secondary school in North Middlesex, where the meal became very popular among a section of the girls.

Only recently Borland (1940) gave results of the feeding of children in Bethnal Green on the Oslo meal. He showed that in height and weight the children increased 25% more than the "hot meal group," and that their haemoglobin averaged 93 % compared with 81%. The Oslo group had fewer minor ailments and less constipation, and chronic skin ailments had completely disappeared. The basis of the meal is wheatmeal bread, vitaminised margarine, salads, and milk. The bread, margarine and salads are given *ad lib.*, the average amount eaten being approximately 4 to 6 oz. of bread, 1 to 1½ oz. of margarine, 2 oz. of raw green vegetables, and 2 oz. of raw root vegetables. Biscuits, rusks, or oatcakes are given as hard tack, and a variety of protein supplements, such as liver in the form of the Danish sandwich, herrings, shrimps, sardines, cod's roe and cod mayonnaise, not to mention cheese and galantines, can be utilised. A typical dish in the North Middlesex Secondary School was "small portions of herrings, sardines, salt cod, mayonnaise, shrimps or fried cod's roe, with cress and tomato and grated carrot and swede." The protective contents of such meals are very high, and there may be as much as 55 mg. of vitamin C. The meals are cheap and easy to prepare, so that they would be practicable in country schools where cooking facilities are difficult to arrange. The Oslo meal requires imagination and intelligence to prepare, so that a capable dietician cook is indispensable. In England we are ready to give labour but not thought to our food; the Oslo meal requires thought but not labour.

Fifthly, it is possible to increase still further the amount of valuable foodstuffs produced in allotments. The Child Nutrition Council (*Wartime Nutrition Bulletin*, 1942) has stated that an allotment of 10 rods, cropped according to recommendations of the Ministry of Agriculture, can keep a family of 5 in vitamin C over the year. Even greater use can still be made of the tomato, which is reasonably easy to grow during the summer months.

Short-term Policy

As a short-term policy, dictated by war conditions, I suggest an extension of the system of fortification. I should recommend the fortification of dried milk with vitamin D_3 and also with vitamin C. Jam might properly be fortified with vitamin C. Bread might be fortified with dried milk. This would add enormously to its nutritional value, and, in fact, lead to an improvement in its palatability. Dried yeast should also be used for fortification. Brewer's yeast is enormously rich in all the known substances which go to make up the vitamin B group, and it is clearly capable of preparation and extraction on a commercial basis. An extract of yeast has a pungen flavour, but if it were used to fortify foodstuffs its disadvantages could be overcome. Experiments are now in progress in the Laboratory of the British Distillers Corporation, Ltd. Then, again, greater use might be made of thiamine. It is said that at present there is only one factory in England producing synthetic thiamine. But I do not wish to suggest that the

addition of thiamine to white bread is a reasonable substitute for wholemeal flour.

It is certain that careful attention must be given to the science of fortification in the above, and many other ways, if we are to avoid any of the evil consequences of prolonged war with shortage of foodstuffs. It is time, for example, that iron therapy ceased to be the prerogative of the general practitioner or chemist, and there seems to be no valid reason why the Minister of Food should not add a suitable inorganic salt of iron to our food. I also recommend greater use of vitamin concentrates in infant welfare work. Striking figures have come from Germany. Hardnapp (1940) has shown that a single large dose of vitamin D was able to protect babies against rickets over the whole of the winter; Hartenstein (1940) said that in the winter of 1938-39 in six welfare centres in Leipzig there was evidence of 78·8% of rickets. A single dose of vitamin D_3 by the mouth protected 69·3% for the whole winter.

Greater use could be made of the drying of foods, particularly overseas prior to importation, for it is important to limit shipping space to actual food values, and water can always be replaced when the food reaches this country. The experimental station at Cambridge has shown (Smith, 1942) that practically all foods are capable of such treatment. Meat can be dried to 35% of its bulk weight, eggs to 26%, milk to 11-12%, and fat to 85%, and none of these processes, I am reliably informed, greatly affect the all-important factor of taste. If this policy were extensively adopted, essential protective foodstuffs of high protein content, like milk, could be produced overseas, thereby saving the shipping space necessary for importing cattle foods and giving greater opportunity to farmers in this country to concentrate on the production of energy foods directly consumed by man. There seems to be a particularly good case for an extension of the drying of eggs in view of the fact that these rank second to milk in the list of foods in order of importance; an energetic policy of importing dry eggs should be carried out.

Still greater use could be made of canning. It is now known that (again with modern methods) the nutritional value of foods is practically unaffected by canning. W. B. Adam (1941) showed that the value of canned vegetables was, with the sole exception of riboflavin, higher in all respects than the same cooked at home, even as regards vitamin C. An enlightened canning policy will assist in solving the problem of spreading supplies of perishable fruits and vegetables evenly over the year.

I should like also to suggest that the Government would do well to recognise the value of medical advice on the food front. The problem is one which interests so many scientists —chemists, biochemists, agricultural specialists, and research workers in many experimental stations—that the physician is apt to be overlooked. Nutrition is primarily a medical problem. The medical profession realises that in the last war Germany was practically defeated by a lack of vitamin D, and there is risk that one or other side will in this war fail from having overlooked a preventable nutritional malady, particularly as feeding problems become more difficult. There is every indication that medical advice is being used to the full in the enemy camp. German soldiers, and probably the great bulk of the German nation, are supplied with vitamin concentrates and other essentials made in the laboratory. It is important that our Government should be equally well advised, and this Society could probably help in putting forward this point of view.

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REHABILITATION OF THE TUBERCULOUS*

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(*Concluded from p.* 163)

Working Capacity

Social legislation provides inadequate payment for complete disablement only, for a period much too short in respect of tuberculosis. A patient discharged from sanatorium, whether he is sputum-positive or sputum-negative, whether really able to do work or not, therefore attempts to get some sort of work in order to live. Such work he can generally obtain only by hiding, with varied degrees of success, his health history—a procedure that does not help in maintaining self-respect or give a feeling of security. About one-half the patients discharged from sanatorium find their way back to an occupation. Many endanger not only themselves but also others, particularly in occupations such as those involving the handling of food or looking after children. Many eventually become too ill to do any work, or die, but a large proportion go on working for years, though this does not imply that they are really fit for work. On the other hand, some who cannot do full work would be able to do some work under favourable conditions, and in the aggregate this represents an asset to the community. As Brieger puts it, can this asset be realised under present conditions?

There are institutions that consider all sputum-positive patients as unfit for work, although some of them are perfectly capable of work, and, on the other hand, some consider any positive-sputum patient as fit for full work if he has been able to do a couple of hours gardening and a two-mile walk a day under sanatorium conditions. In actual fact, the estimate of working and earning capacities is of fundamental importance and these cannot be judged merely on the basis of clinical diagnosis. The wage-earning capacity of a substandard worker must be estimated by physiological methods and economic considerations—principles which are used in industrial research, where medical opinion is constantly sought. This is specialised work, and it cannot be assumed that all tuberculosis officers or medical superintendents have a natural aptitude for it. For many patients correct assessment requires not only clinical intuition but the application of certain tests and watching under actual working conditions, which are far removed from what comes under the term "occupational therapy." Brieger puts it: "It is rather a fiction than a fact that exercises or work in the sense of occupational therapy can be successfully used as an efficiency test"; and again: "Work therapy becomes a test only when it is carried out in the form of regular employment—that is as routine work of vocational character." The conditions under which the laboratory efficiency tests, such as the ergometric test, are carried out are artificially produced and do not really correspond to the conditions of industrial life. The function of efficiency tests is, however, to discover any latent dyspnoea, so that directions can then be given which will cause the human machine to be used both economically and sparingly in relation to its functional reserve.

Capacity for work depends not only on the physiological tests for efficiency, but also on what has been termed the psycho-technical suitability of the patient to vocational labour. Many patients have had only an elementary education without any vocational training. A low physical standard may be compensated by technical or mental superiority, and a fully-skilled worker temperamentally suited to his work will have a high standard of efficiency even with a physical defect. Thus, a great deal more than even functional tests must be known about a sub-standard worker before he can be rehabilitated.

Up to the present I have confined myself to discussion of pulmonary tuberculosis. Adults suffering from so-called surgical tuberculosis form a much smaller group, but the problems of rehabilitation apply no less to them. In fact the problem in their case is complicated (1) often by some permanent disability in a limb, and (2) by the fact that their lesions are part of a chronic disseminated tuberculosis. This suggests that for most such persons, even if quiescence of lesions is obtained, more or less permanent after-care is indicated.

After-Care and Rehabilitation in Practice

After-care and rehabilitation depend on the composition of the "ex-sanatorium" material. The term "ex-hospital" would be preferable. There is in fact no longer any justification for retaining the term "sanatorium." First, there are disadvantages in singling out by name the institutions for the treatment of a particular disease. Secondly, because of the name many sanatoria which have no adequate facilities for the modern treatment of pulmonary tuberculosis "get away with it." Thirdly, the conditions as regards situation in the country, etc., are no more essential in regard to a tuberculosis hospital than in regard to any hospital. Fourthly, the term "sanatorium" is connected in patients' minds with an institution for curable cases only. Lastly, it would be advantageous if all cases first diagnosed could go for assessment to the institution however short the stay in it, rather than that this assessment should be done hurriedly and badly in the dispensary, many people who might benefit by treatment thus being deprived of it through a faulty estimate of their condition.

Of the patients leaving the institution after completion of treatment, two groups can be discussed briefly:—

The first comprises those who are complete invalids and need admission to hospital for a short time until death: here it is necessary to ensure the economic life of the family, but this is merely a continuance of what must have been carried out before.

Secondly, there is, at the other extreme, a group of patients who on their history and clinical findings may be considered completely healed, and be allowed to return to their old job or to another suitable job without an interval. These probably form a small group at present, particularly where an insufficiency of beds limits the period of treatment after quiescence is obtained. But I believe it will form a gradually increasing larger group as more and more cases of early bronchogenic tuberculosis are detected by mass radiological examinations and are adequately treated. The small risk of relapse among these patients can be lessened by persuading the employers to make slight arrangements for the benefit of these patients. I have in mind such points as allowing them to begin work a few minutes later in the morning and leave a few minutes earlier in the evening, so as to avoid the rush and discomfort in travelling; the provision of a small rest room where the workers can lie down for half-an-hour or so during the lunch hour; a longer annual holiday; and so forth.

The three main groups we have to cater for are: (1) those quiescent patients who need a period of industrial convalescence —that is, work under good hygienic and physical conditions and medical supervision so that arrest of the lesions can be established by the end of the period, and they can then safely be allowed to go back to ordinary industrial conditions; (2) the group of "good chronics" who need employment under sheltered conditions for the rest of their life—that is, the substandard workers; (3) the group of "bad chronics" who under suitable conditions can do some work for a number of years. Therefore the problem is to provide temporary sheltered employment, and to provide permanent sheltered employment.

* A lecture delivered on September 4th, 1941, at Harefield Sanatorium during a post-graduate course arranged under the auspices of the Joint Tuberculosis Council.

† The views expressed are those of the author and do not necessarily represent those of the Middlesex County Council.

Temporary Sheltered Employment

According to the Report of the International Union Against Tuberculosis, temporary sheltered employment might be organised in the following ways:—

1. Intelligent patients who are not under the necessity of earning their full livelihood could in some cases, under medical supervision, create the conditions of industrial convalescence at home.
2. Half-time work and financial compensation for reduced wages may be a good alternative.
3. By means of temporary sheltered employment on the staff of the sanatorium in which treatment was initiated.
4. By attaching industrial colonies to sanatoria. This is considered the ideal solution for temporary sheltered employment. The work is not to be considered as a hobby or as so-called occupational therapy, but there must be one or more independently organised industries with a certain turnover and full pay for the workers.
5. Urban workshops.
6. Industrial settlements of the Papworth type.

Industrial convalescence at home and half-time work are likely to be possible for only a small proportion of patients under the present system of social insurance. I shall refer to this again later. For employment on sanatoria staff important difficulties, which I shall mention later in connection with permanent sheltered employment, must be overcome, but at the best it cannot solve the problem of temporary after-care for all those who require it. Industrial settlements were not designed primarily for temporary but for permanent after-care. They seemed all-important at a time when the group needing permanent after-care was the main problem of after-care. This, as I have shown, should no longer be true. Industrial colonies attached to sanatoria, and urban workshops are the most likely practical measures for temporary sheltered employment.

Permanent Sheltered Employment

So much for the quiescent case. For the non-quiescent patient the alternatives are fewer. For him the sheltered employment must be permanent. He is and remains a substandard worker. The conditions of work must be adjusted to make his output as normal as possible. It is obvious that the earning capacity of such workers can be assessed only in special industries (as in those connected with sanatoria), and they must be retained in similar sheltered industries. At the same time, of course, such industries cannot be built up with substandard labour unless the capacity of the workers is known.

The *bad chronic cases* surviving after two years, but unfit or partially fit for work, present a great problem. I cannot convince myself that the work of these can really be utilised in any industry, although it is obvious that some of these people could do some work at home. The institutional segregation of these patients offers immense difficulties whether this is carried out by urban settlement scheme, incorporation with industrial settlements, or in hostels or homes. It is particularly in regard to this group that the principle employed in the part-time sanatoria established in Russia deserves close study, assuming that work could be found for them through usual industrial channels. Henry E. Siegerist gives the following description of them:—

"Patients who are able to work, but require some regular treatment and care, are admitted to these sanatoria. They arrive at about six o'clock in the evening after working hours, have a hot shower or bath, change their clothes, and have dinner. Afterwards they rest for an hour or two, if possible on porches; their temperatures are taken, and they are examined by a physician. They spend the time from eight until ten o'clock in the club of the institution or in undergoing medical treatment. From ten in the evening until six the next morning they are expected to be in bed. They then have physical exercises and breakfast, and return to work. Persons on night shifts are admitted to day sanatoria in the same way. A very important function of these part-time sanatoria is the education of patients. They are taught how to live properly in order to improve their condition."

The *good chronic cases* form a larger group unemployable in ordinary industrial life. The Employment Committee of the Joint Tuberculosis Council sent a questionnaire to 220 em-

ployers asking whether they would employ in their industry 1% bacilliary part-time workers. Only 25% answered, and these answers contained decided refusals. Obviously an employer is concerned only with working capacity, and so long as there are enough unemployed fit workers there seems no reason why he should employ those disabled in any way.

Three Methods

The solutions offered have been (1) employment in sanatoria; (2) urban workshops, such as the Altro workshops in America; and (3) industrial settlements such as Papworth. It is impossible here to go into full details concerning these schemes. Individual institutions such as the Altro workshops are doing excellent work; and, similarly, Papworth has been of immense propaganda value in attracting attention to the problems of after-care. But taken as a whole they have solved the problem of after-care and rehabilitation for not more than an insignificant proportion of those involved. In fact, the success of individual institutions may be largely due to their remaining unique, and thus obtaining facilities, consideration, and financial help which might not be forthcoming otherwise. Many of us believe that a large number of patients could and should be employed on the staff of sanatoria when quiescent, but it is doubtful whether this could be done on a large scale with good chronics—certainly not at present. Local authorities oppose the employment of both groups because of superannuation regulations and the risk of relapsing to a state of incapacity for work. It is time that even if these people were not on the sanatoria staff the local authority would need to pay for their treatment again. In fact, a relapse occurring when on the sanatorium staff is likely to be diagnosed earlier and therefore lead to saving in expenditure on treatment. But at the same time a number of people would have to be available immediately to replace those going sick.

As regards sheltered workshops, attempts to develop them here have certainly not been successful, for obvious reasons. Who is to run them? Who will provide the initial capital for their construction and equipment? The same local authorities who at present do not even provide an X-ray apparatus in any of their dispensaries? Can these industries compete with the output of normal industries without a deficit, and by whom will this deficit be made up? As regards industrial settlements, the difficulties associated with them are those I have already mentioned in connection with urban workshops, with the additional difficulties associated with colonisation. Papworth and Preston Hall have proved a success as industrial undertakings in spite of great handicaps, but how far have they been a success in solving the problem we have been discussing? To my knowledge no details of the personnel at work in either institution have been published, and one wonders, therefore, how far the success of the settlements has been due to the use of labour from patients whom we would call "stabilised arrested," and therefore fit to return to normal industrial life.

Sheltered Industries

After studying the report of the International Union Against Tuberculosis, it may be concluded that the best after-care scheme for the quiescent and the good chronics consists in having connected with each sanatorium sheltered industries in which all patients whose treatment is completed would pass through a period of industrial convalescence; those becoming stabilised would be absorbed into normal industrial life, and others would settle in these sheltered industries, a settlement gradually being built up with them. This presupposes the following conditions:—

1. The first is the existence of well-equipped and well-staffed sanatoria in which modern intensive treatment is carried out. These do not exist throughout the country. The present arrangement by which each local authority, big or small, rich or poor, progressive or backward, guided by a medical officer who is or is not properly informed on tuberculosis matters, with a Ministry of Health which leaves it to progressive authorities to act as an adequate stimulant to others, even in regard to the provision of X-ray equipment—this arrangement, I say, is not likely to lead to the establishment of such sanatoria throughout the country.

2. Assuming the existence of such sanatoria, which would need to be planned with due regard to local incidence of tuberculosis and the probable need of post-treatment arrangements, sheltered industries and settlements might well be built up provided the capital were available. Under the present system this could hardly be provided by separate authorities. In fact the more one sees of tuberculosis work, and the more thought is given to the control of the disease, the clearer does it become that the present handling of tuberculosis under separate local authorities is wasteful, ineffective, and out of date. Tuberculosis as a whole must be tackled nationally. I cannot convince myself that a National Rehabilitation Board alone, as has been suggested, will do much if the rest remains as it is now.

3. It is assumed in the Report that the stabilised arrested workers after their industrial convalescence will return to their old jobs or find others. But will this always happen? The history of tuberculosis and the long absence from normal industrial life will almost certainly handicap them in relation to other workers.

4. The fact that Papworth and Preston Hall have remained the only industrial settlements suggests that under present conditions the establishment of such settlements in competition with normal industry is very difficult, probably more difficult that appears on the surface if one only knew the composition of the workers in them. These industrial settlements were not intended and should not be used for the stabilised arrested case. And, indeed, Dr. McDougall, Director, Preston Hall, has repeatedly stressed this point during the last few years.

Social Insurance

Under National Health Insurance no special provisions are made for the tuberculous patients. Nor does it provide compensation for people permanently disabled. The sum allowed is not adequate either in amount or in length of time to enable the tuberculous person to live without work. The slight increases recently passed do not affect this conclusion. It is astonishing that, while the local authority is prepared to pay £5 a week for the treatment of the patient in sanatorium for an indefinite period, the same patient when discharged from institution—although it is known that he needs special care and is liable to relapse within the next two years, when further expensive institutional treatment will be needed—should be considered as amply provided for with the 7s. 6d. a week from National Health Insurance. Tuberculosis falls in a class by itself in that it is a chronic incapacitating disease involving constant danger to the community as a whole. This alone justifies exception in regard to the benefits of National Health Insurance.

National Health Insurance, or some other system of insurance, should provide (*a*) an adequate sum on which the patient may live when not working during the period when stabilisation is being established, and (*b*) an adequate sum or pension on which to live for the chronic who has no work.

I do not suggest that this arrangement should be adopted in lieu of the schemes I have outlined, and certainly not that it is better for the patients concerned not to work at all—work is essential for proper adjustment to one's social environment—but, failing adequate schemes of after-care and rehabilitation, such financial compensation, available when the patient has no work, would be of distinct benefit and could be applied immediately. I need hardly add that the financial arrangements under the Poor Law Assistance Board do not meet the case.

In a Report prepared by a Committee of the Socialist Medical Association of Great Britain the suggestion is made that under National Health Insurance there should immediately be made available a cash allowance generous enough to provide for the relatively high standard of living that is necessary for the tuberculous patient and his family contacts. This, it is stated, means that the allowance must be enough to avoid his having to live on relatives, to send his wife out to work, or to apply to the Public Assistance Committee. It is further suggested that on notification every new tuberculous case would go into a first category which would entitle him automatically to receive the special National Health Insurance benefit without question for, say, a period of 12 months, because few working-class patients should return to work before this period has elapsed. At the end of the 12 months his case, together with that of the family contacts, would be reviewed by the tuberculosis officer (preferably acting in consultation with another physician or with a local board), and the future financial benefit would be decided upon according to whether the patient is at work, or according to the likelihood of return to work. Patients likely to have to remain idle indefinitely may at this review be placed under a second financial category.

This would, of course, not solve the problem of rehabilitation. The theoretical basis of this as outlined above appears sound, but it is difficult to see how it can be applied under the present conditions of tuberculosis control and under conditions of private industrial enterprise. Under the latter, competition is based solely on getting the largest profit for the individual or shareholder concerned. Under State industrial enterprise competition would still exist in that presumably the State would endeavour to obtain the most productive work possible from its workers and concerns, but, being responsible for the whole community, it could arrange the industries so as not only to absorb all available labour, but also to use substandard workers, with whom we are concerned here. The difficulties to be met when industry is under State control and how they can be overcome is illustrated in the following account from Siegerist's book *Socialised Medicine in the Soviet Union*:—

"A decree passed in 1935 by the Commissariat of Public Health and Trade Union Council requires directors of all enterprises to make special provision for tuberculous workers, their working hours may be reduced and social insurance funds will make up the balance of the wages. All larger factories have special dietetic dining rooms for such persons. In a factory in Kharkov they have their own workshop, called the prophylactic workshop. In a rubber shoe factory they have their own conveyor which moves more slowly. Since all enterprises have a definite plan for amount of production, it is obvious that a large proportion of tuberculous workers handicaps a plant so that many managers are not enthusiastic about employing them. In a radio factory in Veronezh the difficulty has been overcome by letting tuberculous men work as a special group outside the plan. Thus they do not handicap the enterprise, but add to its production figures. In more serious cases invalids from tuberculosis have organised co-operatives where they perform light work under medical supervision. Tuberculous patients are kept in their customary surroundings whenever possible. If they are skilled workers, every effort is made to prevent them from dropping to the ranks of the unskilled on account of their illness."

Without central control of both treatment and industry, a comprehensive solution of the problems of rehabilitation of the tuberculous, and for that matter of rehabilitation in general, may not be found. One might ask what is to be done now? I would reply, we must concentrate on improving treatment, stimulate the development of a satisfactory social insurance scheme, and do some intelligent planning of after-care for the time when circumstances will make its application practical.

In the preparation of this paper I have leaned heavily on the Report compiled by E. Brieger for the International Union Against Tuberculosis. I freely acknowledge this debt.

REVIEW

Gas Cleansing Stations. By Leslie Stewart, M.S.I.A., A.R.P.S., Training Officer, First Aid Posts, Manchester. London: Jordan and Sons, Ltd. 1941. pp. 63. Illustrated. Price 2s. By post 2s. 2d.

To their most practical series of publications on A.R.P. subjects Messrs. Jordan and Sons have added a very useful handbook on gas-cleansing stations. Its aim is to present to members of the casualty services, and particularly to volunteers at first-aid posts, precise instructions for handling persons exposed to contamination by blister gases. The instructions contained in official A.R.P. handbooks relate to Civil Defence personnel; and persons who are contaminated and wounded and quite possibly unable to fend for themselves may need quite different treatment.

After discussing the design of cleansing stations, the author deals with cleansing procedure and with the separate arrangements for C.D. personnel and the *ad hoc* cleansing stations for the general public. It is felt that reference might have been made to the possibility that the community may rely largely on facilities forthcoming from private householders, rather than upon special cleansing stations, which, even if provided in sufficient numbers, can surely never be adequately staffed to cope with a widespread attack.

The author devotes special chapters to detailed consideration of the routine to be followed at cleansing stations attached to first-aid posts dealing with injured and contaminated persons, at stations attached to hospitals (where the patients will be both seriously injured and contaminated), and at emergency and mobile stations. He describes precautionary measures to be taken at mortuaries when dealing with the contaminated dead, and devotes a chapter to the important subject of ensuring that each casualty shall have returned to him all his clothing and other articles taken from him at the cleansing station. He urges the necessity for the adoption of a standardised procedure for the reduction of gas casualties. Common use of this book should go far to achieve this.

RECRUITING STAFF FOR WAR-TIME NURSERIES

The attention of the Ministry of Health has been drawn to the fact that in some areas Medical Officers of Health are omitting to notify the local employment exchange of vacancies in war-time nurseries for untrained personnel. In Circular 2646, issued last month, the Ministry told welfare authorities that as all staffs other than fully trained general and children's hospital nurses and teachers have to apply for nursery posts at the Employment Exchange, it is "of the first importance" that all vacancies should be notified to the local exchange, whether for nursery nurses, candidates for the child care reserve, or other unqualified personnel. For probationers—girls between 16 and 18, willing to train for a nursery Nurse's Diploma—Medical Officers of Health are asked to apply to the juvenile department of the local employment exchange. The Ministry again emphasises that it is imperative, if these arrangements are to work efficiently and smoothly, that there should be the greatest possible liaison between the Medical Officer of Health and the Employment Exchange. As the number of war-time nurseries grows, the question of adequate staffing assumes greater importance. It would be, therefore, doubly unfortunate if would-be candidates were lost as a result of employment exchanges being unaware of present or prospective vacancies for nursery staff in their areas. The recruiting position is clearly set out in the revised edition of the Ministry's leaflet, "Helping with Children is a Real War Job," which will shortly be available. The arrangements outlined above apply in England and Wales.

JOINT TUBERCULOSIS COUNCIL

At a meeting of the Joint Tuberculosis Council on May 16th, 1942, with Dr. D. A. Powell (Wales) in the chair, Sir Wilson Jameson gave an account of his experiences with regard to mass radiology in the United States, where, he said, the 5×4-inch film was in favour. A recent departure, however, had been the co-operation with the Army authorities and the Ministry of Supply to secure a number of apparatuses capable of taking 35-mm. films, and he looked for suggestions as to the technical administration and other steps which might be undertaken for the best use of this apparatus among the civilian population. The Council subsequently decided to set up a committee to consider and report on the utilisation of facilities for mass radiology, with special reference to technique, administration and interpretation. The committee appointed was as follows: Dr. G. Jessel (Convener), Drs. Hebert, Watt, Ferguson, and R. A. Young. In view also of the need for action at an early date in connection with the nursing and domestic staff shortage, it was proposed and carried that: "In the opinion of the Council it is essential for the proper provision of nursing and domestic personnel that women liable to serve should be compulsorily posted to duty in sanatoria or other institutions." The Council decided to co-operate with Dr. Robb-Smith, through its Definition of Terms Committee, on the classification of tuberculosis. Dr. Ward suggested that the existing Ministry of Health classification was a good basis for further discussion.

The sixth summer school of the Nursery School Association of Great Britain will be held at Lady Margaret Hall, Oxford, from August 4th to August 18th, 1942. The first Scottish School, which is being arranged in co-operation with the Edinburgh Branch, will be held in Edinburgh from July 11th to July 25th. As numbers for both English and Scottish schools have to be guaranteed, the earliest possible booking is essential. Registration forms may be obtained from the Organising Secretary, N.S.A., at Hamilton House (Fourth Floor), Mabledon Place, London, W.C.1.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

COUNCIL MEETING

A meeting of the Council was held at Tavistock House, Tavistock Square, London, W.C.1, on May 15th, 1942, with the President (Sir Alexander Macgregor) in the chair.

There were present: Drs. J. S. Anderson, Cyril Banks, H. Stanley Banks, G. F. Buchan, J. J. Buchan, H. W. Catto, J. A. Charles, J. Fenton, J. Ferguson, D. H. Geffen, J. M. Gibson, A. G. Glass, C. E. Herington, J. W. Hunter, Sir Wilson Jameson, Drs. R. H. H. Jolly, A. W. Johns, G. Lilico, T. Orr, Prof. R. M. F. Picken, Drs. T. N. V. Potts, E. Virginia Saunders-Jacobs, F. A. Sharpe, J. A. Stirling, J. A. Struthers, R. Sutherland, Mr. A. Gordon Taylor, Drs. E. W. Caryl Thomas, H. G. Trayer, E. Ward, H. Gibbons Ward, H. C. Maurice Williams, and F. T. H. Wood.

Apologies for absence were received from Sir Francis Fremantle, Dr. J. E. Spence, and Dr. C. F. White.

In opening the meeting the President expressed the pleasure of the Council at Capt. Elliston's return to his duties as acting Executive Secretary after his recent operation. He added that they were deeply indebted to Lieut. G. L. C. Elliston, R.N.V.R., for securing compassionate leave so that he could attend to the Society's affairs during the absence of his deputy.

Sir Henry Brackenbury.—The President referred to the loss sustained by the Society by the death of Sir Henry Brackenbury, who for so many years was a representative of the B.M.A. on the Council. They would all remember Sir Henry as a valued friend of the Public Health Service. A vote of condolence with the family was passed by the Council, the members standing in a silent tribute.

Report of the General Purposes Committee.—Dr. Cyril Banks (chairman) reported the business transacted by this Committee earlier in the day, as recorded above. The Council approved and adopted the report with the exception of the paragraph in reference to the compulsory notification of scabies. It was agreed that the letter in this connection from the Urban District Councils Association should be referred back to the Committee for further consideration.

The Council elected Sir Alexander Macgregor, Dr. Cyril Banks, Dr. J. Ferguson, Dr. J. Fenton and Dr. J. A. Charles to meet representatives of the Medical Superintendents' Society to consider possibilities of co-operation between the two bodies.

Dr. Vynne Borland.—The Council accepted with great regret the resignation of Dr. Borland owing to ill health, and expressed their good wishes for his early recovery. It was agreed that the Metropolitan Branch should fill the vacancy on the Council caused by Dr. Borland's retirement.

Central Council for Health Education.—Owing to pressure of work in connection with educational schemes arising out of war conditions, the Central Council had asked the Society to select representatives who could be relied upon for frequent attendance. Present members able to comply with this request were Drs. W. A. Daley, James Fenton, J. Macmillan, T. Orr, R. P. Garrow, Maitland Radford, Ernest Ward and Mr. J. F. Pilbeam, L.D.S. This left six vacancies. It was agreed that two of these should be reserved for representatives to be elected by the Association of County Medical Officers on the understanding that such representatives would be usually available for attendance at meetings. The remaining four vacancies were filled by ballot from a list of members nominated by the Branches. Three members—viz., Drs. J. F. Galloway, D. H. Geffen, and G. Macdonald—were elected outright, but for the fourth place there was equal voting for Drs. J. Greenwood Wilson, J. W. Hunter, and Hugh Paul. It was agreed that each of them should be asked to notify his readiness to serve and whether he could conveniently attend the frequent meetings. Replies to this inquiry would be considered by the President, Dr. Cyril Banks and the Executive Secretary, and their final selection for the fourth vacancy reported to Council.

The Central Council desire that the Executive Secretary of the Society or his deputy should continue to serve as liaison officer between the two bodies.

Leaflets and Directions for National Dried Milk.—As requested by Council, the Maternity and Child Welfare Group submitted a draft leaflet, based on the collective experience of their members, for distribution to mothers and nurses with supplies of the National Dried Milk. The Council thanked the Group for their help in this matter and agreed that the draft should be forwarded to the Ministry of Food and the Ministry of Health.

President for Session 1942-43.—On the unanimous nomination of the Branches the Council decided to recommend Dr. Cyril Banks for election as President of the Society for the session 1942-43.

Vice-Presidents and Hon. Treasurer for Session 1942-43.—Sir Alexander Macgregor, Dr. F. T. H. Wood and Dr. James Fenton were elected Vice-Presidents of the Society for the Session 1942-43. Dr. G. F. Buchan was re-elected Hon. Treasurer.

Representation of the Society.—The following were elected to represent the Society: B.M.A. Council—Prof. R. M. F. Picken and Dr. T. N. V. Potts. B.M.A. Representative Body—Drs. G. F. Buchan, J. W. Hunter, J. Fenton and J. M. Gibson. National Milk Publicity Council—Dr. T. Orr. Central Council for the Care of Cripples—Dr. D. H. Geffen. Central Midwives Board—Dr. J. J. Buchan. Joint Committee for Matters Concerning the Midwifery Profession—Dr. T. Orr.

Dismissal of a County Medical Officer of Health.—Dr. J. A. Charles reported the final steps in connection with the sanction of the Ministry of Health for the dismissal of a county medical officer of health. After some discussion of various matters arising out of the inquiry which might affect the future status and responsibilities of medical officers of health, it was stated that attention had been drawn to these matters in the proper quarter. The Council decided to put on record their appreciation of the great services rendered by Dr. J. A. Charles and Dr. Charles Hill (B.M.A.) during the various stages of the inquiry, and of the attendance of the President to give evidence.

The Council then adjourned.

GENERAL PURPOSES COMMITTEE

1. A meeting of the General Purposes Committee was held at Tavistock House, Tavistock Square, London, W.C.1, on May 15th, 1942.

Present.—Dr. Cyril Banks (chairman), Drs. J. S. Anderson, G. F. Buchan, J. J. Buchan, J. A. Charles, James Fenton, J. Ferguson, R. H. H. Jolly, Gordon Lilico, Sir Alexander Macgregor, Prof. R. M. F. Picken, Drs. T. N. V. Potts, E. Virginia Saunders-Jacobs, J. A. Stirling, R. Sutherland, E. Ward, H. Gibbons Ward, H. C. Maurice Williams, and F. T. H. Wood.

2. Minutes of the meeting held February 20th, 1942 (printed in PUBLIC HEALTH, April, 1942) were confirmed and signed.

3. *Medical Superintendents' Society.*—A deputation from this Society (Dr. Peter Edwards, Dr. H. A. Kidd, Dr. Stanley Banks, and Dr. Ernest C. Hadley) attended to submit suggestions for co-operation with the Society of Medical Officers of Health. After an exchange of information regarding the respective constitutions of the two bodies, it was agreed that the Committee recommend the Council to appoint a small committee to meet representatives of the Medical Superintendents' Society to consider whether and how closer relations could be established between the Societies.

4. *Salary Cuts.*—Correspondence was reported from the British Medical Association and the British Dental Association in reference to the continuation for senior medical and dental officers of the salary reductions enforced by a county council under the Geddes economy scheme of 1921. Although the salaries offered by the county council for new appointments have complied with the Askwith scale, it has been decided by the professional associations that advertisements for future vacancies will not be accepted for their journals while the Geddes cuts are still retained for senior officers.

5. *Scabies Order, 1941.*—The Borough Medical Officers Committee submitted a summary of replies to a questionnaire as to the treatment of scabies by hospitals, chemists and doctors, from 22 metropolitan medical officers of health as follows:—

Treatment in Hospitals.—The views expressed are that in most boroughs there is adequate co-operation between hospitals and the public health departments. Seven replies, however, state that cases are at times treated without the knowledge of the department, and in three of these it is stated that this, however, refers to a few cases only, but in two cases it is considered that it amounts to a considerable number.

Treatment by Chemists.—Most of the replies are indefinite about the extent of this practice. In two cases, however, definite opinion is expressed that a considerable number of persons attend and receive treatment from chemists. A few replies state that the majority of such cases probably eventually reach the public health department, as a result of unsatisfactory treatment.

Treatment by Doctors.—Most of the replies have stated that cases are generally referred by doctors to the public health departments, but in eight cases the replies indicate that this is not by any means always the case, and in three cases it is stated that there are probably a considerable number of exceptions.

In most cases the opinion has been expressed that treatment by chemists or doctors without co-operation of the public health departments may be regarded generally as unsatisfactory.

The Borough Medical Officers Committee further reported that after consultation with the Secretary of the Pharmaceutical Society they recommended (1) that a letter should be addressed to the *Pharmaceutical Journal* indicating the pernicious nature of scabies and how essential a thorough treatment is, and advising chemists to direct any sufferers with whom they come in contact to the public facilities available for treatment; and (2) that a pamphlet should be prepared suitable for distribution to the public through chemists' shops. The recommendations were approved for adoption by the Council, and it was agreed to ask the Central Council for Health Education to prepare and distribute a suitable pamphlet.

The following report from the British Association of Dermatology and Syphilology was also considered:—

The sub-committees appointed by the Executive Councils of the British Association of Dermatology and Syphilology and the Society of Medical Officers of Health to consider the present epidemic of scabies met on two occasions at the Royal Society of Medicine. At the first meeting held on March 20th, 1942, there were present: Dr. MacCormac (in the chair), Dr. Gray, Dr. Semon and Dr. Barber (Secretary), representing the British Association of Dermatology and Syphilology; Dr. Fenton, Dr. Begg and Dr. Bacon, representing the Society of Medical Officers of Health; and Lt.-Col. McKenna and Dr. Mellanby, who were invited to attend. At the second meeting held on April 10th, 1942, the same members of the two sub-committees were present, and Dr. Buchan was also able to attend. Sir Alexander Macgregor could not, unfortunately, be present at either meeting.

After considerable discussion, the following proposals were agreed upon: (1) *Notification.*—That scabies should be made a notifiable disease. (2) *Propaganda.*—That steps should be taken to give instruction by means of suitable methods of propaganda in the nature, mode of spread, symptoms, and principles of prevention and treatment of the disease. (3) *Treatment.*—That owing to the existing shortage of fats, which makes the use of sulphur ointments undesirable, an emulsion of benzyl benzoate should be employed for routine treatment—viz., benzyl benzoate 25·0, lanette wax 2·0, water to 100·0—and that this emulsion should be applied either on two successive days or on two occasions at an interval of a week. When possible the first application should be preceded by a hot bath, in which the skin of the body and limbs should be thoroughly lathered with soap. (4) *Disinfestation.*—That whenever possible some method of disinfesting the garments and bedclothing should be provided, or that the undergarments and sheets at any rate should be thoroughly washed at the termination of treatment. (5) *Treatment Centres.*—That an adequate number of properly equipped treatment and cleansing stations should be established. The number of those at present available is far too few, and it was agreed that, if scabies is made notifiable, it is essential that full facilities for treatment near the patient's home should at once be provided. These treatment centres should be equipped with baths, or at least shower-baths, some form of apparatus for disinfesting the clothing, and an adequate number of trained personnel. It was realised, however, that the provision of a large number of new treatment centres throughout the country would be difficult or impossible under present conditions. It was therefore recommended that, owing to the extreme urgency of the scabies problem, all existing cleansing stations should be made available both for children and adults, and that the gas-decontamination centres should also be utilised for the purpose. Simple apparatus for disinfesting the clothing could doubtless be improvised where necessary. (6) *Follow-up System.*—That at all treatment centres the patients should be urged to present themselves again for medical inspection one month after their treatment.

Further letters were reported from the Urban District Councils Association and others asking whether the Society would be likely to reconsider their decision that the general compulsory notification of scabies was not desirable. The Committee decided that their decision must stand until there was adequate provision for treatment of the disease.

6. *War-time Increases of Salaries.*—The Committee considered replies from the Branches and Groups in reference to the desirability or otherwise of recommending increases of public health salaries during the war. The replies showed a preponderance of opinion that a revision of salaries should not be pressed at the present time, but that any war bonus awarded to the staffs of local authorities should be extended to all medical officers, whole-time or part-time. It was agreed to forward a recommendation to this effect to the Public Health Committee of the British Medical Association, with whom the inquiry originated.

7. *Scientific Liaison with U.S.S.R.*—Dr. E. H. R. Smithard reported his attendance on behalf of the Society at a meeting called by the Ministry of Information to consider scientific liaison with the U.S.S.R. After speeches by Mr. Ernest Thurtle, M.P., Parliamentary Secretary, Ministry of Information, Sir John Russell, F.R.S., and others it was agreed *nem. con.* that a small committee should be elected to organise the desired liaison and to consider ways and means. The Committee extended thanks to Dr. Smithard for his report.

8. *Proposed Amalgamation of Tuberculosis Organisations.*—A scheme for the establishment of a General Council, by the National Association for the Prevention of Tuberculosis to include within its organisation the Joint Tuberculosis Council and the Tuberculosis Association, was forwarded for the observations of the Society. It was agreed that the scheme would mean economy in working and avoidance of duplication and overlapping in the work of the bodies concerned, and that it should be supported, provided that the Society of Medical Officers of Health was given adequate representation on the General Council.

9. *White Hospital Coats.*—A letter was received from Dr. Cecil B. Hogg (M.O.H., Kettering) asking the Society to press for the amendment of the Consumer Rationing Order (No. 8), 1941, to exempt from coupon requirements white coats required for fever hospitals and clinics. As this matter has recently been fully ventilated in the House of Commons and in letters to the Board of Trade, it was agreed that further action would serve no useful purpose for the time being.

10. *The Nutrition Society.*—A letter from Dr. Leslie J. Harris reported that the Nutrition Society is particularly anxious to interest health departments in its activities and has already enrolled a number of medical officers of health in its membership. Their immediate wish was to co-opt a representative of the Society on their Council. In reply to this invitation it was agreed to nominate Dr. G. F. Buchan.

11. *Physical Education.*—The Federation of Societies of Teachers in Physical Education, representing approximately 3,500 men and women teachers of the subject, wrote expressing their desire to co-operate with the medical profession in order to consider and discuss questions concerning the health and physique of school children. The Federation suggested the formation of a joint committee with representatives of the Society for this purpose. It was agreed to accept this invitation, and the following were recommended for election by the Council to represent the Society—viz., Dr. Oscar Holden (Croydon), Dr. E. Virginia Saunders-Jacobs, Dr. R. Sutherland, and Dr. H. C. Maurice Williams.

12. *Tuberculosis Hospital Accommodation.*—The Association of Municipal Corporations invited observations from the Society on a representation from the Stoke-on-Trent City Council urging the provision of additional hospital accommodation for the treatment of persons suffering from tuberculosis. The Tuberculosis Group of the Society strongly endorsed the opinion of the Stoke-on-Trent Council, and it was agreed that the Association of Municipal Corporations should be advised that increased hospital accommodation for tuberculosis cases was urgently necessary and that provision should be made therein for proper specialist treatment of the disease.

13. *Matters Deferred.*—Owing to pressure of other business, consideration of correspondence from the Maternity and Child Welfare Group, the Midland Branch and Dr. G. E. B. Payne (M.O.H., Acton) in reference to wartime nurseries, was postponed until the next meeting of the Committee. Also postponed was a memorandum on the payment of expenses for attendance at Group meetings, and correspondence from the Yorkshire Branch regarding security of tenure of office for all medical officers.

The meeting then adjourned.

METROPOLITAN AND HOME COUNTIES BRANCHES

A joint meeting of the above branches was held on February 13th at Tavistock House, 52 members being present.

WHOOPING COUGH PROPHYLAXIS

An address on whooping-cough prophylaxis was given by Dr. I. H. Maclean, of the Inoculation Department of St. Mary's Hospital. He said that, in computing results of whooping-cough prophylaxis, all experiences before 1936, at which date Phase I vaccines first became generally available in this country, should be discarded. In his experience, during the last 5 years all but 3 of 28 field trials of pertussis vaccine had been favourable. Kendrick and Eldering had concluded "that there was a reduction of 60% in the risk of attack in the vaccinated group and an eight-fold increase in the probability of escaping from known exposures": this had been substantiated by nearly all other trials. About 70% complete protection from known exposures could be expected, as against a 10–20% escape rate in controls according to the type of exposure and the severity of the epidemic concerned. In institutions, where exposure was prolonged and heavy, there were more failures in the vaccinated group than among those in street and household exposure. The 3 unfavourable trials were in institutions, but there were at least 7 reports from residential children's homes where the protection was found to be up to the 70% standard. Prophylaxis in pertussis was less efficient than in diphtheria. Pertussis, with its explosive cough, its long incubation period, and absence of institutional isolation, gave an exposure to infection of from 5 to 6 weeks, whereas in diphtheria there was less intensive exposure of only 2 to 5 days. The immunity in pertussis was antibacterial; in diphtheria it was antitoxic.

The dosage used in immunisation was important: in U.S.A. the Sauer method, with 6 injections amounting to a total dose of 80,000 to 160,000 million organisms, was widely practised. Dr. Maclean had found that good protection could be obtained by a total of 16,000 to 20,000 million, split up into four spaced doses. If this dosage were too cumbersome to use in clinics, good results could be obtained with a dose of 20,000 million given in two properly spaced injections. This was a great convenience, especially as both doses of pertussis vaccine could be combined with the two doses of diphtheria prophylactic (A.P.T.) and spaced at one month's interval. Dr. Maclean stressed, however, that this two-dose immunisation had not had an extensive trial and experience might alter these views.

Many day nurseries were now opening, and if they had a permanent population they would be ideal for field trials of pertussis vaccine. The experiments would have to be properly controlled, and the results collected by a central authority. Although pertussis was a war-time problem, it was probably premature to recommend mass immunisation.

Dr. Rawlinson stressed the value of the "boosting" dose, which should follow the normal course, but at a much later date. Dr. Struthers pleaded for standardisation of research in nurseries and other communities.

Dr. Maclean replied, stating that reaction to inoculations varies within wide limits. The Medical Research Council had prepared a scheme for immunisation of the population, but this was not in all

respects, unless modified, suitable for a closed community. The white count increased temporarily with the disease and also with inoculation. A positive cough plate could be obtained as early as the fifth day of the disease, but it was very rare in the fifth week and was, so far as he knew, unknown from the sixth week onwards

YORKSHIRE BRANCH

President: Dr. J. F. Galloway (M.O.H., Dewsbury C.B.).
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

An ordinary meeting of the Branch was held in Leeds on March 27th. The President was in the chair, and was supported by 30 members and 2 guests. The minutes of the last meeting were read, approved and signed by the President.

It was resolved that the names of the President and the Secretary should be sent forward to be considered for election to the Central Council for Health Education.

Dr. Jervis and Dr. Potts opened a discussion on "The Care of Children aged 2–5." It was decided that no record should be kept of what was said, in order to give every member an opportunity of speaking freely.

The meeting of the Branch was preceded by a meeting of the Council at which the President was supported by 9 members.

WEST OF ENGLAND BRANCH

President: Dr. P. H. Stirk (formerly M.O.H., Exeter C.B).
Hon. Secretary: Dr. I. G. Davies (Deputy M.O.H., Bristol C.B.).

A meeting of the Branch was held in Bristol on April 10th. There were present 13 members and 8 visitors. In the absence of the President, Dr. Lowe, Vice-President, took the chair. The minutes of the last meeting were read and confirmed.

It was agreed that the Branch should, according to the request of the East Midland Branch, support the nomination of Dr. Cyril Banks as President of the Society of Medical Officers of Health.

Dr. P. Phillips, Medical Superintendent, Southmead Hospital, Bristol, and Dr. J. M. Cormack, M.O.H., South Gloucestershire Joint Committee, were nominated to serve on the Central Council for Health Education.

Dr. H. G. H. Kearns, Research Entomologist, University of Bristol, gave a most interesting address on insect pests of medical importance.

SOUTHERN BRANCH

President: Lieut.-Colonel D. G. Cheyne, O.B.E., M.C. (Assistant Director of Hygiene, Southern Command).
Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B. and Port).

A meeting of the Southern Branch was held at Portsmouth on April 17th. Col. D. Gordon Cheyne, the President, was in the chair, and 11 other members and 5 visitors were present. The minutes of the meeting held on February 6th having been circulated, were approved as correct and signed by the President.

The Secretary reported with regret the death of Dr. A. Bisset Shed, who was for many years Assistant County Medical Officer of Health and Tuberculosis Officer for Hampshire, and was a member of this branch. A letter of sympathy was sent to Mrs. Shed.

The Secretary submitted a letter from the Society asking for the opinion of the branch on the desirability or otherwise of recommending a war-time increase in the remuneration of (i) whole-time public health officers, and (ii) practitioners employed on a part-time basis by local authorities in public health or associated services. The branch supported the recommendation that the salaries laid down under the Askwith scheme should be reviewed in the light of the increased cost of living at the present time, and that when the memorandum regarding whole-time public health officers is reviewed consideration be given to the question of including in the scale fixed increments in respect of all medical officers of health, similar to those given to other whole-time medical officers.

It was resolved that a copy of Colonel Cheyne's address to the branch should be forwarded to the Planning Committee of the Society for its first meeting on May 14th.

The branch supported the nomination of Dr. Cyril Banks, M.O.H., Nottingham, for the office of President of the Society for 1942-43.

Dr. H. C. Maurice Williams was nominated as a candidate to fill one of the six places on the Central Council of Health Education.

Dr. J. G. Cairns, Senior Assistant Medical Officer and Clinical Tuberculosis Officer, Portsmouth, gave an address and opened a discussion on several unusual cases of diphtheria in Portsmouth. Many members of the branch took part in the discussion, and Dr. Cairns was cordially thanked for his most interesting address.

OBITUARY

C. W. PAGET MOFFATT, M.B., B.C., D.P.H.

We regret to record the recent death of Dr. C. W. Moffatt, who was for 23 years connected with the public health service in Bolton.

Christopher William Paget Moffatt received his medical education at the University of Cambridge and at Liverpool. He qualified M.B., B.C., in 1904, and received the D.P.H. in 1905. He went to Bolton in November, 1908, as assistant medical officer of health and tuberculosis officer, and he succeeded to the senior position in 1921, retiring in 1931. Not long afterwards, however, he took up a temporary appointment as M.O.H. in the Epsom Rural district. He finally retired in 1934 and went to live at Southport. He was a bachelor and 79 years of age. Among other appointments which he held at various times were those of M.O.H. for the County Borough of Bolton, Hon. Anaesthetist, Royal South Hospital, Liverpool, and Clinical Assistant, Throat and Ear Department, Royal Infirmary, Liverpool. He was the author of *Science French* and *Science German*.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments in the health departments of various local authorities :—

BLACKBURN C.B.: A.M.O.H., Dr. Mary Swan Miller.
DENBIGHSHIRE C.C.: A.M.O.H., Dr. Peggy Jones-Roberts (A.M.O.H., Caernarvonshire). Salary £600 p.a.
HOLLAND (LINCS.) C.C.: A.M.O.H., Dr. Mary C. Donovan.
MIDDLESBROUGH C.B.: M.O.H., Dr. Trevor L. Hughes (M.O.H., Barnsley C.B.). Salary £1,200, rising to £1,400 p.a.
PLYMOUTH C.B.: A.M.O.M. & C.W., Dr. Marjorie S. Wilson (A.M.O.H., Warwickshire C.C.).

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CONTENTS

EDITORIAL

Report of the Planning Commission

The Interim Report of the Medical Planning Commission, which has recently been issued,* represents what more than seventy persons from all walks of medicine are prepared to allow to go forth over their names. It would have been astonishing if all of them agreed with every proposal mentioned in the Report, and indeed the use of the term "the majority" in certain passages shows that on some topics there is a sharp difference of opinion. Taken as a whole the Report shows that there is a significant movement of opinion in favour of increasingly corporate practice in medicine. Inevitably, since there has recently been much ventilation of the advantages of a whole-time salaried service, this question receives prominence. As might have been expected the idea does not find favour with the majority. Nevertheless the criticisms of the existing system to which the Commission has listened are recorded at some length, and have evidently been regarded as sufficiently justifying a substantial measure of reform.

It is clear that those members of the profession who are not in salaried service recognise the need for closer association between the different organisations providing medical services and between one medical practitioner and another. They realised that little justification but opportunism can be found for the tenuous connection between private and insurance practitioners, independent specialists, local government medical services, voluntary hospitals and other voluntary bodies, industrial medical services and state-administered services like that concerned with occupational health or the E.M.S. What they do fear is a type of administrative machine actuated by preconceived ideas with no sound basis in medicine, and influenced only by the advice of officers of its own choosing. Among the proposals in the Report of the Commission, therefore, first place is given to reform of the central and local governing bodies responsible for the health and medical services. It is suggested that a new central authority should acquire all the medical functions now exercised by several government departments, that it should not be burdened with the non-medical responsibilities now falling on the Ministry of Health, that, if it is a department in the ordinary sense, it should have attached to it a medical committee or board with functions entirely or partly advisory, and that its chief officer should be a medical practitioner. The alternative of a corporative, semi-autonomous body like the B.B.C. or the Port of London Authority is also put forward. The essential point is that the outlook of the new central authority should be predominantly medical and not cribbed, cabined, and confined by Civil Service tradition.

In the local field the need for large areas of administration is accepted, and it is agreed that the governing bodies might well be new local authorities elected for health and other local government purposes. If so, health and medical matters should stand referred to a statutory committee having non-elected members, including medical representation, and there should be a medical advisory committee, statutorily established. An alternative would be the formation of statutory regional councils, representative of local authorities, voluntary hospitals and the medical profession, with some nominees by the central authority. Although such bodies would have executive powers, some financial control and direct access to the central authority, it appears that detailed administration would remain in the hands of existing local authorities and the managers of voluntary hospitals.

Provided some such administrative reforms were brought about, the Commission contemplates a great extension of managed medical services. Under the new local bodies a general practitioner service would extend at least to all those sections of the population the wage-earners and lower salaried members of which are now entitled to medical benefit, representing over 90% of the people. Consultant, specialist, hospital, laboratory and ancillary provision would come within the scheme. If the government adheres to the policy that patients should contribute toward the cost of hospital treatment, regional contributory and provident schemes should be developed. The general practitioner service would operate through local health centres, the nature of which is described in some detail, and medical remuneration would be partly by salary and partly by capitation fee. While there would be free choice of doctor up to a specified number of patients on a doctor's list, commercialism in medicine would be largely destroyed by the cessation of marketing of practices.

Consultant and specialist services would be based on hospitals. While some private consulting practice would be left to some specialists, they would be adequately paid for their public work both in and outside of hospital, which would have a corresponding claim on their time and attention. A considerable extension of whole-time specialist service is contemplated within each region. The staffing of municipal and voluntary hospitals, and the methods of admitting patients, would be uniform.

While the commission regards its proposals for administration as fundamental and all other proposals as contingent upon their

*Brit. med. J., 1942, June 20th, p. 743.

being carried out, it also recognises that powerful obstruction may cause delay in giving them effect, and that the needs of the people may demand quicker inauguration of some extension of medical services. In such circumstances it proposes an extension of medical benefit to dependants under the National Health Insurance Acts, its augmentation if possible by consultant, specialist and laboratory benefits, and some measure of regionalisation of hospitals. For the latter purpose it suggests the creation of statutory regional councils on the lines advocated by the Nuffield Provincial Hospitals Trust, but there is some difference of opinion as to whether these should or should not be purely advisory. The Report is a fusion of the ideas fermenting in the minds of several committees set up by the Commission, and the friction of different tenets appears to have led to the glossing over of a good many difficulties which will become evident when matters of detail have to be considered. Proposals of the kind would, of course, fit in more neatly to a whole-time salaried service than to any other system, and public health officers have naturally less hesitancy than other medical practitioners about accepting it since they regard much of the criticism of this type of service as ill-informed or prejudiced. Nevertheless developments along the lines suggested would be a great step toward a complete and integrated medical service for the people. It would not be unworkable; no worth-while scheme is. It is the function of administration to accommodate itself to the delivery of a service which the people need, and not to mould it for the convenience of administrators. However a scheme of this kind began, the contact on committees between the representatives of the people and those who are serving them would probably lead to the rapid evolution of a service acceptable to both of them, but differing from anything we are able to conceive on the basis of past experience.

Food and Physical Efficiency

The diagnosis of mental deficiency and a useful working assessment of the intelligence quotient of children have been enormously developed by the admirable work of Binet and his successors. This has been carried out by the application of a series of simple intelligence tests standardised with reference to a very large number of children. These tests are graded according to the age of the child, and their use by psychologists and School Medical Officers generally has proved to be a rough but very valuable practical guide to the mental efficiency of a given child.

Attempts have been made in recent years to develop analogous tests of physical efficiency, but comparatively little progress has as yet been made towards standardisation on a wide scale. A series of articles published in the *Medical Officer* between March 7th and April 11th of this year show that work on these lines is being undertaken. In "A Study of the Physical and Nutritional Condition of Children in Wartime," Dr. E. H. M. Milligan, M.O.H., Glossop, and Dr. E. Lewis-Faning, of the Statistical Staff of the Medical Research Council, collaborated in an investigation of groups of children with the object of finding out whether there were any adverse effects on children on account of the reduction in first-class protein made necessary by the meat ration. The authors adopted tentatively measurements of height and weight; tests for strength by the dynamometer; and endurance tests based on the length of time (*a*) a child could hang to a bar, and (*b*) support his own weight on a pulley-block. In making this study they were able to obtain fairly satisfactory pre-war standards of comparison, because in Glossop heights and weights, as well as the dynamometer and bar tests, had been estimated in the pre-war period. One group consisted of 130 boys measured first in the autumn of 1937 and again in the spring of 1939 at an interval of almost 60 weeks. A second control group was formed by selecting from recordings made during the years 1936 to 1938 50 children giving a mean interval of just over 26 weeks. For each group the average increase in weight and height was calculated over the whole period of observation, and the values obtained were reduced to the common units of "average gain in weight and height per week."

In the war groups, 34 boys were studied from the last quarter of 1940 to the end of 1941, and 123 boys from January and February, 1941, to September of the same year. It was found that the second pre-war group was more suitable for comparison, and the results were that the increase in height of the first war group was 92% of the pre-war figure and in the second war group 79%. The difference in weight was more striking, being only 69% in the first of the war groups and as low as 48% in the second. The authors suggest, in summing up these differences in rates of growth, that in groups of boys of the same average age there was a significant reduction in wartime as regards weight; it is doubtful whether the change in height was noteworthy. The authors then went on to consider data relating to endurance and strength, and the 123 boys of the second war group were tested. The first readings of both tests were made in January, 1941, the second reading of the bar test was made in September and of the weight test in June of the same year. No pre-war data of the weight test was submitted, but the bar and the dynamometer test figures were both available. At the first test, early in 1941, the endurance of the boys showed no real difference from that of a similar group examined in 1938, but in September a 21% reduction was revealed. The record of weight held also showed a reduction of 11% between January and June. Contrasted with this the results of the dynamometer test indicated that the strength of the 1941 boys in January was 8% less than the pre-war standard, but during the following six months there was a gain of 9%, replacing them at the pre-war level.

These three tests, the authors point out, are measures of physical fitness, two of them in terms of one measure, endurance, while the third was a test of strength measured by the dynamometer (pull in lb.—weight in lb.). The results of the statistical analysis of these data must raise doubt about the efficacy of the tests as a measure of physical fitness, and the authors put forward the following suggestions: measurements of endurance and strength, unlike those of height and weight, are not independent of the will of the examinee, and it is a debatable point whether, in the absence of any competitive factor, the same will to endure is exerted by the second and subsequent tests as when they were a new experience. The second suggestion is that bodily activity is so great in a growing child that fat may be lost and energy used up if there is undue stringency of feeding. The result of this would be that in the early stages of restriction a boy would grow lanky and would be trained down, as it were, for muscular development. This would probably result in his having more strength per pound of body weight, but, as energy resources would most likely be drawn on, he would have less endurance. The fact that weight has been greatly retarded would indicate that something of the sort actually is happening here; hence the anomaly of greater strength per pound of weight associated with less endurance and retarded growth. When nutrition falls below a certain point both strength and endurance go down together.

The authors regard the cause of the conditions which they found as in keeping with moderate dietary restrictions, especially as regards first-class protein, calcium and iron, and the vitamins B complex, C, and possibly D. They suggest, first, that there is an urgent need for studies of this kind to be carried out elsewhere, especially to find out if growth is being retarded generally and if children are becoming prone to fatigue, and, secondly, that more adequate steps be taken to prevent the curtailed war diets detrimentally affecting the well-being of children.

One of the authors draws attention to the measures which he had previously recommended under the heading of "A Five Point Food Charter for Children." (1) Adoption, as far as possible, during the war of the League of Nations dietary standards for children. (2) School meals, with at least one generous meal a day, should be compulsory in all elementary and secondary schools. A time limit should be fixed for their inauguration. (3) Whey, which is a by-product in cheese-making, should be salvaged for the use of children, as it is one of the greatest body-builders we have. (4) The working of school allotments on an adequate scale should be part of the routine in all schools other than infant schools. (5) The impoverishment of foods by refining should be prohibited so that their full virtue in nourishment would be retained for children as well as adults. Few students of nutrition would quarrel with these five proposals, or with the suggestion that a constant watch should be kept on the war diet of children. Nevertheless it is doubtful whether the authors can draw any valid inferences from their observations as such. The study of a few hundred children in this way is a useful indication of what might be done on a vast scale with the object of establishing standards of physical efficiency that might qualify for general application. The idea is well worth the serious consideration of a large group of field investigators.

The School Medical Service

Of all public services the school medical service in war-time has been most encompassed by difficulties. To begin with, a large part of the school population was redistributed, but even when redistributed never "stayed put." The service has had to accommodate itself to the crowding of schools in reception areas, their closure in large towns, and, in such towns, the effect upon the remaining children of shelter life, air attack, and the relaxation of home control. Along with these difficulties have been those occasioned by a depleted staff (especially in the dental service). Yet it has managed, with the help of other factors at work in the same direction, to preserve the health of the school child without any visible deterioration.

Dr. J. Alison Glover, who was for many years senior medical officer to the Board of Education, and has now returned to the Board in a temporary capacity after his retirement, recently gave a Chadwick public lecture on the subject of the school medical service. The lecture was largely a recapitulation of the now familiar story of the evacuation of town children, or, rather, the successive evacuations, followed by a constant trickle back to the towns. For some time after the first evacuation the school medical service in evacuation areas was suspended; two-thirds of the schools were taken over for civil defence purposes and the other third were closed, and nearly all the teachers accompanied the children to the reception areas. In due course and in successive stages the schools in the evacuation areas reopened, and eventually school was again made compulsory for all children. The children thus returning were medically examined, and the school medical service recommenced its functions, though not at full pre-war capacity. In August of last year the Board of Education advised that where replacement of staff was found impossible the work should be cut down, but that there should be no relaxation in the watch upon cleanliness and that treatment facilities and the follow-up of treated children should be maintained. The ritual of medical inspection was cut down to the inspection of school entrants and a visit to each school once in a term.

One large aggressive movement in which the school medical service participated was the drive for immunisation against diphtheria, handicapped to some extent by the difficulty of communicating with the parents of evacuated children. In the towns the conditions of shelter life gave new opportunities for bringing home the advantages of immunisation. The school medical service devoted its energies in 1940 and 1941 to assisting the local health authorities in this campaign, and from April to September of last year children were immunised at the rate of 300,000 a month, and by the end of the year one-third of the child population of the country had been immunised. But this figure, Dr. Glover pointed out, is far from satisfactory.

On the provision of school meals and milk Dr. Glover said that just before the war 177,000 children in the elementary schools were receiving solid meals free at school, and 50,000 others on payment; the number now having dinners at school is something like 611,000. He hoped that as one result of the war the school dinner would become an essential part of the school curriculum and that there would be provision of school milk for every child. In February of this year 3,113,000 elementary school-children and a quarter of a million children in the secondary schools were taking milk under the "milk-in-schools" scheme.

To those familiar with the history of the school medical service the interesting thing is the absence of public criticism on the ground of usurpation of parents' rights or anything of that kind, even when the service extends far into the nutritional field.

AN EXPERIMENTAL MID-DAY MEAL FOR SCHOOL-CHILDREN

By EMYR JONES, M.D.,
Assistant School Medical Officer, Caernarvonshire
Medical Superintendent, County Hospital, Bangor

When the war began it was feared that the nutrition of school-children would be greatly affected by rationing and by the prohibitive cost of some foodstuffs. An attempt was therefore made to devise a meal which would provide some of all the body-protecting and body-building foods, and also the energy-producing foods. The total daily needs of a growing child could not be provided in one meal, but it was assumed that the foods most likely to be absent from the meals available at home were the body-building and protective foodstuffs.

Recipes

A meal containing the following ingredients was eventually adopted: milk; bread; margarine (vitaminised); cheese; fruit, in the form of oranges, apples, bananas, raspberries, damsons, etc., or fresh green vegetable salad. During the latter part of the experiment black treacle was added.

Each 2 lb. loaf of bread contained: Flour (wholemeal stone-ground), 1¾ lb.; Soyolk, 1 oz.; powdered calcium phosphate, ¾ oz.; salt, ¾ oz.; yeast, ¾ oz.; water, 13 oz. The wholemeal-flour was chosen for its high protein content and as a source of vitamin B_1. For many generations oriental populations have made use of the soya bean. It is an excellent source of protein and fat and contains a large amount of mineral matter with a relatively small amount of carbohydrate. "Soyolk" is a fine ivory-coloured powder prepared from the soya bean. It has the following formula: Protein, 42%; fat, 20%; carbohydrates, 25% (no starch); ash, 4%; water, 9%. It is described as being entirely free from toxic principles, while the fat and other natural food elements of the bean have been retained in a palatable and readily assimilable form and it contains a certain quantity of vitamins A, B_1, riboflavin, D, and E. The powdered calcium phosphate was added to ensure a sufficient supply of both these minerals. The bread was very palatable. The treacle was added as it was felt that the meal lacked iron. It will be noticed that this meal is based on the Oslo breakfast and contains some proportion of all the essential foodstuffs.

Scope of the Experiment

Children from two schools were chosen: (*a*) an elementary school in a rural area where the ages of the children varied from 6 to 14 years; (*b*) a central school, where the ages of the children varied from 11 to 15 years—this was a school in a town of approximately 9,000 inhabitants.

A school dinner was available at each of the above schools. The dinner at (*a*) was, daily: (1) meat soup, containing potatoes, peas and carrot; (2) white bread; (3) rice pudding. At (*b*):—

Weekly	Monday ...	Irish Stew	Baked Jam Roll.
	Tuesday ...	Mince and Vegetables, Boiled Potatoes.	Spotted Dick and White Sauce.
	Wednesday	Sausage and Mash...	Prunes and Custard.
	Thursday ...	Liver, Vegetables, Boiled Potatoes.	Jam Roly-Poly and White Sauce.
	Friday	Irish Stew	Baked Jam-roll and custard.

A group of 30 children whose nutrition was below normal was chosen for the experiment. Thirty other children acted as a control group. These latter were, on the whole, of a higher standard of nutrition. They were not chosen for this reason, but being the only class of children who took the school dinner they served as a convenient control.

The average age of the children on December 30th, 1941, was: Experimental group, 12·2 years; control group, 13 years. The experiment was continued for 12 months, from May, 1940, to May, 1941. The following list gives the average consumption of the main ingredients per meal per child: milk, 2/3 pt.; bread, 2·77 oz.; margarine, 0·55 oz.; cheese, 0·73 oz.; fruit salad, fruit, green vegetables, treacle in small quantities.

The children in both groups were examined periodically by the same medical officer, and were also measured and weighed by one of the school nurses at more frequent intervals.

Method of Assessing Nutrition

It is unnecessary to comment on the many difficulties encountered in any attempt to assess the nutrition of a child. Many schemes have been evolved—some simple, some elaborate—in order to try to arrive at a standard method. For the purpose of this experiment a modification of the Gloucestershire County Council scheme was adopted. This Scheme is divided into two main parts: (*a*) information obtained from the parent, guardian or teacher; (*b*) a special routine clinical examination which lays stress on the main signs and symptoms connected with the nutritional development of the child. At the end of each examination of every child the medical officer attempted to record his opinion in the form of a percentage figure, taking 100% as a standard.

Difficulties Encountered

Unfortunately, some of the constituents of the meal became increasingly difficult to obtain, and the cost of others increased so rapidly that the average cost was just under 6d. per child per meal. The question of measuring the percentage of haemoglobin in each child at various stages of the experiment was considered, but in view of the difficulty of adopting a simple method by which the results could be compared with any degree of accuracy, and also because of the small number of children concerned, it was decided that this observation would be of no real value.

Synopsis of Results

The average increase in weight, per child, during the period of the experiment, in the experimental group was 1 lb. 4 oz. greater than that of the control group. The average increase in height was negligible. Minor skin conditions, such as pityriasis simplex, almost disappeared from the experimental group while they remained unchanged in the control group. The teacher in charge of the children in one school stated that children of the experimental group were more active and less tired towards the end of the day than they had been previous to the meal. Unless the fruit was varied the children found the meal monotonous and some would not continue with the experiment. The addition of black treacle caused an increase in consumption in all the other solid constituents of the meal.

Conclusion

The scope of this experiment is too limited to justify definite conclusions, but it is hoped that it may serve as a basis for an experiment on a larger scale as soon as the constituents become available and can be procured at a more reasonable cost. I would urge that such an experiment should be conducted as soon as possible after the war with the object of devising an appetising midday meal which can be served with a minimum of cooking facilities, and which will ensure that a growing child receives the required amount of all the protective and body-building foods. The meal should then be made available for all school-children.

I wish to thank Dr. Parry-Pritchard, the County Medical Officer of Health and School Medical Officer for the interest he has taken in this experiment and for many helpful suggestions. I also wish to thank Dr. Griffith Evans, whose generosity made this experiment possible and who first suggested feeding children with bread made from a modification of Dr. G. M. Vevers's formula; the Director of Education; members of the staff of the Health Department; Caernarvon Rotarians for providing extra milk for the children; the staff of both schools concerned; and Messrs. Calfos, Limited, who supplied the calcium phosphate powder, free.

The inter-allied conference convened by the New Education Fellowship in April has drawn up a Children's Charter for submission to the governments of the allied nations, as a statement of the basic and minimum rights of children to be secured and guarded above and beyond all considerations of sex, race, nationality, creed or social position. Copies of this charter may be obtained from the New Education Fellowship, 50, Gloucester Place, London, W.1.

EXPERIENCES IN THE RECEPTION OF EVACUEE EXPECTANT MOTHERS

By G. E. GODBER, D.M., M.R.C.P., D.P.H.,
Regional Medical Officer, Ministry of Health.

The problems associated with the reception of children evacuated from the large towns have received attention in the medical Press on many occasions, but, apart from an account of the organisation of emergency maternity homes (Banks and Norman, 1941), little has been written of the reception of women evacuated in the late stages of pregnancy. The provision of maternity homes is, of course, the first and, initially, the largest part of the task. There is, however, another side of the reception arrangements which is equally necessary and always difficult—namely, the accommodation of the women between the dates of evacuation and confinement; for this, accommodation must be outside the maternity home if economical use is to be made of the home. The object of this paper will be to describe the experience in a region both in maintaining a system of emergency maternity homes and in organising the preliminary reception.

The region differs from that described by Banks and Norman in that a number of towns outside the London area have sent organised parties to it, including Sheffield, Leeds, Hull, Grimsby, Derby, and the coastal areas of East Anglia; London has, however, sent more than any other evacuating area. This has complicated the arrangements to be made by the Regional Office, but does not materially affect the problem of the reception authority.

Our experience falls into three quite well-defined phases: the first during 1939 and the beginning of 1940, the second during the last half of 1940, and the third during 1941.

1939—1940

During July and August, 1939, plans were rapidly made for the provision of emergency maternity homes to receive the organised evacuation from Leeds, Sheffield, Hull, Grimsby, Derby, Nottingham, and London. It was assumed that a very considerable proportion of the women in the last month of pregnancy, in each town, would apply for evacuation at the last moment, even if they had not registered sooner, and that many other women evacuated with their children would be in earlier stages of pregnancy. Necessarily the figures were guess-work, but for London, at least, they were justified. Many buildings were surveyed as possible maternity homes, but no work of adaptation was undertaken until very shortly before evacuation began. Twelve emergency maternity homes with 360 beds were set up. Two of these units were very small and were used only temporarily, and one was never used, because some of the provincial towns did not evacuate the expected numbers of women. Most of the nursing staffs were provided by the evacuating authorities and some equipment came from the same source, but all else had to be provided locally. The actual reception arrangements were simple. All the women were billeted, and, where possible, billets were found near the maternity homes. In most areas the billeting was successful, although this priority class was, even in the first evacuation, one of the most difficult to billet—the difficulty being the greater because evacuation of expectant mothers took place on the second day and many of the best billets had been filled by school children on the first.

The number of beds provided was approximately half the number of women expected in the area, and this would, of course, have been insufficient if all the women had arrived. Only London sent its full quota, and some of these women returned to their homes before delivery. The number of births in the homes during the first five months of the war was only 334, most of these women having been sent out during the ninth month of pregnancy. Other expectant mothers, for the most part, returned to their homes, though their numbers initially were large enough to justify fully the preparation made. By the end of January, 1940, all save one of the homes had been closed, and this home was kept open to deal with a trickle evacuation from Hull. This region, being somewhat remote from London, did not receive the "trickle" from that area.

End of 1940

The second phase began with the evacuation from East Anglia in June, 1940. In the meantime the existing homes had been kept ready on a care-and-maintenance basis, without nursing staff, with the exception of two very small units, which were abandoned, one unit in a convalescent home on the coast, which was considered no longer safe, and one which was temporarily diverted to other uses. Improvements in equipment had been made from central supplies which were now available. The East Anglian evacuation made more accommodation necessary to replace some no longer considered safe, and to provide for new evacuation areas. A further 140 beds were obtained in four new homes.

The East Anglian evacuation, after an initial spurt, diminished and the full number of beds was never needed, but September brought an increasing pressure from London, and the plans which had been made for re-opening the other homes assigned to London were brought into operation. These plans envisaged the provision of nursing staff for one home at a time, the billeting area for that home receiving, at the same time, a number of women in the last month of pregnancy equal to twice the number of maternity beds, on the assumption that each woman would require treatment for two weeks and the dates of expectancy would be distributed evenly over the month. In practice, seldom more than 70% of the numbers expected arrived, and the distribution of dates of expectancy was eccentric, so that homes were little occupied until the third week after the arrival of the party. The non-arrival of a substantial proportion of the women was, therefore, fortunate.

The ground had been carefully prepared beforehand by evacuation officers of the Regional Office. Parties of women always travelled by coach and were not set down at the home. Billeting officers had, in many areas, kept certain billets free for expectant mothers. Women were all seen by a doctor on arrival, and were admitted to the homes only for medical reasons if they were not in labour. All the homes assigned to London were rapidly brought into use, but they were insufficient. Homes reserved for other towns were used, and two more homes, one of 24 and one of 44 beds, were established in a large house and a "holiday home" respectively. It became necessary to borrow, temporarily, 130 beds from the E.M.S. with more hurried equipment and adaptation, so that, at one time, 470 beds were in use for London and East Anglia alone, East Anglia accounting for a very small proportion of these. A system had to be devised for continuing a trickle evacuation from London to the reception area for each maternity home. The great difficulty was to decide how many women should be sent each week, to keep an even flow of admissions to the homes. Statistics were obtained weekly of numbers awaiting admission for each home, but the estimation of the further numbers which could be sent was hazardous guess-work at best, until some experience had been gained. All this time we were under great pressure to take as many women as possible from London while striving to avoid overcrowding of the maternity homes. Gradually it was found possible to determine a standard figure for each home each week, as the organisation settled down to a steady flow from London.

During 1940, from August, we received 1,353 women of a total of 1,885 expected from London, and during the whole year 347 of a total of 391 expected from other areas.

1941

In the reception area for London, 1941 required largely a routine exercise of principles worked out at the end of 1940. By the beginning of the year we had established standard figures for reception each week in the area used for billeting round each home. These figures are related rather to the total beds in the home than the empty beds on any date. We do not expect all the women in a party to arrive, as we know from experience that from 20% to 40% fail to do so, but this is offset by the number of evacuees coming to the area by private arrangement. The reception authorities know the magnitude of their problem, which cannot be exceeded or recur more frequently than once a week. London knows in advance the number of vacancies it can use each week without further reference to us—127 places divided between eight homes, which provide in all 310 beds. Actually, during the year the number of women sent was often less than the number of places offered. For a period during July, August, and September, full numbers were used regularly, and it was a good test of the system that during that period we only once had to transfer patients booked for one home to another, and that was due to closure of a home on account of infection. If it is held that not more than 80% of the beds in a maternity unit should be kept full, we were always well within that limit for the whole region, though it might occasionally be reached or temporarily exceeded in one particular home. On such occasions we always had the safeguard of an available reserve in other homes. During the year we also received women from other evacuating areas outside London. One home was continuously in use for Hull and another for Sheffield and Hull.

The Three Phases

Table I shows the numbers of women received in the region during the three phases described. Apart from the first phase, numbers expected are also shown, for it is only by appreciation of the regularity of a proportion of failures that the numbers of places offered each week can be placed sufficiently high. Not all the women who reach the reception area remain for their confinements. A small proportion return to their homes either because they dislike their billet or hostel, or for family reasons.

TABLE I

Evacuating Area	1939	1940		1941	
		Expected	Received	Expected	Received
London ...	180	1,885	1,353	4,113	2,849
Hull	42	119	87	660	578
Sheffield ...	84	90	83	551	339
East Anglia ...	—	181	176	32	30
Others ...	195	1	1	—	—
Totals ...	501	2,276	1,700	5,356	3,796

Billeting Arrangements

The majority of the women received have been billeted on private householders. In the earlier evacuation the householder was required only to provide lodging and the woman was left to make her own arrangements for board. This led to endless trouble, because many women claimed that they were entitled to board, despite their printed instructions. Others asserted that they had been promised accommodation in a maternity home at once. Many arrived without funds, and despite the ready co-operation always given by the Assistance Board this often led to trouble in the billets. There was always a risk that a householder who had agreed to provide board for a fixed charge might not be paid when her guest was suddenly transferred, usually in labour, to the maternity home. This actually occurred at times, and the feeling of financial insecurity was a deterrent to householders. Babies were very infrequently born in billets; nevertheless, the householders' fear of such an accident was one of the reasons why the expectant mother was one of the most difficult types of evacuee to billet.

Toward the end of 1940, authority was given to billet at a board-and-lodging rate which gave security to both householder and evacuee. Payment for board was recovered by the Billeting Authority in accordance with the evacuee's capacity to pay. Some billeting authorities preferred to continue on the original lines, but the board-and-lodging billets were very generally, and successfully, used during 1941. The provision of board and lodging is only one aspect of the matter. Areas which have been most successful with billeting have organised schemes for the welfare of the women outside their billets. Billets cannot always be of the best when a steady, weekly succession of women is arriving; some are certain to lack the amenities which will reconcile a woman to a stay of 5 or 6 weeks away from her own home. Social centres and clubs have been started where the women can meet during the day. One rural area in Northamptonshire has used two small villages continuously for 16 months, at the time of writing, and a succession of expectant mothers has been billeted, using the same households repeatedly. All these billets were at the lodging rate only, and the mothers

formed a club at the local village hall, where they cooked communal meals and otherwise contributed to their own entertainment. This experience is unique in the region, as billets for all the other homes were obtained in towns. A small town in Derbyshire, similarly used for London women, has billeted at board-and-lodging rates 683 women in one year's reception and we have had no complaint. In this town, also, facilities for recreation were well organised. These are only two examples. Some such activity has been an inseparable part of the reception arrangements in each area. The magnitude of the problem can be best expressed by the figures for two of the towns most heavily used. When receiving its full weekly quota of expectant mothers regularly, each of these towns might expect to have, in billets, a population of about 100 women in the last month of pregnancy, the population changing compietely every three or four weeks; one received 639 and the other 635 women in 1941.

For the reception of parties, the most important requirement is standardisation of the arrangements. Parties should arrive by the same type of transport, on the same day of the week, at the same time each week, and in similar numbers. It is then possible to preserve the same arrangements for premises, medical examination, provision of meals, and distribution to billets, without the trouble of re-planning for each party. This was easy with the careful organisation used for London, and the same principle has been applied to the provincial evacuation areas. It is most important that parties should not be set down at the maternity home, for the women show an understandable disinclination to leave the home for the less obvious attractions of billets.

Billeting officers of the local authority co-operate with the welfare authority maintaining the maternity home, although the two aspects of the work are quite distinct. Mutually satisfactory arrangements must be made for the transport of mothers to the home and for the billeting of any women who wish to remain in the area with their babies. When the billeting authority appreciates that women can be admitted to the home only if they are in labour or require antenatal treatment, there is no difficulty. The whole scheme breaks down at once if this rule is relaxed. This point was well illustrated by our experience with one of the last homes to be opened. The billeting resources of the area soon failed, owing to crowding with unofficial evacuees, and the home was used for more than six months as a combined hostel and maternity home. The average duration of stay of a patient was 37 days, as against 20 days for the rest of the homes in the region during the same period. It must, of course, be accepted that women will require admission from billets for much less serious ante-natal abnormalities than they would from their own homes.

Antenatal supervision is in the hands of the welfare authority and special clinics have been established at the emergency maternity home, antenatal hostel or the existing centre.

Antenatal and Postnatal Hostels

Hostels have been established in areas where billeting has been most difficult. It is difficult to provide sufficient accommodation in hostels for all the women to be received, and it is uneconomical when the numbers evacuated vary with the prevalence of air raids. Hostels with at least twice the number of beds provided in maternity homes would be required if none of the women were billeted. Hostels have certain advantages. Some of the women will never settle down in billets, and it is useful to have hostel accommodation for these more difficult cases. Communal activities are much more easily organised in hostels than in billets, and feeding is often simpler. Premises cannot always be found, but hostels have been used to some extent in six of our reception areas, a total of 9 hostels with 174 places having been provided. Two other hostels are in course of preparation, and we have encouraged such provision as an auxiliary to billeting wherever premises can be found. Antenatal hostels are usually run by the welfare authority and require staff with midwifery experience. They are much more expensive than billets, although the women themselves do most of the housework. The preference of the women varies, but more of them seem to favour hostels than billets.

Two postnatal hostels have also been established, but they have been little used because most of the women prefer to return home or to go to some area where they have made private arrangements.

Regional Organisation

Careful control of the arrivals of women must be exercised by the Regional Office, and this control can most conveniently be maintained by the medical staff, who are also dealing with the maternity homes, after the ground-work has been undertaken by evacuation officers. This task was arduous in the early days, but has now become much more simple. Occasionally difficulties arise from the need to close a home in which infection has occurred, but other troubles are infrequent.

During 1941 there were 310 beds regularly in use for London, and the weekly number of vacancies offered has been 127. There were brief periods when homes were closed, owing to infection, and the total number of places offered in the year was, therefore, about 6,000. Of these, only 4,113 were actually taken by the organised parties, and so many women registered for these parties failed to join them that only 2,849 arrived. Had they all arrived we would have been in difficulties, for 6,000 births would be very near the maximum permissible for 310 beds in normal times, and emergency homes, because of the greater need of antenatal beds, have a slower turnover. With an average stay of 20 days it would be unsafe to allow for more than 14 to 15 confinements per bed per year, and this means that our capacity would be about 4,500 births a year. There were 3,415 births in the year in these nine homes. The experience of the periods of heaviest raiding on London fully justified our conclusion that we need not anticipate the arrival of more than 75% of the numbers expected, and it would be exceedingly wasteful of our available beds and staff not to take this factor into account. Regular weekly returns are received from the reception areas showing the numbers of women awaiting their confinements during the current week and each of the three succeeding weeks, and this enables a check to be kept against possible future overcrowding. It is difficult to keep a "live register," as occasionally women will return before their confinements are due and others give inaccurate dates of expectancy, ante-dating being the commonest error. Information is received from headquarters six days beforehand of the numbers to be expected each week from London, and these are passed on at once to billeting and welfare authorities in the reception area. The whole procedure has now become almost automatic and involves a minimum of work for the medical staff. The procedure for the provincial towns, where we deal direct with the health departments concerned, follows similar lines. Hull and Sheffield each use one home, provided the weekly, or in the case of Sheffield, fortnightly, figure does not exceed the standard for the home. If it does, assistance is given by another home less fully used.

It will be appreciated that the burden of extra work imposed on welfare authorities, who maintain the maternity homes, and billeting authorities, who are responsible for reception, is exceedingly heavy. The share of the regional office must be the provision of the simplest and most convenient organisation which will operate efficiently and reduce that burden as far as possible.

Experience of the Homes

The records of the maternity homes have been summarised in Table II, separately for 1939, 1940 and 1941.

TABLE II

	1939	1940	1941	*Total*	
Number of confinements	330	1,435	4,382	6,165	
,, live births	325	1,442	4,332	6,099	
,, still births	7	23	79	109	(1·77%)
,, infant deaths	2	8	28	38	(0·46%)
,, cases of puerperal pyrexia	8	47	138	193	(3·1%)

The number of beds and homes in use varied in 1939 and 1940 and has been constant only during 1941. There were no maternal deaths in the homes, but three deaths occurred in patients transferred to other institutions—two from puerperal sepsis and one following a Caesarean hysterectomy for fibroids. The homes cater only for supposedly normal cases, and abnormals are moved to other institutions with special facilities.

Small outbreaks of puerperal sepsis have occurred in two homes—one in a temporary unit established for six weeks in a public assistance institution during the worst rush in 1941, and the other in a home which was very little used at the time. The first of these outbreaks was explosive and due to streptococcal infection, but there were no maternal deaths. Both homes were temporarily closed. Three outbreaks of a mild form of pemphigus occurred during the last half of 1941 at a time when the homes concerned had been working at top pressure for some months. There were 15, 12, and 3 cases respectively. In each of these outbreaks the homes were closed to admissions and infected cases were transferred. The homes were thoroughly cleaned before re-opening. No death occurred as a result of the infection, either of a mother or child. Women awaiting admission to the affected homes were diverted to others with vacant beds, a manoeuvre easily arranged from the regional office. Reception for the areas concerned was stopped for two or three weeks. There are difficulties in the management of these improvised establishments, especially in securing adequate isolation rooms. Cases of sepsis are always transferred at once, but it is rarely possible to find ideal accommodation for the isolation of all pyrexial cases. In many of the homes we have adopted a rule that any notifiable case of puerperal pyrexia must be transferred unless there is definite evidence that it is not infectious. Doubtful cases are not retained. Sluicing arrangements are usually improvised, though some of the larger homes have standard sluices. The absence of gas in many of the large country mansions makes sterilising difficult. Gas or electric domestic coppers serve very well as bowl sterilisers but are less effective for bed-pans, since the largest size will sterilise only three at a time. Recently two homes have had gifts of dressing sterilisers from America, but most of the work has been done with dressings sterilised at nearby institutions and transported.

An interesting development has been the increased demand for institutional midwifery in areas where emergency maternity homes have been established. Overcrowding of the available housing by evacuees has led to an increase in the number of local women who must be admitted for their confinements because of unsatisfactory home conditions. Institutional midwifery has been provided in areas where it was formerly available only with difficulty, and its popularity is rapidly increasing. Beds in emergency maternity homes are, of course, only used by local residents when the requirements of evacuees have been fully met.

Summary

Since war began 5,997 expectant mothers have been received in organised parties in one region. The arrangements for their reception are described, and the importance of standardisation of these arrangements is stressed. The experience of emergency maternity homes is briefly outlined. There have been 6,165 confinements with only 3 maternal deaths.

REFERENCE

BANKS, A. L., and NORMAN, L. G. PUBLIC HEALTH. (1941). **54**, 179

The Trustees of the late Sir Henry S. Wellcome have generously placed a sum of up to £20,000 at the disposal of the Medical Research Council for the purposes of research into methods of drying blood plasma and blood serum to provide stable products for use in the transfusion of patients suffering from haemorrhage, shock, or other conditions calling for such treatment. By agreement between the Trustees and the Council, this gift is to be applied to the purchase, erection and operation by the Council of a plant which will make it possible to test and develop these methods on a substantial scale. The need for the improvement of such methods is of particular importance at the present time, and the products will be made freely available for the treatment of sick and wounded at home, at sea and abroad. The M.R.C. therefore desire to express their appreciation of this timely and public-spirited action on the part of the Wellcome Trustees.

Retired Medical Officers of Health who would take charge of Public Health Departments for the duration of the war are asked to notify the Secretary, Central Medical War Committee, B.M.A. House, Tavistock Square, London, W.C.1.

WAR-TIME NURSERIES*

By H. MAINWARING HOLT, T.D., M.B., B.S. (London), D.P.H.
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During the last great war, nurseries were instituted throughout industrial districts in order to liberate mothers for work. A nursery makes provision for the care of infants and young children up to 5 years of age. It may be organised on day-to-day or on residential lines. In the former case children are usually brought along by mothers on their way to work, left in the care of the matron, and collected by the mothers on their way home. In the latter, the nursery provides for day and night care of the children over a period. It is generally accepted that if this war is to be successfully prosecuted a considerable demand will have to be made on married women with children. If this demand is to be met, adequate provision must be made for the care of these children whilst the mother is at work: hence the day-nursery idea. The Ministry of Health has urged all local authorities in whose areas war industries are set up to establish day nurseries sufficient for their needs. Assuming the need for a day nursery, we may proceed to consider minimum requirements.

Premises

An ample private residence should, if possible, be secured. It should be of sound construction and should occupy a site situated on the route to the factory or industrial area where the majority of mothers are likely to be employed. The conversion of such premises may prove to be an expensive undertaking. The essentials are a laundry and domestic offices, accommodation for prams, a lawn and play space, provision against fire, air-raid-shelter accommodation, and an ample supply of hot water. Most of these may be found already installed in the type of house I suggest, but if they are not in existence they must be provided. The 40-bedded unit is the minimum accommodation which any local authority should seek to provide. A smaller one is necessarily more expensive in proportionate running costs and can only scratch the problem of day-nursery provision. The contribution of the parents of 1s. per day does not go far towards the total cost of maintenance.

Staff

The staff falls into two categories—nursing and domestic. The minimum nursing staff for a 40-bedded unit consists of matron, deputy matron, staff nurse, and one child-care reserve nurse for every 5 children accommodated. The matron is not expected to take any regularly active part in the immediate care of the children. Her work deals with admissions and discharges, isolation of suspected cases of infectious disease, the control of the staff, both nursing and domestic, the responsibility for cash and records. She meets the medical officer of health or his representative, and attends the meetings of the management committee. The deputy matron, while to some extent taking an active part in the care of the children, must also be able to accept the responsibilities of the matron during her absence. Similarly, the staff nurse, though she would not normally deputise for the matron, is expected to exercise immediate supervision of nurses; as most of these have only a very elementary training and little or no experience, her responsibilities are important. The child-care reserve nurses are usually recruited through the W.V.S. Their training is prescribed by the National Council for Maternity and Child Welfare, and although an examination is held at the end of the course too much reliance should not be placed on its value. The essential point is to recruit the right type of candidate, and young married women seem to me the most suitable. This class of work demands interest and alertness as well as technical knowledge and common-sense.

The domestic staff would include at least a cook, a housemaid, and a handyman. The care of the garden and the cleaning of windows can best be delegated to outside sources. Thus for a 40-bedded unit the minimum staff amounts to a total of 12 persons. For a 20-bedded unit, 8. Thus the former is the more economical.

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* Paper read at a meeting of the Yorkshire Branch of the Society of Medical Officers of Health on January 2nd, 1942.

Value of the Nurseries

We may now consider the value of the day nursery in the present circumstances. First, it can only find its application in areas where there are large concentrations of married women war-workers. In rural districts, or districts where these elements are scattered, the day nursery would fail on account of the time wasted in reaching it before going to work. Mothers will not utilise a provision of this nature unless it is convenient. I have considered methods of overcoming this difficulty, and it is becoming more and more apparent that as factories are becoming established in country districts the recruitment of female labour may have to be carried out not only in neighbouring towns and boroughs but also in the immediate vicinity if full use is to be made of married female labour. The alternatives which offer themselves are (*a*) the establishment of a day nursery at the factory itself, or (*b*) the collection of the children by means of a bus and their delivery at a day nursery entirely separately situated. The latter seems to me much more desirable. I do not think a factory site, whether such factory is engaged in war work or otherwise, is the right place in which to set up a day nursery. There is, moreover, the question of congestion of transport on the way to and from the factory, with all its concomitant dangers. It should not be difficult to arrange to collect children by bus at their homes before the mother leaves for work. Such a vehicle would have to be suitably adapted and a nurse detailed to accompany it. The vehicle might be used for other purposes during the periods the children were at the day nursery.

Supplementary Schemes

As we are aware, the Ministry of Health has prepared and is preparing supplementary schemes for the care of infants and young children. There is, first, the registration of child minders—women who are prepared to take care of the children of mothers engaged on war work. Such women must show that they have suitable accommodation and that they themselves are capable and reliable. Secondly, there is the private-house day nursery where the owner or occupier must be able to provide a play room, a sleeping room, residential accommodation for a nurse, and a patch of garden in addition to the usual domestic conveniences. In this way a minimum of four children may be catered for both conveniently and cheaply. Thirdly, there is the utilisation of nursery classes outside as well as within normal school hours. This latter scheme will require further consideration on the question of staffing and accommodation. Full provision will have to be made for feeding, for laundry, and for regular medical as well as teaching supervision. Staffing during holidays as well as during the periods outside normal school hours remains to be settled. The nursery classes are small scattered units, and therefore may be very expensive to maintain when their functions are extended to those of a day nursery.

I believe the most successful unit is a standard day nursery set up to accommodate no fewer than 40 children, and that a transport service on the lines suggested should be an essential factor in its organisation. I see no objection to the registration of child minders, but this should stand only as a supplementary scheme available on economic grounds only—that is to say, when it would be cheaper and more convenient to make use of it.

The Future of the Day Nursery

Let us consider finally the future of the day nursery. It is alleged in responsible quarters that the ground gained in this direction during the war will be stoutly defended when hostilities have ceased. I gather from this that mothers will be encouraged to make further use of day-nursery facilities when the exigencies of war have long since passed. At present there is every reason to encourage the maximum employment of married women in every possible sphere, and consequently to make provision of the most satisfactory type for their children. I believe, indeed I hope, that this is purely a wartime measure, and that with the advent of peace there will be a return to normal home relationships and a full sense of the responsibilities of motherhood. It seems to me wrong, may I say unnatural, for an infant to be separated from its home or its mother without very real cause. If a mother is compelled by force of circumstances to assist in maintaining the home, then the competent care of her child in the meantime is a matter of sheer necessity, but may we not look forward to the time when married women are not in this unhappy position of being hampered by the anxieties of poverty—when, on the other hand, they may devote themselves entirely to home, to children, and to motherhood?

The potential fertility of married women is not yielding its due proportion of births, at all events in this country, and the insecurity of the home is amongst the several known causes. It may be argued that homes wherein security is practically assured compare just as unfavourably in this respect, but this can be explained by the greed and selfishness pervading this section of society.

What I would like to see after the war above everything else is the re-establishment of the family as the pivot around which the whole social order rotates. Every influence, however well intentioned, which might tend to disintegrate it, I would stoutly oppose. The binding force of the family is responsibility. That responsibility should be encouraged rather than removed, and the social services of the future should be directed towards making people acknowledge their responsibility to their families and to the State—not the contrary. In this respect I cannot but reflect on the social service props introduced in the last 50 years, which in spite of their blessings have also brought their curses.

WAR-TIME DAY NURSERIES*

By E. D. IRVINE, M.D., D.P.H.,
M.O.H., Shipley U.D.

I shall first deal with war whole-time day nurseries and then make some general observations. Many problems arose during the establishment of a day nursery in Shipley, an industrial town of moderate size. Various alternatives were considered: pre-fabricated buildings or army huts in the nursery school grounds (but there was too little space available); similar premises on "waste land," and in a small central park (this entailed a high cost of laying services); the conversion of two adjoining council houses; or the adaptation of a large empty house.

It was felt that a large house, affording facilities for residential staff and warmth in winter, was much more satisfactory for the purpose than pre-fabricated buildings. Siting is very important, but it was impossible to obtain a suitable house in either the working-class area or on the approach to the bus terminus. The only possible house (the only large unoccupied house in the district which had not been requisitioned by the War Department) was in a residential area, and transport would certainly be necessary. The need for collecting centres (*e.g.*, in schools) to shelter the mothers and babies waiting for the bus which would take them to the nursery, was also considered.

Some Desiderata

The great difficulty of the whole-time nursery is the early hour at which it must be opened if it is to serve its purpose, and I consider that the nursery should be opened at about 6.30 a.m. and be kept open till about 7.30 p.m. If the mother can make arrangements for the baby to be minded until 8 a.m. or 9 a.m. the problem of the rest of the day should be quite simple; it is the extremes of the day that make for difficulty in running a day nursery for war workers. Shifts involve further complications. I consider that it is undesirable that women with very small children should go out to work; it is certainly undesirable to have small babies taken from their beds at 6 a.m. and be exposed to the cold atmosphere of a winter's morning. Transport must be provided. Whether the emergency ambulances will be a suitable means is doubtful.

The cost of adaptation has been high, and the net running costs, after the parents' payments have been taken off, for a nursery of 50 children, are estimated at £2,000 per annum: this is more than the net cost of all the other M. and C.W. services of the town, with the exception of the maternity home. As a peace-time measure this would obviously be inequitable.

The success of the nursery turns on the fitness of the Matron for her post; she should have a true affection for children and act as another mother to them. It may not be easy to obtain good business capacity with a genuine maternal affection, but it must be sought; she must have a psychological insight based on affection and experience, and close observation of little children. It cannot be over-emphasised, so far as we are concerned, that a day nursery is not the natural environment of the child, and it is the matron's task to create in the nursery the conditions to be obtained in good homes. For the same reason the premises must be good, and Army Authorities should be willing to yield for this purpose any large house that is not a key point in their local organisation.

The ordinary hygienic needs of the nursery and the physiological requirements of the children must be met; the provision of toys is very important, and they should include dolls and toys enabling the children to exercise their desire for exploration; if possible they should be in good, strong, pure colours.

To-day and To-morrow

The State's anxiety for the welfare of children was expressed during the last war in the Maternity and Child Welfare Act, 1918, and in the present conflict by the Ministry of Food's allocation of vitamin products and milk to children and milk to mothers, and, in a sense, by the provision of war nurseries. The purpose of the day nursery is, however, primarily to release for war industry mothers who have young children. Those who urged day nurseries in peace-time press for them in war-time, and will no doubt press for their retention afterwards. While it is a public duty to support the Government in everything necessary for the prosecution of the war, equally we must maintain the view that the family is the fundamental unit of society, and that on return to peace every child should be reared in its own home under the direction of the parents. The economic conditions which make married women go out to work, and the appalling housing conditions in many places, must be corrected in our post-war social programme. This is the real need; the provision of facilities for looking after children out of their own homes is but a makeshift and a palliative. There is no doubt that there is a strong movement in this country for compelling children at the age of 2 or 3 to attend public nursery schools, and this should be resisted. No one denies, however, the value of the nursery school in the case of a genuine only-child problem and for children whose mothers are compelled to work away from home, or whose social conditions are bad.

In relation to day nurseries influential press comment in this country has been less than fair to the welfare authorities and the Ministry of Health, and has expressed the desire that children from 2 to 5 years of age should become the responsibility, so far as public welfare is concerned, of the education authority; from this it is but a short step to compulsory education in nursery schools. The Public Health Act, 1935, has imposed upon the welfare authorities the duty of providing for the welfare of nearly all young children under 5, or when separated from their homes as foster-children up to the age of 9 years, and in my view it would not be in the true interest of young children to transfer the public responsibility for the welfare of children of from 2 to 5 to the education authorities, with the probable result of extended compulsory education. Part-time nurseries are so much simpler to organise, and so much less useful for the difficult cases, that I have not discussed them.

* Paper read at a meeting of the Yorkshire Branch of the Society of Medical Officers of Health on January 2nd 1942.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments in the health departments of various local authorities:—

BARNSLEY C.B.: M.O.H. & S.M.O., Dr. J. T. L. Lewis (Deputy M.O.H., Croydon C.B.). Salary £900, rising to £1,000 p.a.

FALKIRK B.C.: Interim M.O.H., Dr. Joseph Walker (M.O.H., Co. Zetland). Salary £800 p.a., plus car all. £60 p.a.

LANCASTER, CITY OF: M.O.H. & S.M.O., Dr. Edward Hughes (M.O.H., Dover M.B. & Port).

MIDDLESEX FEVER & EMERGENCY HOSPITAL: Deputy Med. Supt., Dr. M. C. Hopper.

BOOK REVIEW

Handbook of Practical Bacteriology. By T. J. MACKIE, M.D., D.P.H., and J. E. MCCARTNEY, M.D., D.SC. Sixth Edition. Edinburgh: E. & S. Livingstone. 1942. Pp. 675. Price 17s. 6d. net. (Postage 7d.)

"Mackie and McCartney," now in its 6th edition, continues to be a best seller in the pathological market. It has a wide appeal, being used at home and abroad by undergraduate and postgraduate medical, veterinary, and science students, laboratory technicians, and bacteriologists engaged in routine work in hospital and public health laboratories. It is, indeed, a veritable goldmine of useful practical information. The new edition contains nearly 100 pages more than its predecessor, and, despite the new knowledge that accrues in this subject almost from day to day, it is remarkably up-to-date. Although the book is meant to be used primarily for guidance in practical bacteriology, a chapter on infection might usefully be included in Part I, which deals with general biological and immunological principles, and where, incidentally, the lucid explanation about H and O agglutination should not now be in small type. In Part II, on bacteriological technique, there are many new additions, among which may be noted the formulae of Fildes's wartime C.C.Y. agar, Hynes's modification of desoxycholate-citrate agar (now proving so valuable in the bacteriological diagnosis of dysentery), and the useful and easily prepared blood-tellurite medium of Neill for the isolation of *C. diphtheriae*. Numerous wartime economies are also suggested—for example, the use of industrial methylated spirits in place of rectified spirit and absolute alcohol. And it is to be hoped that most bacteriologists are now converted to the use of the screw-capped bottle and container for culture media, specimens, stains and the like. This part ends with a full description of the methods, and their interpretation, used for the examination of water and milk, which public health workers will find most helpful.

In the last part, brief but adequate descriptions are given of the common pathogens with particularly useful sections on the methods and materials required for the laboratory diagnosis of infections by these organisms. There are obvious signs of revision in the sections on typhoid, where the value of phage typing and Vi agglutination are discussed, dysentery, where Boyd's classification of the Flexner group is adopted, the anaerobic infections, and the rickettsial diseases, while 47 pages are given to the viruses. There are appendices on the mode of action of the sulphonamides and the neutralising effect of *p*-aminobenzoic acid, the formulae of some new culture-media, and the bacteriological examination of air.

SCHOOLS AND INFECTIOUS DISEASE

A "Memorandum on Closure of and Exclusion from School" was first issued in 1909 and was revised in 1925 and 1927. The Ministry of Health and the Board of Education, jointly responsible for the Memorandum, have now issued an "Addendum on Exclusion."* They point out that Medical Officers of Schools Association have revised their well-known "Code of Rules," the latest (10th) edition being published in 1940.

Most medical authorities, the Addendum states, have doubts whether the course of epidemics or the number of cases is influenced to any appreciable extent by the exclusion of contacts. The loss of school time involved is realised by all, and it does not seem that this sacrifice of education brings any corresponding advantage to the public health. Some experienced school medical officers in urban areas have abandoned the exclusion from school of measles, German measles, and chickenpox contacts, and have allowed the return of scarlet fever and diphtheria contacts one week after the isolation of the patient whether at home or in hospital. Other medical officers recommend that, in urban areas, the practice of allowing contacts to attend school might be extended to include those of any of the common infectious diseases of childhood, except on the rare occasions when there is some special reason why an individual child should be excluded. They feel that the attendance of contacts at school makes daily supervision by the school medical and nursing staff easier, and facilitates the early detection of fresh cases. War-time economy renders the issue of a completely revised memorandum inexpedient, but the principle relating to the closure

* H.M. Stationery Office. 1942. Price 1d. net.

of schools enunciated in the memorandum, that it is only in special and quite exceptional circumstances necessary to close a school in the interests of public health, still holds good.

The Addendum now published takes the place of the Appendix to the Memorandum (on pages 30-31), and is, like the Memorandum itself, purely advisory. The Ministry and the Board would welcome information gained by the application of other methods of dealing with contacts if these are controlled by careful observation and strict recording. The Appendix to the Addendum is printed belo w.

Incubation and Exclusion Periods of the Commoner Infectious Diseases

It should be understood, when this table is used, that infectious disease is a process, not an entity, and that the process is liable to modification by many circumstances. The period indicated in the second and third columns of this table should, therefore, be regarded as approximate only. Just as infectious diseases behave differently in different individuals so epidemics behave differently in different types of area. The medical officer of health or school medical officer must therefore decide how far the suggestions contained in the appendix are applicable to local conditions and what are the best measures of control in his own area. It is, however, the opinion of the Ministry and the Board that the Rules governing exclusion of contacts should not be more rigid than those suggested in the appendix.

	Usual Incubation Period (days)	Interval between onset and appearance of rash (days)	Period of Exclusion: Patients	Period of Exclusion: Contacts *i.e.* the other members of the family or household living together as a family, that is, in one tenement
SCARLET FEVER	1-7	1-2	7 days after discharge from hospital or from home isolation (unless "cold in the head," discharge from the nose or ear, sore throat, or "septic spots" be present).	7 days after the removal of the patient to hospital or the beginning of his isolation at home.
DIPHTHERIA	2-7	—	Until pronounced by a medical practitioner to be free from infection.	7 days after the removal of the patient to hospital, or the beginning of his isolation at home. If there be any suspicious signs the child should be excluded further until pronounced by a medical practitioner to be free from infection.
MEASLES	7-14	3-4	14 days after the appearance of the rash if the child appears well.	Infants who have not had the disease, should be excluded for 14 days from the date of appearance of the rash in the last case in the house. Other contacts can attend school. Any contact suffering from a cough, cold, chill or red eyes should be immediately excluded.
GERMAN MEASLES	5-21	0-2	7 days from the appearance of the rash.	None.
WHOOPING COUGH	6-18	—	28 days from the beginning of the characteristic cough.	Infants who have not had the disease should be excluded for 21 days from the date of onset of the disease in the last case in the house.
MUMPS	12-28	—	14 days from the onset of the disease or 7 days from the subsidence of all swelling.	None.
CHICKENPOX	11-21	0-2	14 days from the date of the appearance of the rash.	None.
*SMALLPOX	10-21	3	Until the patient is pronounced by a medical practitioner to be free from infection.	21 days unless recently successfully vaccinated when exclusion is unnecessary.

* The incubation period of major smallpox is commonly 12 days but that of minor smallpox is more variable and the wide limits given apply to this variety of the disease.

At the Annual General Meeting of the Central Council for Health Education, held on June 12th, Dr. Charles Hill was elected Chairman in succession to Dr. W. Allen Daley who, together with Sir Walter Langdon-Brown, was elected Vice-President. Dr. Maitland Radford succeeds Dr. Hiss as Vice-Chairman, and Mr. Henry Lesser has been re-elected Hon. Treasurer.

E.H.S. PATHOLOGICAL SERVICE

The Minister of Health (Circular 2658) has had under consideration the development of a hospital pathological service to meet the needs of the Emergency Hospital Scheme in the provinces on the lines already developed in the London Sectors. For this purpose certain laboratories are being and will be recognised in each Region as "area laboratories"—*i.e.*, laboratories with whole-time pathologists which will take work from other hospitals as well as work from the hospitals at which they are situated—and in suitable cases, works of extension and adaptation are being put in hand as part of the upgrading of hospitals in the E.H.S. In a very few cases, new laboratories are being built. Provision is also being made for "side-room laboratories"—*i.e.*, laboratories with technicians only, or in some cases with minor equipment only and no technician, undertaking only work from the hospitals at which they are situated, and normally supervised by a pathologist from the nearest area laboratory. It is proposed that hospitals included in the E.H.S. shall be grouped round the most convenient area laboratory, where one is available, so that, in so far as the hospitals have not already made their own provision for pathological work, they may send it to the area laboratory with which they are grouped. The grouping will be arranged by the Hospital Officer, in consultation with the Honorary Consultant in Pathology where one is appointed, after consultation with the hospitals concerned, and the Senior Regional Officer will in due course notify the hospitals in his Region of the arrangements made.

The Circular then describes financial and staffing arrangement and equipment, and concludes by stating that the general aim is to secure for all hospitals included in the E.H.S. the best facilities for pathological work available, and the essence of the arrangement is the application to pathology of the scheme of reference to special centres which has been developed in connection with other special activities of the E.H.S.

OBITUARY

WILLIAM GIBSON PARKER, M.B., D.P.H.

Dr. W. G. Parker, a Fellow of the Society of Medical Officers of Health, died recently in his 64th year. He had been for 35 years Assistant Medical Officer of Health to the Somerset County Council.

William Gibson Parker received his medical education at Birmingham University, the London Hospital, and Guy's Hospital. He passed the M.B., London, in 1901, and took the D.P.H., Cambridge, in 1907. At various times he was medical superintendent of the City Smallpox Hospital, Birmingham, assistant medical officer to the City Fever Hospital, Birmingham, and assistant house surgeon to Guy's Hospital. He went to Taunton in 1908 and later moved to Weston-super-Mare. During the war of 1914-18 he served in Egypt in the R.A.M.C., with the rank of Captain, and he returned to Somerset after the war. As Assistant M.O.H. to the county, he contributed much to the development of the child welfare services, in which he was keenly interested. His sympathy and kindliness made him a friend of children and teachers alike.

In his leisure hours Dr. Parker was interested in music, was chairman of the Committee of the Taunton Choral Society, and sang in the choir of the Temple Methodist Church, Taunton. He was also an enthusiastic archaeologist and golfer.

WILLIAM BRAND, M.B., C.M.

We regret to record the death of Dr. William Brand, formerly senior tuberculosis officer for Camberwell, and for three years chief medical commissioner to the National Association for the Prevention of Tuberculosis. He was a Fellow of the Society of Medical Officers of Health.

William Brand was a graduate of the University of Manitoba, and received his medical education at Edinburgh, where he qualified M.B., C.M. in 1910. He very soon began to make a special study of tuberculosis, and besides his excellent pioneer work at the N.A.P.T. and as tuberculosis officer for Camberwell, he was at various periods Hon. Treasurer to the Tuberculosis Society of Great Britain and Hon. Secretary, Post-Graduate Courses, Joint Tuberculosis Council. He was also Medical Officer to the Camberwell Day Sanatorium (L.C.C.). The Annual Reports on Tuberculosis in Camberwell from 1922-1925, and the Reports of the Camberwell Central Fund Tuberculosis Dispensary from 1913-17, which were compiled by him, testify to his untiring and valuable work in his own district.

British Drug Houses have recently issued leaflets on sulphaguanidine and valogen. An average daily dose of the latter, it is stated, represents the total vitamin activity of 2 oz. of fresh yeast, and amounts of soluble mineral salt equivalent to 12 grains of ferric iron, 0·002 grain each of copper and cobalt, and 0·01 grain of manganese.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

WELSH BRANCH

President: Dr. Greenwood Wilson (M.O.H., Cardiff).
Hon. Secretary: Dr. H. W. Catto (M.O.H., Newport).

During the winter months from November to April, five meetings of the branch were held at which the subject of medical planning was discussed. Different aspects of public health work were considered separately, the discussion in each case being opened by one of the members with special experience in a particular phase of the work. Thus Dr. D. Rocyn Jones (County M.O. for Monmouthshire) outlined a Regional Scheme for Wales which had been embodied in the report of the Welsh Consultative Council and issued at the end of the last war; Dr. Mary Scott (Assistant M.O. of the Monmouthshire C.C.) read a short paper on the maternity and Child Welfare Services; Dr. G. McKim Thomas (M.O.H. for Cardiff R.D.C.) dealt with medical planning in relation to medical services in rural areas; Dr. Culley (Assistant M.O. of the Glamorgan C.C.) dealt with the subject from the point of view of the school medical officer; Dr. Gwyn Rocyn Jones (County Pathologist for Monmouthshire) opened a discussion on the need for a domiciliary pathological service, and Dr. Colston Williams (County M.O. for Glamorgan) surveyed the problems of hospital administration.

Attendance averaged 20 at each meeting, and the chair was occupied throughout by the President. Discussions were keen, and it was decided to forward for consideration by the Medical Planning Sub-Committee of the Council of the Society certain resolutions, the drafting of which was entrusted to a sub-committee composed of the readers of papers, under the chairmanship of the President.

MATERNITY AND CHILD WELFARE GROUP

A refresher course, attended by some 40 members of the Maternity and Child Welfare Group, was held in Oxford on April 18th and 19th. On the first day, at the Radcliffe Maternity Home, a short address of welcome was given by Dr. G. C. Williams, M.O.H. for Oxford.

Obstetrics at Oxford.—Dr. Scott Russell (First Assistant in the Nuffield Department of Obstetrics and Gynaecology) then gave an account of the work of the Oxford Emergency Obstetric Service—the "Flying Squad"—provided by the Radcliffe Maternity Home. The service was used for persons too ill in the first place to be removed to hospital. The personnel required to run such a service consisted of (1) the surgeon in charge, (2) one fully trained nurse accustomed to the work, (3) a junior colleague, (4) an ambulance driver.

In an interesting discussion, the question arose as to what area should be served by the Flying Squad. Dr. Scott Russell thought that a radius of 35 miles was too wide for satisfactory work.

Prof. Chassar Moir spoke of the types of anaesthetics in common use—*e.g.*, cyclopropane, gas and oxygen, and chloroform. He referred to the Minnitt apparatus and to the Queen Charlotte's Hospital model. The original mixture of gas and air was 35%. This took 45 seconds before it began to have any effect, so that it caught only the last part of the pain. Prof. Moir then demonstrated the use of gas and air, 35% mixture, and also pure gas, on himself. Forty-two seconds elapsed before the gas and air mixture began to have any effect. Pure gas took 8 seconds. He said there was much to be said for intermittent inhalations of chloroform—small amounts repeated many times.

A Day Nursery.—In the afternoon the Group visited a day nursery run in connection with the Morris Works. An adaptation of a sports pavilion, it was a one-storey building with a veranda, situated for the convenience of mothers in an open space within easy access of the Morris Works. A point of interest was the thermostat regulating the temperature of the water supplied to the toddlers' basins. Later, Mrs. Lane, Superintendent of the Oxford Day Nurseries, gave an address on nursery school problems in day nurseries, dealing with such points as staffing, teachers *versus* matron, the problem of trainees and child care personnel, hours of work, salaries, diphtheria immunisation, laundry.

Later in the afternoon, Dr. Kathleen Todd (Psychiatrist Tutor to the London Training Group, Oxford Guidance Clinic) gave an address on "Child Psychology in Relation to Wartime Nurseries." Dr. Todd said that neurotic symptoms in children were not haphazard but the outcome of early training. Dealing with the problems of masturbation in both sexes, Dr. Todd stressed the need for plenty of occupation, outlets, and companionship for the child. Punishment and restriction of movement as a means of stopping masturbation were useless. Dr. Todd questioned whether the child was going to get enough companionship in a nursery school from the nurses, and said that a child up to the age of 2 years needed its mother. It was bad, she said for children to have a rota of people all day long at the day nurseries, and the great danger of the whole system was the lack of mothering.

Scabies.—On April 19th the City Isolation Hospital was visited, where Dr. Archer described the scheme enforced in Oxford for the control of scabies. Each patient received a home visit, and sleeping, bathing, and washing facilities were investigated. Any member of the household not clean was referred to the Central Scabies Clinic, where an evening session from 6 to 9 was held. From this clinic patients were referred for treatment to an out-patient treatment clinic, or, if unsuitable for out-patient treatment, they were admitted to hospital. After about 10 days patients returned to the Central Scabies Clinic for re-examination. They were drawn from (1) the schools medical departments, (2) the antenatal clinics, (3) the infant welfare clinics, (4) the general practitioners, all of whom had been circularised, (5) the services, (6) the Radcliffe Infirmary, out-patient and casualty departments.

Following an inspection of the Isolation Hospital, Dr. A. F. Meiklejohn (of the Rockefeller Foundation Health Survey) gave a provocative address on "Nutrition Surveys in Wartime," and an interesting discussion followed.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the branch was held at Blaydon on April 25th. The President and 18 members were present. The minutes of the meeting held on March 28th were read, confirmed, and signed by the chairman.

The report of the meeting of the Branch Council regarding the question of war-time increase in the salaries of whole- and part-time public health officers was submitted to the branch which, after careful consideration, adopted the recommendation of the Council with certain minor amendments which have been incorporated in the draft resolution as follows: (1) That there should be a national bonus, fluctuating in accordance with the cost of living, over and above the standard scales of the Askwith Memorandum, for all whole-time public health officers, including officers on the temporary establishment. The branch did not think that any other form of war-time increase in salary was appropriate. (2) That part-time officers of all grades should receive a cost-of-living bonus which should be related to the salary they receive, or to the sessional fee. In the case of the salaried persons it should be on the same basis as the cost-of-living bonus of the whole-time medical officers, and in the case of those receiving sessional fees it should be an increase

in the sessional fee—say, not exceeding 10%. It was also moved : That any scheme which was adopted should be given national application under direction from the Ministry of Health.

DENTAL OFFICERS' GROUP

President: Miss M. S. Mackinnon (L.D.S., Glas. ; D.O., Reading).
Hon. Secretary: Miss Winifred Hunt, L.D.S., 4, Highcroft, North Hill, Highgate, London, N.6.

A meeting of the Dental Officers' Metropolitan and Home Counties Sub-Group was held on April 18th. The President and six members were present.

"An Exchange of Practical Hints" was opened by Mr. C. R. Wilshaw. Inspections and treatment of every type were considered, and operating technique, materials, drugs, instruments, advice to parents, "catch phrases," dealt with in detail. All members took part in the discussion which followed, and it was agreed that the meeting was successful and educative.

TUBERCULOSIS GROUP

President: Dr. T. R. Elliot (T.O., Salop C.C.).
Hon. Secretary: Dr. R. L. Midgeley (Medical Superintendent, Devon C.C.).

A meeting of the Tuberculosis Group Committee was held in the Society offices on Thursday, May 14th, 1942. The President, Dr. E. Ward, occupied the chair, and 11 other members were present.

The minutes of the previous meeting were read and signed, and arising from them it was stated that the Joint Tuberculosis Council had set up a committee to deal with Dr. Tattersall's letter on notification, and a report was being prepared.

At a meeting of the Standing Advisory Committee it had been stated that the Army was proceeding with a scheme to introduce mass radiography.

Dr. Ward was instructed to ask the Council to forward the letter from Stoke-on-Trent to the Ministry of Health, with a recommendation that the provision of adequate and suitable accommodation and facilities for treatment for the tuberculous was an urgent national necessity.

The N.A.P.T. memorandum was approved in principle, but it was felt that in some respects the wording could be improved.

The Joint Tuberculosis Council representatives gave an account of the special meeting. Their actions were approved and they were instructed to keep a watchful eye on future proceedings, so that the J.T.C.'s ability to continue its useful work should not be endangered.

The view was expressed that where a tuberculosis officer was called up for military service he should approach his local medical war committee if he wished to be considered as a "chest consultant."

The Minister of Health, Mr. Ernest Brown, speaking at a conference at the Royal College of Nursing on Co-ordination of Hospital Services, said: "What are the things that a patient expects us to provide? At the top of the list I should put certainty of treatment—that is to say, an assurance that when he is seriously ill or injured there will be the necessary professional skill, the equipment and the accommodation immediately available. Such an assurance can be given only if it is the duty of some responsible public body to see that the necessary facilities are provided in sufficient quantity. That is why the first principle of the Government's hospital policy is to lay a Statutory obligation on the major local authorities to secure the provision of an adequate hospital service for their area. The local authorities will of course look to others for help, above all to the voluntary hospitals with their long experience and in many areas their unrivalled facilities, which must obviously play a very large part in any co-ordinated hospital service. Next to certainty of treatment I should suggest that we ought to put convenience of treatment. A patient likes to be treated near his home. . . . The patient also wants to have the treatment best suited to his condition."

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PUBLIC HEALTH

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EDITORIAL

Medical Planning—The Society's Report

At its meeting on July 31st the Council of the Society of Medical Officers of Health passed the Report of its Medical Planning Committee for publication in this journal and circulation to the Branches and Groups. The Committee consisted mainly of representatives of these territorial and sectional units, each of which had been formulating its own views since last September and had forwarded them for central consideration. Under the able chairmanship of Dr. George Buchan, the Committee has produced with commendable speed this preliminary report which appears in full on p. 199 of the present issue. It is concise and, on most points, definite. It should be studied carefully by every member of the Society. The Council hopes to receive the comments of the Branches and Groups without too much delay. It can be confident that these are truly representative only if members exercise their right and duty to attend the meetings when the Report is under discussion.

The ideas running through the Report are, for the most part, not different from those revealed in the Interim Report of the Medical Planning Commission.* In both it is recognised that all aspects of medical administration require to be concentrated in a central department with a medical officer as its chief official, and local departments covering wider areas than those of many existing authorities; that all forms of medical service should be provided for most of the population on terms other than fee-paying; and that there should be the closest possible association not only in administration but also in day-to-day working between the various types of medical and auxiliary services. In some matters of detail the Society's Report is more definite than that of the Commission, and on one major question it differs profoundly. It does not contemplate any other type of administrative bodies than, centrally, a government department answerable to Parliament through a Cabinet Minister at its head, and, locally, popularly elected authorities for all local government purposes exercising jurisdiction in the new areas envisaged and free from interference by any other body than the central department directly administering Treasury grants. It makes no concession to the agitation for medical representatives on such local authorities, but recognises the function which may be served by central and local advisory medical committees. It states most emphatically the cardinal principle that hospital services are an integral part of the health services and cannot be administratively severed from them without causing worse confusion than planners are setting out to banish. It subscribes to the proposal that general and special practitioners should work together in health centres provided by health authorities, and that they should be increasingly concerned with the promotion of health and prevention of disease, which so far have been mainly the province of the health departments. But it considers that all medical services given in this and other ways should be available for every member of the community without charge for each specific item of service rendered. There would be no income limit to eligibility.

It is on the question of staffing that the Report diverges most sharply from that of the Commission. The dual objects of administrative efficiency and the elimination of undesirable competition for patients are regarded as unattainable along with private enterprise in medicine, and require for their full realisation a national service on a whole-time salaried basis. While the maximum possible freedom of choice would be given to patients in the selection of their doctors, conditions of employment and opportunities for study and research would be afforded which only a privileged few enjoy at the present time. Indeed, the Report repeatedly notes the need for research and the advancement of knowledge, especially in the direction of maintaining and improving health, which hardly thrive in an atmosphere of private competition. It would be an exaggeration to say that there is complete unanimity in the ranks of the public health service on this question of whole-time domiciliary medicine, but it is probable that the dissentients are few.

It is recognised in the Report that a completely integrated service of the type outlined cannot be brought into being by one administrative action. The steps suggested are the creation of a new central department, the establishment of new local authorities, and the grant of power to the latter to plan and develop their services according to circumstances during a transition period in consultation with the local medical profession. The medical profession itself will require a new type of education to fit them for their new field of work and steps to that end are a corollary to the scheme. If it is necessary to act quickly in the difficult period of demobilisation the Report suggests that it would be better to allow existing major authorities to set up a whole-time salaried medical service which would fit into the scheme outlined than to adopt the

* See *Public Health*, August, 1942, **55**, 185.

Commission's proposal for a mere extension of medical benefit under the National Health Insurance Acts.

There is little doubt that a large proportion of the people would welcome a medical service of this kind. It would start, however, under a great handicap if it were imposed on an unwilling profession or accepted by it with reluctance under political and economic pressure. While a majority of the medical students and young practitioners, who ultimately will be most concerned with changes in the medical system, may possibly incline toward a whole-time salaried service, this is probably not true of those already established in practice. It is within the profession, therefore, and not outside of it that the idea needs to be propagated.

The Woman in Industry

The entrance of mothers and prospective mothers into industry has given the problems of maternity and child welfare a new illumination, and it is not surprising that this subject coloured almost all the addresses at the recent conference arranged by the National Association of Maternity and Child Welfare Centres. The Minister of Health, who presided, and all the speakers expressed solicitude lest the drafting of women into industry should imperil the next generation. Mr. Ernest Brown spoke of the establishment of war-time nurseries, 644 of which have been set up, with another 750 in preparation, of the provision of meals for working mothers at communal centres and canteens, of the system of rationing whereby certain essential foodstuffs are ensured for the children, and of the widespread provision of maternity accommodation and homes for expectant mothers.

Apart from the problem of maternity and child welfare, the entrance of women into industry brings to industry itself not a few medical and medico-sociological difficulties. Take the question of medical examination on admission. It is easily said, as one speaker did at the conference, that in order to prevent tuberculosis among these women all entrants into every type of industry should undergo a medical examination in close co-operation with tuberculosis officers, and that every diagnostic facility should be employed, including the extensive use of mass miniature radiography. This may not be easy even in the case of women entering the services of the Crown, but it is much less easy in the case of women entering industry, because industry is not a single organisation like the Army or the Air Force. In the large factories there may be adequate medical supervision, but in quite small factories and offices there is none. Moreover, women are enlisted not only as whole-time workers but increasingly as part-time workers, and the regular medical inspection and supervision of part-time workers must be exceedingly difficult. Allowance must also be made for the fact that many factory managements have hitherto been accustomed to deal only with male labour; they may therefore fail to recognise the special problems of the female influx, and may not be willing even to admit the need of a female labour officer. The conference was informed of some arrangements at enterprising factories which are certainly an example to the rest—the appointment of sectional "mothers," for example, to act as hostesses to newcomers, help them over difficulties, make social contacts for them, arrange rest pauses and rest rooms, and—not least important—ensure that the tea trolley goes its rounds.

It was clear from much that was said at the conference that the position of the industrial medical officer is not altogether enviable. He is apt to be regarded by the management as a necessary evil, even as a spoke in the wheel of "production and yet more production," and his recommendations may be received with impatience, while, on the other hand, the worker may regard him with suspicion as just an extension of managerial supervision. In cases of threatened tuberculosis the segregation of women with early signs and the placing of them in special workshops or colonies in conditions adjusted to their capacity, while certainly an ideal, is always difficult of attainment, and especially so in the circumstances of war production. This is a matter which calls for the patient co-operation of all concerned—the members of the industrial medical service, the factory management, the private general practitioners who may have to deal with the employees at works in their vicinity, and the public health medical officers. One deterrent to effective action is the feeling that all these problems are only temporary, that some dramatic change in the war situation may make all these elaborate plans unnecessary, and that to-morrow morning these women may all be released to nurse their babies and do their housework in their own time, and the restraints and compulsions which have settled upon us all will be relaxed. It is a forgiveable feeling, but very unfortunate in its consequences. It is far better in present circumstances, in this field as in others, to take a long-term view of the problems at hand and methods for solving them. It will be easier to revert from a war-time to a peace-time economy than it would be, should the war continue, to proceed on a temporary, makeshift, hand-to-mouth basis which is effective neither for war nor peace.

One other point brought out at the conference may serve to reassure some people. Fears have been expressed that women by working in close association with men, wearing men's clothing, and doing jobs usually reserved for male labour, may become "psychologically damaged," which, if it were proved, would be more than a matter for sentimental regret. Dr. Letitia Fairfield, however, who spoke with some authority as a senior medical officer of the London County Council and former Woman Medical Director of the R.A.F. Medical Service, declared that there was no need for anxiety on this score. Neither the women in the Services nor those in industry are "turning into men"; their love of home becomes more pronounced during enforced absence, and it is said of many of them that the more they work at men's jobs the more feminine they become.

Rags and Bones

"A rag and a bone and a hank of hair," to quote Kipling's line, from being among things most despised have become profitable and sought after. Municipalities have gone into the salvage business, and made a very successful thing of it. Every turn in the misfortune of war seems to bring about a new salvage drive, and the municipal van starts on a fresh collection. The invasion of Scandinavia caused a demand for waste paper, owing to the loss of valuable sources of wood pulp; the conquest of Malaya led to a big effort to recover waste rubber; shipping difficulties in the Mediterranean—not very obviously perhaps—emphasised the importance of bone salvage, and the Battle of the Atlantic, which affected imports of cereals intended for animal food, led to the collection of kitchen waste for this purpose.

According to the Controller of Salvage of the Ministry of Supply, Mr. J. C. Dawes, who addressed the Royal Society of Arts on the subject, the local authorities' salvage schemes, which began a month or two after the war started, had resulted up to February last in the sale of 639,000 tons of waste paper, 18,000 tons of bone and bone meal, 271,000 tons of kitchen waste, 10,000 tons of waste fish and fish meal, and 2,800 tons of fats. The value of these items alone (and there are many others, some of them more remunerative, such as ferrous metals) is in the neighbourhood of three million pounds. Household bones are unexpectedly profitable. Bone is said to be 100% useful for war or agriculture. But so far it has been possible to recover only one-fifth of the bone tonnage entering dwelling houses. Probably the housewife does not feel that the minute amount of bone in an almost equally minute meat ration is worth preserving, in addition to which bones are not easy or pleasant to keep in or in the vicinity of a house. But an impressive list of things which a ton of salvaged bones will do was mentioned by Mr. Dawes. It will provide two hundredweight of grease, or three hundredweight of glue, or one hundredweight of feeding-meat and bone-meal, or half a ton of fertilisers.

Kitchen waste is in a class of salvage by itself because it brings in public health considerations. It is made into substitute feeding-stuffs for pigs and poultry, but its storage and collection is not a simple matter, though many local authorities are now doing their best by means of specially labelled bins against the street lamp-posts. It has also to be remembered that without special precautions the material may act as a carrier of foot-and-mouth disease. Kitchen waste is now being collected at the rate of 250,000 tons a year, and processed and sterilised at concentration plants provided by local authorities or the Ministry of Supply or private firms. Nearly one hundred local councils are now sterilising kitchen waste by boiling before sale.

It is not to be expected that this immense trade in salvage will remain in anything like its present dimensions in a peace economy. During the war values are artificial and often inverted, and when anything like normal supplies are again available certain salvage operations may not be worth their cost. But some useful lessons will have been learned, some methods will remain, and especially in the handling and processing of kitchen waste the experience will be valuable, not only in making available a supplementary source of feeding stuffs for certain livestock, but in bringing in a more hygienic and economical regime for the disposal of culinary refuse.

Diphtheria Immunisation Campaign

Details of the Government drive for the immunisation of children up to the age of 15, and a guide on the planning of local campaigns, are contained in a brochure produced by the Ministry of Health and the Ministry of Information, which has been sent to all Welfare authorities in England and Wales. The facilities provided to assist local authorities in their publicity are: (1) Stereos for local newspaper advertising. These are reproduced in the brochure and can be obtained free of charge from the Public Relations Division of the Ministry of Health. The actual cost of the advertising space will, however, fall upon the Authority. Recommendations for using the advertisements to best advantage are given. The Ministry is prepared to arrange for all the detailed work in connection with an advertising scheme to be carried out at no extra charge to the Authority concerned. (2) Minister's letter to parents. Mr. Ernest Brown has written an open letter to parents urging the national importance of protecting children from diphtheria. A limited supply of the letter will be available to Authorities, free of charge, for distribution through clinics, direct to parents by health visitors, or through schools. (3) Cinema slides. Attractively designed in full colour, these slides will, in limited quantities, be available on loan and free of charge. (4) Films. The non-theatrical sound film, "Defeat Diphtheria," is being included in the general programmes of the Ministry of Information's Mobile Film Units. In addition, copies of the film in 16-mm. and 35-mm. sizes (and from August 15th, copies of a silent version) can be borrowed from the Central Film Library. The Central Council for Health Education have produced, to supplement their existing pamphlets and posters, a 4-page leaflet, a shop window poster, and a public transport vehicle bill. Recommendations for localised campaigns cover such points as timing and duration, Press advertising, Press conferences and supporting material. The value of "word of mouth" publicity is stressed.

The Chartered Society of Massage and Medical Gymnastics will hold a congress on September 18th and 19th. Lectures and demonstrations, which are open to all medical practitioners, will be held in the Great Hall, British Medical Association House, Tavistock Square, London, W.C.1. At 2 p.m. on September 18th, Prof. J. A. Ryle will deliver the opening lecture, on "The Re-making of Man." The other lecturers on that day will be Prof. F. R. Fraser and Lord Horder (both speaking on rehabilitation), and on the following day Surgeon Lieut.-Commander J. Bunyan will speak on the treatment of wounds and burns by the envelope method, and Dr. Vaclav Benes on physical training in Czechoslovakia. Applications for tickets, price 1s. each lecture to members, and 1s. 6d. to non-members, should be made to the Secretary, C.S.M.M.G. Office, Mount Lodge, Amersham, Bucks.

The Archbishop of Canterbury has accepted the invitation of the Chairman to become President of the Central Council for Health Education.

The Minister of Health has approved the appointment of Mr. R. J. R. Farrow to the post of Deputy Registrar-General.

Prof. J. W. H. Eyre, Emeritus Professor of Bacteriology, University of London, has been elected President of the Royal Institute of Public Health and Hygiene in succession to the late Sir Thomas Oliver.

A NATIONAL HEALTH SERVICE

INTERIM REPORT OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

It must not be assumed that the following report represents the final policy of the Society of Medical Officers of Health. The report has been prepared by the Medical Planning Committee of the Society and submitted to the Council. It is printed in the Journal as a matter of convenience so that all members may see it and Branches and Groups discuss it. Observations by Branches and Groups should reach the Executive Secretary of the Society not later than October 31st, 1942, after which the Council will prepare the Final Report.

1. Many services have been established in this country over a period of years for the medical care and the health of the people. Some of them have been established under Statute while others have been instituted under voluntary auspices. A number are administered by Central Government Departments, many by local authorities—widely different as to character and functions—and others by voluntary bodies. Few of the services are complete and there is no adequate machinery for their co-ordination and harmonious expansion. The war has brought into prominence the lack of system for medical care, and many are the improvisations which have had to be made in connection with the allocation of medical personnel to the Armed Forces, Civil Defence, the Civil Population, and the Emergency Medical Services. The time has arrived when the many questions involved require to be reviewed and an organisation established able to deal adequately and efficiently with the medical care and health needs of the nation.

A New Central Government Department

2. At the present time several Government Departments have health and medical functions—*e.g.*, the Ministry of Health, the Board of Education, the Ministry of Pensions, the Home Office, the Ministry of Labour, the Ministry of Supply and the Board of Trade. The medical and health functions of these various departments should all be brought within one Central Government Department with health as its sole function and with a Cabinet Minister as its responsible head. Such a department would be concerned with: (*a*) Hospital, medical, health and allied services, including the environmental and personal health services administered by local authorities. (*b*) International health. (*c*) Certain highly specialised work relative to health—*e.g.*, matters relating to the purity of food and food standards, and generally the acquisition and dissemination of special knowledge and information for the promotion of health. (*d*) The provision of such national health or medical institutions or services as it would be uneconomical or undesirable for the new local authorities to establish. (*e*) The encouragement of medical research.

New Local Authorities

3. At the present time local services for medical and health care comprise:—

A. General practitioner medical services, including visits to homes and consultations in surgeries, given (*a*) to some 20,000,000 persons, under the National Health Insurance Acts; (*b*) to persons who are destitute or in need of public assistance under the Poor Law; (*c*) to persons making their own arrangements with medical practitioners.

B. Health and medical services established by various local authorities, *e.g.*: (*a*) Environmental health services. (*b*) Maternity, Child Welfare, School Medical, Infectious Diseases, Tuberculosis, and Venereal Diseases Services. (*c*) Hospitals or institutions for the physically sick, the mentally sick, the mentally defective, the epileptic, or other abnormal conditions.

C. Health and medical services established by various voluntary associations, *e.g.*: (*a*) Child Welfare, Child Guidance, Rheumatism, and other similar services. (*b*) Hospitals or institutions for the physically sick, the mentally sick, the mentally defective, the epileptic, or other abnormal conditions.

The foregoing services are administered locally by local insurance committees, by one or other, or more than one, of the several types of local authorities, or by voluntary associations. These various schemes, however, be they for the cure of disease or its prevention or for the maintenance or improvement of health, do not work within a unified or co-ordinated plan for any area, and few if any of the services are complete,

4. The foregoing statement deals primarily with medical services, but any plan for the provision of medical services must include the provision of the necessary auxiliary services—*e.g.*, health visiting, nursing, midwifery, sanitary, pharmaceutical, ambulance, etc., services. All of these are required and some are already provided more or less incompletely by local authorities or voluntary agencies or both. A dental service—although not an auxiliary service in the sense of the foregoing—requires also to be provided for health reasons.

5. Having regard to these provisions and the need for their co-ordination and expansion, it would appear that what is required is that in any local government area there should be a single authority for all health purposes. Such an authority would be responsible within its area for the administration of all hospital medical, health and allied services, including the environmental and personal health services. Few of the existing local authorities are sufficiently large to be able to provide complete health services, and new local government areas will have to be devised in which not only population but geographical and other considerations will require to be taken into account. Treasury grants should be available for the equalisation of the financial resources of the new local government areas. It is difficult to lay down any hard-and-fast rule as to the sizes of areas having regard to distribution of the population. The enlarged local government areas should, however, be able to provide efficiently and economically all the hospital and health services commonly required. In respect of some rare conditions or occasional occurrences—*e.g.*, brain surgery, smallpox, typhus fever or leprosy—it might be necessary or desirable for the new local authorities to combine, or perhaps for the central health department to act. It would further be the business of the new local authorities to utilise to the best advantage all voluntary organisations in their area dealing with health or medical care. It is appreciated that new local government areas will not be constructed on health considerations alone, but these observations as to the need for such new areas are submitted as the result of knowledge and experience of hospital and health administration.

The New Medicine

6. The future practice of medicine must be designed not only to cure disease and restore health, but to prevent disease and to maintain and improve health. It follows therefore that concentrated and concerted thought must be given by all members of the medical profession to the achievement of health, and that all hospital and health services must be administered with health as the final goal.

DOMICILIARY SERVICES, CONSULTATIONS, HEALTH CENTRES.

7. In the new organisation of medicine it cannot be too strongly emphasised that it will be the future general practitioners who will be the first line of defence against the encroachment of disease and for the maintenance and improvement of health. The family should be regarded as the health unit, and each practitioner should have the care in health as well as disease of a suitable number of persons. He would deal with matters with which a general practitioner normally deals in respect of patients by way of visits to their homes or consultations at his surgery. He would also participate in maternity and child welfare and school medical work for the families under his charge, and have such responsibilities relative to the notifiable infectious diseases, tuberculosis, venereal diseases, and industrial medicine as may be considered desirable or convenient. To enable him to carry out these duties satisfactorily specialist help and all necessary auxiliary services should be available. In order to encompass this work with the greatest benefit to the public and the greatest conservation of time, Health Centres should be established at which and from which doctors would work. These health centres, together with all necessary auxiliary services, would be located, provided, furnished and maintained by the local authority for the area. As far as possible all health centres provided in populous areas should be fully equipped. In less populous areas a number of smaller health centres with essential services may require to be established round a central health centre completely equipped and staffed. Even in populous areas it may be that for some of the less common forms of treatment, such as orthoptic treatment, only one of the health centres would be equipped to deal with it. Variations of this kind would have to be made to suit the particular circumstances of the area.

8. The number of practitioners working in a health centre would vary according to the type of area, and in rural areas, where practitioners may be single-handed, special arrangements would require to be made by the local authority. At the health centre each doctor would have his own room, and certain of the consultations with consultants would be held in the doctors' rooms. Special suites would require to be provided for certain branches of work as might be deemed necessary—*e.g.*, antenatal work, orthopaedics, defective vision, throat, nose and ear conditions, etc.

9. Every doctor would have at his disposal clerical and nursing services. A health visiting service would also be available by which the doctors might be well informed of the social conditions having a bearing on the health of their families. As environment in relation to health has also to be taken into account, sanitary inspectors should be available to obtain and submit the necessary information.

10. The consultants of the area would attend at all or such of the health centres as might be convenient at regular times to deal with cases referred to them by the doctors. These consultants would also be available for consultations with doctors in the homes of patients as required. Patients would be admitted to the hospital on the advice of the consultants or by the doctors.

11. The hospital consultants of the area would arrange for conferences and demonstrations at the health centres or hospital at frequent intervals, so that the doctors may be well informed of the latest developments in medicine. Provision should be made to enable doctors to undertake research and to have study leave. Opportunities should be given to selected general practitioners to participate in hospital practice and to rise to consultant status. Health centres should be linked up with the teaching hospitals in order that the medical student may get the necessary training to fit him for the improved type of medical practice envisaged.

12. The above picture of a health centre equipped for services of curative and preventive medicine portrays the doctor as the essential element in the organisation with facilities for giving effect to the real purposes of national medicine—namely, to maintain and improve health, to prevent disease, and to treat disease and re-establish health. The doctor in this organisation becomes a real family doctor with full responsibility for the health of the persons under his care. His work would be suitably organised and the doctor provided with all the assistance needed to carry out the work with satisfaction to himself and benefit to his families. Under such conditions the doctor would no longer work alone, but would have the advantage and encouragement of discussion and communion with colleagues with like ideals as to the ends to be achieved.

DENTAL SERVICE

13. Provision should be made at the health centres for dentistry. The dental work should be arranged on the same lines as the medical work, with which it should be closely co-ordinated. With the establishment of a dental service at the health centre doctors and dental surgeons and their staffs would be enabled to work in close association with each other. Dental surgeons, in the same way as doctors, would be provided with the necessary staff of nurses and clerks and would have the services of dental mechanics and facilities for X-ray examination, prosthetic and orthodontic work and provision of artificial dentures. Hospital beds would also be available for their patients as might be required.

HOSPITALS

14. A hospital service should be complete and able to deal with all forms and stages of invalidity. It includes hospitals both for the physically sick and for persons suffering from mental disorder and mental deficiency. There must be unified administration of all hospitals within the area of a local authority so that it may be possible not only to determine the functions of individual hospitals but how these hospitals may best be linked up with one another and with the work of health centres and domiciliary practice. The hospital service is in fact a necessary part of the health service. The function of the health services is to detect disease and to develop the hospital on its preventive as well as its curative side. The hospitals' staffs would be concerned to add their contribution to the prevention of disease and the maintenance of health, and their findings could only be suitably assessed and utilised with the hospitals as an integral part of the health service. The health administration knows the incidence of disease, the requirements of the people and their social circumstances, and is able to relate this knowledge to the need for hospital provision and to set up the kind of service which the community requires. It must be regarded as a cardinal principle that hospital services are an integral part of the health services. The duty of providing hospital services should be the function of the new local authorities in co-operation with the voluntary hospitals and, if necessary, with one another. Any suggestion to create *ad hoc* hospital authorities for the purpose of administering hospital services would create fresh confusion in a field where integration is essential.

15. With the development of health centres out-patient departments of hospitals would generally only be necessary for emergency cases, consultations, special treatments and for the continued treatment of discharged patients requiring special supervision.

16. In every area it will be found that at least one hospital on account of its size and location will come to be regarded as a principal hospital. Sometimes it will be a voluntary and teaching hospital and sometimes a municipal hospital. Municipal hospitals should not be excluded as teaching hospitals, and it should be borne in mind that in any complete hospital system an equally high standard of service will be demanded for all areas.

17. All hospitals, voluntary and local authority, should be available for all members of the community on similar terms and conditions. All facilities for diagnosis and treatment provided by any unit of the hospital service should be available to every patient admitted to any of the hospitals of an area.

LABORATORY SERVICE

18. An adequate laboratory service forms an essential part of an efficient medical service and should be conducted so as to ensure regular personal contact between the staff of the laboratory, the officers engaged in epidemiology and other public health work, the clinical staffs of hospitals and the medical practitioners in the area.

RESEARCH

19. Research will be able to play an even more important part than heretofore in the progress of medical science. In an organised system of medicine many converging lines of investigation in the field and in the laboratory will suggest themselves and advances in knowledge should be rapid. The new local authorities should encourage research and make adequate provision for the workers and all necessary equipment in this field of medicine. Research should be directed to the elucidation of the causes of disease—genetic, personal, social and environmental—and to prevention as well as cure. Investigations directed towards the maintenance and improvement of health must take a high place in the research work of local authorities. Such research work should be closely linked up with the research department of the central government so that, by full co-operation and co-ordination in this important branch of medicine, the most effective results can be obtained.

Availability of Services

20. All hospital, medical, health and allied services, including the environmental and personal health services, should be available to every member of the community without charge for specific items of service rendered.

Staffing

21. *Central.*—The chief officer of the new central health department should be the chief medical officer of the department responsible for all the work of the department to the Minister of the Crown. The chief medical officer should have such assistance, medical and lay, as may be necessary for the purposes of the department.

22. *Local.*—In each new local government area there would be a Chief Medical Officer responsible for the administration of hospital, medical, health and allied services, including the environmental and personal health services. There would be associated with him Medical Directors or Medical Superintendents for the various medical services or such combinations of them as might be considered suitable for the area.

23. *Advisory Medical Committees.*—Central and local advisory medical committees should be appointed by the medical profession and be recognised by the appropriate authority. They should meet regularly with the appropriate chief medical officer for purposes of consultation and advice respecting any matters within his purview.

24. *Whole-time Salaried Service.*—It has been suggested that the medical personnel of the services herein outlined might be employed: (1) on a capitation basis as under the National Health Insurance system; (2) on a part-time salaried basis; or (3) on a whole-time salaried basis.

Private enterprise cannot provide and maintain complete hospital, medical, health and allied services, and such services conducted on a whole-time salaried basis have the dual advantages of administrative efficiency and the elimination of undesirable competition for patients. Hitherto the doctor has been mainly interested in the illness of his patients, but it is of the first importance that his attention should be directed to the maintenance of health. This means not only a re-orientation of outlook on the part of the individual practitioners but the provision of all services necessary to enable practitioners to study and investigate their cases in order that health may be achieved. In these circumstances a national medical and health service should be established on a whole-time salaried basis with the complete facilities outlined in this report. It should be available to all members of the community who wish to take advantage of it, and should offer to doctors conditions of employment and opportunities for study and advancement likely to attract to the profession the best type of individual and to ensure his continued interest and contentment in his work. The maximum freedom of choice should be given to patients in the selection of their doctors within the organisation provided.

25. *Appointments.*—All appointments, whether central or local, should be advertised. Appropriate Appointments Boards should be established, and all applications for admission to or transfer or promotion within the services should be made to the appropriate appointments board. On the occasion of a vacancy the appropriate appointments board would submit the names of suitable applicants, and appointments would only be made from the names so submitted. Senior appointments should be made by the appropriate authority. Junior appointments should be made by a medical committee and approved by the appropriate authority.

26. *Conditions of Service.*—The conditions for all types of medical service should be determined by a suitable national body and there should be adequate machinery for the protection of officers in the discharge of their duties.

27. *Superannuation.*—All medical posts in the central and local government departments should have an optional retiring age of 60 years with provision for added years so that such medical officers may have full pension. All medical officers should be compulsorily retired at 65 years of age.

28. *Compensation for loss of office or practice.*—Suitable provision should be made for loss of office or practice.

Medical Education, Post-Graduate Training and Careers

29. Medical practitioners taking part in the new service should have a preventive outlook in relation to their work. It will take some time to achieve this and to establish the proposition that the prevention of disease and maintenance and improvement of health must occupy at least as important a place in the training of the medical student as the cure of disease. An early beginning can be made by associating existing teaching hospitals with the hospitals, health centres, clinics and public health practice of local authorities, so that the student may obtain during his undergraduate career a wide perspective as to the scope and purpose of medicine.

30. After graduation there should be further post-graduate training extending over a minimum period to be subsequently determined. During this period the medical graduate should be paid and should undertake whole-time hospital medical work at hospitals and health centres so that he may acquire experience in the practice of both curative and preventive medicine.

31. Having obtained this insight and experience in the various forms of medical practice, the graduate should bear in mind the possibilities for a career in his profession in accordance with the plan for the future of health and medical practice. Careers would in the main be in respect of administrative or clinical or laboratory or research work. Clinical posts should not necessarily be paid on a lower basis than administrative posts. Medical officers in higher grades—clinical or administrative—should possess a higher qualification applicable to their work.

Operation of the Plan

32. In present circumstances the immediate operation of the plan is not practicable. A number of factors govern its growth and consideration must be given to the transitional period pending its complete development.

33. *Post-War Conditions.*—It is obviously impossible to make any prediction as to either the length of the war or as to how post-war conditions will affect the development of social services for the country.

34. *Hospitals.*—The cure of the sick is always an urgent matter, and the hospital policy of the government so far as it has been disclosed may be useful in the transition period. It would appear necessary, however, to express the hope that the greater need for unified measures for the maintenance and improvement of national health will not be lost sight of in connection with any interim hospital policy. It is an accepted axiom that curative and preventive medicine cannot be separated on any sound principle, and it is therefore imperative that measures for the health of the people should be closely knit with hospital policy and apportioned their place, so that there need be no unnecessary delay in the inauguration of a complete national health service.

35. *Health Centres.*—Time will be required to provide health centres and for their medical staffing. Such staffing should be on a whole-time salaried basis. It is realised, however, that such a method of staffing may have to be brought about gradually. It would therefore appear desirable in connection with the erection and organisation of these centres to empower each local authority after consultation with the local medical profession to determine which method or methods of staffing they consider most appropriate for the hospitals, health centres or domiciliary practice in the whole or parts of their area. Such choice would appear to be essential during the transition period having regard to the fact that the establishment of health centres and hospitals will be gradual.

36. *The New Medical Practitioner.*—It will take time, too, for a new type of medical practitioner to be trained for the care of his families in health as well as disease. Hitherto the education and training of the medical practitioner has mainly had regard to the cure of disease. Future training must also embrace the study of the prevention of disease and the maintenance of health. Time must accordingly elapse before a sufficient number of such practitioners is available. Nevertheless the change over must be begun and take place *pari passu* with the establishment of health centres and the development of hospitals.

37. Having regard to the foregoing considerations it would appear that to avoid any unnecessary delay in the ultimate operation of the plan steps should be taken at the earliest possible moment: (1) To establish a Central Health Department; (2) to establish new Local Government Areas; and to give powers to the new Local Government Authorities to plan and develop their hospital, medical, health and allied services within their discretion and according to circumstances during the transition period.

38. Having regard to the probable state of medical practice immediately after the war, it is suggested that steps might be taken to ameliorate the post-war situation by empowering major local authorities to set up a whole-time salaried domiciliary service on lines which would ultimately fit into the scheme outlined in this report.

Among the first areas to reach the goal aimed at by the Ministry of Health in its national campaign for the immunisation of children against diphtheria is East Suffolk. 84% of the school-children in this area have received the complete immunisation course, while 75% of those under school age have also been protected.

MEDICAL PLANNING OF THE HOSPITAL SERVICES FROM THE PUBLIC HEALTH ASPECT*

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Of all questions connected with medical planning, that which the public are most frequently asking is, "What is to happen to Voluntary Hospitals?" I have gathered the impression that there is a growing fashion in public health circles to decry the voluntary principle in relation to hospitals and to assume that the future hospital service will be wholly State-controlled and State-maintained, either direct or at one remove through the local authority. Some seek that solution as giving the ideally neat and well-ordered scheme; others accept it as inevitable on the assumption that the voluntary principle in hospital work is dying or dead. Both groups seem to be forgetting that one essential purpose of preventive medicine is to enable individuals to get on to their own feet and stay there; to help them to help themselves and to help others with a minimum of hindrance. Our function as public health officers is to encourage an active co-operation rather than a passive acquiescence on the part of the public, to seek to make them participators in good works, not mere recipients; and we should try to build up neat, easily administered schemes only in so far as those schemes have this as their prime purpose. Deliberately to set out on a national hospital scheme with the intention of allowing the disappearance of the voluntary hospital, still more with the intention of *causing* its disappearance, is to me a betrayal of that fundamental principle of our work. The right policy is not to eliminate but to integrate the voluntary hospital more securely and effectively into a complete hospital service. Our aim should be that of collaboration, not absorption.

Collaboration Between Voluntary and Municipal Hospitals

How is collaboration to be effected? We should regard as inherently bad any system which would bring all hospitals, municipal and voluntary, under the dominant and unquestioned control of the local authority. The true course to steer towards a co-ordinated hospital service is, in my view, that of a partnership on equal terms between voluntary and civic agencies, the two groups together to cover the whole hospital needs of the area by extension of the appropriate accommodation, in the appropriate position, through either the voluntary or the civic body by mutual agreement; or, if it prove more convenient, to utilise such additional facilities as may be available elsewhere in the larger region in which this local hospital area lies. Obviously, this envisages a local and a regional hospital organisation. Can we be more definite?

Local and Regional Hospitals Councils

As a result of direct experience in Birmingham over some years, I should regard with strong approval the establishment in county boroughs and counties, individually or grouped as unit hospital areas, of local hospitals councils, on which the various types of hospital—voluntary, municipal, general, special—are represented in respect of their staff and their governing body, together with representatives of the local authority, of the local medical profession, etc. The Hospitals Council would have sub-committees dealing, one with problems of the individual hospital in the light of like problems elsewhere, another with co-ordination between voluntary hospitals and between voluntary and civic hospital services, with appeals for funds and so forth. Personal knowledge of the outstandingly fine work of the Birmingham Hospitals Council has convinced me of the remarkable way in which such a co-ordinating body can bring about a genuine and active co-operation based on mutual understanding between all such varied and otherwise competing interests. It can amicably encourage, restrain, or modify desires for expansion of individual hospitals, voluntary or municipal. It can suggest, with the agreement of all and without suspicion of sinister designs, where and when the next expansion of hospital accommodation should take place. It can get individual hospital

* Paper read before the Midland Branch of the Society, February 5th, 1942.

committees to postpone or reduce their public appeals for funds in favour of some more urgent claims, and so on. The fact of collaboration can give rise to a living elastic quality by no means so readily created where the position is one of domination, not of collaboration. My lowest rung, then, in the future hospital service would be not a series of local authorities supremely in authority in their several areas, but a series of local hospitals councils in which local authorities would work on equal terms with the governing bodies of voluntary hospitals in these areas, thrashing out and adjusting their needs in mutual discussion.

But many areas will not be self-contained in hospital provision, for this notoriously varies in extreme degree from one area to another. Regional Hospitals Councils will therefore be needed as the next rung in the ladder of administration. What the regions which they respectively cover should be would be a matter for discussion; whether they should correspond with the regions which serve now for civil defence, or those which may serve the Ministry of Health for its own administrative regions after the war, or whether they could be more directly related to the distribution of existing hospitals, needs to be explored. But whatever the basis fixed, the Regional Hospitals Councils would include voluntary and civic representation of the local hospital areas within the region, together with regional representatives of the Ministry of Health; and they would be concerned in part with the equalisation of hospital services throughout the region, and as an aspect of this with the distribution of financial help, to which I will refer later.

Finally, there would be needed the highest rung, that of a Central Hospitals Council, which I picture as a body separate from the Ministry of Health, for the same reason that the local Hospitals Council is not to be a committee of the local authority; with representatives, however, of the Ministry of Health, of the Royal Colleges, of the General Medical Council, of the General Nursing Council, of the central voluntary hospital associations, and of the grouped associations of county councils and of municipal corporations, dealing with general questions of hospital policy, provision and discipline, and of the hospital training of medical students and nurses.

Finance

As in regard to administration, so in respect of finance the popular trend now is for the local authority to seek to pay the piper financially in order to call the tune; and there is a cold-shouldering of the principle of maintenance by voluntary funds, a whispering campaign that the day of voluntaryism has gone by. I disagree both with the statement and with the wishful thinking behind it. It is in the face of this discouragement that the great voluntary contributory schemes in a number of areas have had a resounding success in the collection and the maintenance of funds for the hospitals; and these schemes are still capable of a far wider extension both in scope and in area covered. Industry still has to be tapped in a much more intense degree than at present; and there is evidence to show that industry will subscribe handsomely if convinced that charity is also good business: consider the helpful attitude of industry towards the costs of hospitals dealing with industrial accidents and injuries.

Whether and to what extent, and for how long, such voluntary funds will need to be supplemented by public funds, from rates or taxes, pending the fullest development of organisations of the contributory scheme type is a matter for future determination. The allocation of these funds, voluntary and official, would seem best made in part through the Regional Hospital Councils in the light of their knowledge of the varying needs throughout the region, and in part through the Central Hospital Council with its national outlook.

Function of the Local Authority

I have suggested that the local authority should not rule the roost in the management of the hospital affairs of its area. It is to collaborate, not to dominate. Can we follow more explicitly its true role?

In the first place, it should seek to fill the gaps in local hospital services, in so far as it is not more convenient for the gap to be filled by a regional machinery. It should provide for additional beds for the acute sick and for the chronic sick, needed but not available through other sources. It should seek to get the best utilisation of all beds, for example, through the co-operation of the local Hospitals Council and each constituent hospital in a central bed bureau, facilitating prompt admission of acute cases by one common machinery for all hospitals.

Should the local authority provide separate maternity hospitals or maternity homes, separate children's hospitals for the acute or chronic sick among children? My own inclination would be towards the merging of all these in future into separate sections within general hospitals, as being to the advantage of patients and of the training of doctors and nurses alike. There would perhaps be a case also, in regard to fever hospitals, for testing out whether the Continental system of treating infectious diseases in special wings of general hospitals could be done as effectively here. I see that the Fever Hospital Medical Services Group of the Society of Medical Officers of Health is adopting such a policy. If it were found practicable, there would be considerable advantages in the training of doctors and nurses and in the more effective administration of hospitals themselves. But there would be a risk, in the earlier stages a serious one, of relatively inexpert treatment for the critically acute case of infectious disease, and also—unless within the past generation there has been a substantial change in hospital atmosphere from that in which we were medically trained—a risk of the infectious block in a general hospital being the rather uncared-for lumber-room for unwanted human junk from other wards.

The local authority is interested in developing, again I suggest in full collaboration with voluntary agencies, an effective ambulance service for all hospitals within its area. Finally, it is concerned to see that the public are dealt with in a prompt, kindly, yet businesslike way in every casualty and out-patient department, in admission and discharge, in assessment and in service, with a minimum of delay and a maximum of consideration.

Hospitals and the G.P.

Is the Hospitals Service to accept a policy of continual expansion? In that query I refer to the growing fashion among the public to have recourse to the hospital rather than to the general medical practitioner, or at any rate so to press for hospital examination and care as in effect to force the family doctor's hand where he has not already decided to play for safety and to transfer the patient to hospital. There have, of course, been a number of diverse factors making for this strong trend towards hospitalisation: difficult housing, shortage of domestic help, increasing specialism of diagnosis, with highly technical adjuncts to diagnosis available only in hospital; and with this, as it seems to me, a diminished trust in the general practitioner and an exalted regard for the specialist consultant.

I look with apprehension at that last pair of factors. The specialist is a man of the utmost value in his province, but outside it he can be as blind as a bat; and the growing deference to and demand for the specialist as against the general practitioner has its very real dangers. The new technical aids to diagnosis have again their great value; but they are dearly bought if the price is a reduction of the confidence in, and the confidence of, the general practitioner in his sphere of considering the whole man in health and disease. That public esteem for the general practitioner is still profound is happily true; but I think it is also evident that the public tend more and more to regard him as the introduction to a competent physician rather than as that physician himself. The practitioner may have his own share of blame for this; but whatever the cause and whatever the seat of the change, the change itself, with its reflex of growing hospitalisation, is a mark of morbidity, not of growing wisdom, in society and in the medical profession. In the ready expansion of our hospital services, without any consideration of the fact and the significance of this undertone of attitude, we are widening the breach between the family and the family doctor, to the lasting loss of society and of our profession. Our campaign for efficient and complete hospital services needs to be balanced by a drive towards the replacement of the general practitioner in his right place as the true centre of gravity both of clinical and of preventive medicine.

THE EDUCATION HEALTH SERVICE

We print below a Memorandum approved and adopted by the Council of the Society of Medical Officers of Health on July 31st, 1942

The Society of Medical Officers of Health has observed with great concern the growth of a tendency to regard the health of children as purely a function of education. The claim that this service should become the direct responsibility of Education Committees and Directors of Education, who would thus take charge of the health of children from the age of 2 years up to the end of school life, is receiving influential support. This view is being urged as one of the measures to be aimed at in post-war education policy. The Council of the Society of Medical Officers of Health at its meeting in September last year unanimously approved of the following resolutions :—

(*a*) The Society . . . desires at once to take the strongest exception to the suggestion that the care of the health of children between 2 and 5 years of age should be transferred from the Ministry of Health and Welfare Authorities to the Board of Education and Local Education Authorities.

(*b*) The Society is further of opinion that the most satisfactory means of integrating the School Medical Service with the other health services is for the Minister of Health to assume full responsibility for it, and for its local administration to be transferred to the committees of local authorities responsible for the administration of other health matters.

These resolutions express the Society's considered opposition to the view that the function of the Board of Education and of Education Committees should be extended to the care of the health of young children between 2 and 5 years of age. Since the above resolutions were adopted, there has appeared a publication by the Association of Directors of Education which not only expresses similar views as regards children from 2 to 5 years of age and even younger, but also recommends that Education Committees and Directors of Education should have complete administrative control of this enlarged health service for children. Thus it appears to be the intention of the sponsors of this movement, as it is the declared desire of the body representing Directors of Education, to press for cleavage in the administration of the health services at a point where unification is most essential. The Society of Medical Officers of Health feels that these statements of policy amount to a commendation of those authorities which separate the School Medical Service from the Public Health Service, and to a direct invitation to other authorities to effect a similar separation and to reverse their present administrative procedure.

The Society of Medical Officers of Health, desiring to make its position quite clear, submits the following considerations in support of its views and in amplification of the resolutions previously submitted.

1. Progress has been made, especially since the passing of the Local Government Act, in the provision of joint clinic services in respect of the public health functions for which local health authorities are at present responsible. In these combined treatment and welfare centres, special and suitable arrangements are made for attending to the health of expectant and nursing mothers, infants and children up to the end of school life. Dentistry, among other facilities, is provided. A unified service of this kind is now firmly established as the ideal to be aimed at under the modern term "Health Centre"; it implies combination rather than separation or divided control.

2. The arrangements for the treatment of school children are or should be part of the general or special provision made by the local authority through its health service for the treatment of the sick. Comprehensive powers are contained in the Public Health Act, 1936. Incidentally, the new hospital policy, to be followed no doubt in time by a new medical treatment policy, will ensure the complete adequacy of these measures. The diagnosis and treatment of many affections of the ear, throat and nose (which often follow the infectious diseases), the eye, skin conditions, orthopaedic defects and so on are matters for specialist attention. In so far as they require such attention, whether at clinics or in hospitals, the specialists would be drawn from those available to the health authority under a scheme which would ensure to school children the services of an appropriate team.

Again, co-ordination of the school medical officers with the health service is essential for the after-care of children discharged from hospital. Similarly, dentistry is an important branch of work in the school clinics, but the dentists employed would have the advantage of the wider experience which a unified dental health service would provide. The treatment of scabies, being so often a household infection, is obviously a matter for unified provision. In such a matter as inoculation against diphtheria, the whole resources of the health department as well as the school medical service would be brought to bear. Sufficient examples have been given to show that at these and other points the education health service dovetails into the general health activities of the local authority. It is inevitable that this process will be carried further in proportion as the health functions of the local authority expand.

3. There is no doubt that in the future the work of the school doctor and the health visitor will be conducted on a broadening basis of knowledge and experience of preventive medicine. It is greatly to the advantage of those engaged on this work that they are members of a public health staff, especially in view of the developments which are likely to take place. It is of course equally desirable that all the facilities of the health service should be available to the education health service, particularly as regards the child welfare branch in relation to nursery schools. The day nursery, which is established as a permanent health provision under the aegis of the Ministry of Health, is an expression of the true needs of this period of child life.

4. By the Ministry of Health Act, 1919, the central supervision of the school medical service was transferred from the Board of Education to the Minister of Health. The Minister nominally took charge, but in accordance with the provisions of the Act delegated his administrative functions to the Board, and, except that the posts of Chief Medical Officer of the Ministry and of the Board have been combined since that time, no administrative change of material importance has taken place. Locally, the duty of providing this service in England and Wales under the Education Acts rests with local education authorities and statutorily stands referred to their education committees. In Scotland, on the other hand, the unification of the school medical service with public health administration was effected both centrally and locally following the passing of the Local Government (Scotland) Act, 1929, the administration of the medical services for school children being transferred from the Board of Education to the Department of Health for Scotland.

5. The proposal that the health of children under 5 ye of age should be regarded as a function of education and so a. ninistered is surely based on quite a wrong conception of the physiology of the young child and of the causes of sickness or ill-health at this age of life. The proposal means, in effect, that the Medical Officer of Health and his staff hand over their health duties to the Director of Education and his staff when children reach the age of 2 years, and above all that the Ministry of Health hands over to the Board of Education. The Society of Medical Officers of Health considers that this would be a serious and fundamental mistake. If, as is suggested, enough has not yet been done for the care of the health of pre-school children, the remedy is to improve the existing service and not to change its control. Medical Officers of Health are well aware of the importance of a good service for pre-school children and are of opinion that its improvement should be one of the first aims of post-war health policy. They have for a generation stressed the need for further expansion of this service as an integral part of the general and personal health service of local authorities.

6. The common aim of the education side and of the health side —namely, the health of children—requires that there should be the closest possible co-operation between the Medical Officer of Health and the Director of Education. None of the considerations advanced in this memorandum implies dual control in the schools. Indeed, the Society of Medical Officers of Health takes the view that as regards health education, physical fitness, welfare, child guidance the more these measures evolve from within the schools themselves the more successful will be the results; everything depends on the pupil teacher relationship. But to ensure that the principles of preventive and social medicine are soundly applied this service should be inspired and directed by the local health authority through the Medical Officer of Health.

In conclusion, the Society of Medical Officers of Health would be most grateful for an opportunity to discuss these issues with the Ministry of Health and the Board of Education.

We have received from British Drug Houses, Ltd., specimens of their sulphonamide-P paste, marketed in two consistencies. In both the sulphanilamide is present to the extent of 30%, and cod liver oil in the stiff variety to the extent of 60%, in the medium of 49%. It is recommended that the medium paste be applied to burns and surface wounds, which are then covered with gauze; and that the stiff paste should be incorporated into gauze for the packing of a wound in a manner similar to packing with paraffin.

BOOK REVIEW

The Brompton Hospital Reports, Vol. X. Published by the Research Department of the Hospital. London. 1941. Pp. 127. Price 5s. net.

The Brompton Hospital Reports for 1941 consists of ten papers of which the first three are concerned with the treatment of chest wounds. The first paper, by R. C. Brock, deals concisely yet thoroughly with the important subject of pleural drainage. The second and third papers, by J. G. Scadding and Clifford Hoyle respectively, deal with the management of chest injuries which do not involve gross external trauma. The conditions considered are tension pneumothorax, haemothorax, and infection. These three papers contain much valuable information and should be read by all medical officers who may be called upon to treat such cases. The paper by Maurice Davidson and Philip Ellman on the aetiology of subacute pulmonary infections is a further contribution to the study of those conditions which clinically and radiologically resemble pulmonary tuberculosis but in which the tubercle bacilli cannot be demonstrated. Five cases are fully described and discussed, the accounts being assisted by some excellent reproductions of radiographs. The inclination shown by the authors to regard these cases as tuberculous in origin is a useful corrective to the growing tendency of recent years to ascribe such conditions to some other cause. Tuberculosis is the commonest cause of pulmonary illness, and the increasing interest in unusual cases will in many instances reveal to the physician another manifestation of this ubiquitous disease. Three papers on bronchial neoplasms: adenoma by A. F. Foster-Carter, carcinoma by F. C. Ormerod, and chondroma by Maurice Davidson, remind us that the increase in the knowledge of pulmonary diseases continually brings to light an important group of neoplastic conditions whose early diagnosis is vital for their successful treatment. The paper by J. G. Scadding on "medical aspects of chronic empyema" is as arresting as its title, for it brings home to the physician that the longer he fails to realise the possibility of chronic empyema as an underlying cause of the disabilities described, the longer will the surgeon be prevented from being able to bring about a cure, and the more difficult will be his task. A note on the aetiology of erythema nodosum by A. Lisle Punch is a significant contribution, though the number of cases quoted is small. The recording of observations concerning three cases of the change of Mantoux reaction from negative to positive co-incident with a feverish illness associated with the lesions of erythema nodosum will form a valuable item in the bibliography of any future larger-scale investigation into this subject.

The final paper, which concerns the persistence of lipiodol in the lungs following bronchography, by F. H. Young and E. Gantz provides food for serious thought for those who have hitherto regarded the instillation of iodised oil into the bronchial tree as a proceeding whose only risks were either immediate or associated with iodism. The results of further research on this subject will be awaited with interest.

This volume also contains an index of authors and index for volumes I-IX of the reports.

Evacuated Mentally Defective Children

The Board of Education, in consultation with the Ministry of Health and the Board of Control (Administrative Memorandum No. 404), have considered the problem of dealing with mentally defective evacuated children. A number of them have proved to be unsuitable for billeting with householders, while places in hostels for evacuees cannot be permanently allotted to them. The Board have ascertained from the Local Education Authorities for Birmingham and London that a certain number of vacancies exist in their evacuated parties of mentally defective children which are conducted by them as residential Special Schools and have been so certified by the Board. These Authorities would be willing to place the vacancies at the disposal of other Education Authorities for suitable cases. If any other authorities have vacancies in their residential Special Schools for mentally defective children and would be prepared to admit children from other areas, the Board would be glad to be informed in order that they may circulate particulars as a supplement to this Administrative Memorandum.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

COUNCIL MEETING

A meeting of the Council was held at Tavistock House, London, W.C.1, on July 31st, 1942, with the President (Sir Alexander Macgregor) in the chair.

There were present Drs. J. S. Anderson, Cyril Banks, H. Stanley Banks, G. F. Buchan, J. J. Buchan, J. A. Charles, I. G. Davies, J. Fenton, J. Ferguson, D. H. Geffen, J. M. Gibson, C. Herington, Katherine M. Hirst, J. W. Hunter, Sir Wilson Jameson, Drs. A. W. Johns, G. Lilico, T. Orr, Prof. R. M. F. Picken, Drs. E. Virginia Saunders-Jacobs, F. A. Sharpe, J. E. Spence, J. A. Stirling, J. A. Struthers, R. Sutherland, Mr. A. G. Taylor, Drs. E. W. Caryl Thomas, E. Ward, H. Gibbons Ward and C. F. White.

Minutes of the meeting held May 15th, 1942 (printed in PUBLIC HEALTH, July, 1942) were confirmed and signed.

Apologies for absence were received from Sir Wm. Savage, Drs. A. G. Glass, H. G. Trayer, H. C. Maurice Williams, F. T. H. Wood.

Report of the General Purposes Committee.—Dr. Cyril Banks reported the business transacted by this Committee on the previous day, as recorded above. The report was approved and adopted by the Council. Recommendation 8 in reference to the Scabies Order was carried on a division by 18 votes to 4.

Report of the Journal Committee.—Prof. Picken reported the proceedings at a meeting of the Journal Committee held earlier the same day. He explained the difficulties in connection with paper supplies which had made it necessary to reduce the number of pages and the size of the type, and asked the indulgence of members if the Committee were compelled to curtail contributions or postpone their acceptance. Fortunately the increased cost of paper and printing had been partly met by the increased charges for advertisements. The Committee were still anxious about the shortage of paper, but they hoped they would be able to continue monthly publication. They were also concerned to secure more punctual publication and were pressing the printers to ensure delivery on the first of each month.

The report was approved, and Prof. Picken was thanked for his services as chairman of the Committee during the past year.

Report of the Medical Planning Committee.—Dr. G. F. Buchan submitted the report (see p. 199) adopted by this Committee on July 3rd, 1942. The Council agreed (1) that the report be published in the September issue of PUBLIC HEALTH with a statement that it has been referred to Branches and Groups, and is not yet the adopted policy of the Society; (2) that the Branches and Groups be asked to meet for consideration of the report and to forward their observations to the Acting Executive Secretary not later than October 31st, 1942; and (3) that an order be given for 250 reprints of the report.

Life Membership.—The following Fellows were elected to Life Membership under Article 12: North-Western Branch—Dr. R. Veitch Clark (formerly M.O.H., Manchester); Metropolitan Branch—Dr. C. J. Thomas (formerly Senior M.O., L.C.C.); West of England Branch—Dr. Dunstan Brewer (formerly M.O.H., Swindon).

Central Council for Health Education.—Dr. J. W. Hunter was elected to complete the representation of the Society on this Council. It was noted that the minutes of Council (May 15th, 1942) incorrectly recorded the election of Dr. G. Macdonald (Metropolitan Branch) to the C.C.H.E., whereas the choice fell on Dr. E. K. Macdonald on the nomination of the East Midland Branch. Apologies for the mistake had been accepted by both members concerned.

Sir Arthur Newsholme.—The Council accepted with grateful thanks the offer of Lady Forber, M.D., to present to the Society a portrait of her former chief, Sir Arthur Newsholme, in red crayon, by Legros. It was agreed that, until the new offices of the Society were ready for occupation, this valuable gift should be kept in a place of safe storage.

The Royal Sanitary Association of Scotland.—Sir Alexander Macgregor, Dr. John Buchan and the Acting Executive Secretary were appointed to represent the Society at the 67th Annual Congress of this Association to be held at Edinburgh on September 15th and 16th.

County Borough Group.—A resolution from this Group was received and noted, as follows: "That this Group requests the Council of the Society to assume bolder leadership in medical policy and to take all necessary steps to impress that policy on all other interested bodies and associations."

Dr. Charles F. White, O.B.E.—The President extended to Dr. C. F. White the hearty congratulations of the Council on his appointment as an officer of the Order of the British Empire in the Birthday Honours List.

The Council then adjourned.

GENERAL PURPOSES COMMITTEE

A meeting of the General Purposes Committee was held at Tavistock House, London, W.C.1, on July 30th, 1942.

Present: Dr. Cyril Banks (in the chair), Drs. J. S. Anderson, G. F. Buchan, J. A. Charles, J. Fenton, J. Ferguson, R. H. H. Jolly, G. Lilico, A. S. M. Macgregor, Prof. R. M. F. Picken, Drs. E. Virginia Saunders-Jacobs, J. A. Stirling, R. Sutherland, E. Ward and H. Gibbons Ward.

Minutes of the meeting held May 15th, 1942 (printed in PUBLIC HEALTH, July, 1942) were confirmed and signed.

Apologies for absence were received from Sir William Savage, Dr. H. C. Maurice Williams and Dr. F. T. H. Wood.

War-Time Nurseries.—Arising out of recommendations from the Midland Branch, the Maternity and Child Welfare Group and Dr. G. E. B. Payne (M.O.H., Acton) in reference to Ministry of Health Circular 2535 and Board of Education Circular 1573, the Committee passed the following resolutions:—

1. That this Committee urges the Council to make formal representation to the Ministry of Health against the admission of children under three years of age to nursery schools and nursery and infant classes, on the grounds of health, sanitary requirements and psychological unsuitability.

2. That the above resolution should be forwarded to the Ministry of Health, the Board of Education, the County Councils' Association, the London County Council, the Association of Municipal Corporations and the Metropolitan Boroughs Standing Joint Committee.

3. That this Committee recommends that Government Departments be urged to make part-time work available for the mothers of young children who are required in war-time industries, and that their hours of work should be fixed to permit the attendance of their children at whole-time day nurseries.

4. That the above resolution be forwarded to the Ministry of Health and the Ministry of Labour.

Expenses of Branches and Groups.—The Hon. Treasurer reported that certain Branches were finding their capitation fees inadequate in view of increased expenses, postal charges, etc., consequent on the war. He had also been approached by Dr. Ernest Ward in reference to the allowance of travelling expenses for members of Group executive committees. In view of the uncertain outlook and possible reduction in the Society's revenue, the Committee agreed that the consideration of any increase of grants should be deferred.

War Bonus for Staff.—On the recommendation of the Hon. Treasurer, the Committee recommended:—

5. That war bonus in accordance with the Whitley award be granted to the assistants of the Executive Secretary (Miss Scotchford and Miss Gatheral) as from August 1st, 1942.

Security of Tenure.—On the suggestion of the Yorkshire Branch the Committee recommended:—

6. That inquiries be made regarding any special security of tenure extended to senior officials of local authorities, other than medical officers.

7. That Dr. Robert Sutherland be appointed to make this inquiry and to report to an early meeting of the Council.

Scabies Order.—The Committee further considered the letter of the Urban District Councils Association referred back by the Council on May 15th and recommended:—

8. That the Council should adhere to its previous decision that the general notification of scabies is not desirable.

Education After the War.—After consideration of communications from the Yorkshire Branch, Dr. G. Hamilton Hogben (M.O.H., Tottenham) and the Maternity and Child Welfare Group, the Committee recommended:—

9. That the appended memorandum (see p. 204) on the Education Health Service be forwarded to the Ministry of Health and the Board of Education.

10. That the following be appointed as a deputation, if invited by the Ministries, to discuss the memorandum: The President, Drs. G. F. Buchan, James Ferguson, Cyril Banks, James Fenton, R. Sutherland and Prof. R. M. F. Picken.

11. That a modified version of the memorandum, omitting reference to confidential documents, be published in PUBLIC HEALTH and circulated to the Association of Municipal Corporations, the County Councils' Association, the British Medical Association, the Association of Education Committees, the London County Council and the Metropolitan Boroughs Standing Joint Committee.

12. That members of the deputation should be appointed a sub-committee to report on any further publicity advisable in connection with the subject of this memorandum.

Inter-Departmental Committee on Medical Schools.—A letter was reported from this Committee inviting the Society to submit evidence in reference to post-war hospital policy, and the organisation of medical schools particularly in regard to facilities for clinical research. Having considered a memorandum in the same connection from Prof. Picken, the Committee recommended:—

13. That the invitation of the Departmental Committee be accepted and that Prof. Picken, Drs. Charles, Parry, Jervis, G. F. Buchan, Daley, Ferguson and Fenton be appointed a committee to draft evidence for approval by the Council.

List of Health Books.—The Committee approved a list of health books compiled on behalf of the Society by Dr. E. Ashworth Underwood for circulation by the National Book Council. It was agreed that Dr. Underwood should be thanked for his willing acceptance of this task.

The Annual Statistical Review.—A letter was considered from Prof. Picken pointing out that Part II of the Annual Statistical Review of the Registrar-General is not to be issued generally but is to be available for the year 1938 and presumably for subsequent years for reference, possibly by loan, to those who ask for it. Prof. Picken continued:—

"It seems likely that the same policy will be adopted for the far more important Part I for 1939 and subsequent years, containing the medical statistics, and presumably we shall have to be content with that also. The Text, which contains analyses of the data in the other two parts and discussions of them, will probably be suspended. This Part has undergone many modifications throughout its history, and in many respects has a value of its own over and above that of all the statistics contained in the other two parts. Its compilation must be a fairly formidable task each year, and there is a danger that if it were once suspended it might disappear. I think it would be useful if the Society were to put on record its opinion as to the value of the Text in its present or any form to which it may in future be cast so that the Registrar-General may know that Medical Officers of Health have found it of value in their work."

It was agreed

14. That Prof. Picken's proposal be commended for approval by the Council.

Prevention and Treatment of Venereal Diseases.—A letter was received from the Medical Society for the Study of Venereal Diseases forwarding the following resolution: "That in the opinion of the Society for the Study of Venereal Diseases, in the prevention and treatment of venereal diseases, further measures, administrative and legislative, are required to deal with sources of infection, contacts and defaulters."

The Committee agreed

15. That the above resolution of the Society for the Study of Venereal Diseases be commended for approval by the Council of the Society.

Billeting of Evacuated Children.—A letter was received from the Women Public Health Officers' Association forwarding the following resolution: "That it should be compulsory for all billeting officers to notify the Medical Officer of Health of all children under five years of age billeted in their area."

The Committee agreed

16. That the above resolution of the Women Public Health Officers' Association be commended for approval by the Council of the Society.

Certificates of Pregnancy.—A letter from the Board of Trade asked for consideration of draft certificates of pregnancy for expectant mothers applying for supplementary clothing coupons. Amendments recommended by the Maternity and Child Welfare Group were approved as follows:—

1. After the signature of the certifying doctor or midwife there should be a space for the address and, in the case of a registered midwife, for her number, otherwise difficulty may be experienced in placing the certifying doctor or midwife should it prove necessary later, particularly if he or she happens to have been a locum tenens.

2. There should be a short statement to be signed by, or on behalf of, the mother stating that she has received the coupons. Alternatively, if the coupons are sent by post there should be a note on this part of the form indicating that the postal registration certificate is to be affixed. By one or other of these means, the local authority then has definite evidence of having handed over the coupons to the responsibility either of the mother, her representative, or the post office.

3. On page 2 of the form, after the words "Local Authority for Maternity and Child Welfare at," there should be sufficient space to allow for a stamped address.

The Committee recommended:—

17. That the above amendments be forwarded for consideration by the Board of Trade.

Diphtheria Immunisation.—A letter from the Ministry of Health asked for the co-operation of the Society in securing consideration by medical officers of health of the brochure circulated to local welfare authorities in preparation for the national propaganda campaign in connection with diphtheria immunisation. Owing to the paper shortage, the distribution of the brochure had been restricted, and the Ministry was anxious that medical officers of health should make a point of perusing any copy available.

The Committee recommended:—

18. That medical officers of health should be urged to give every possible assistance in securing publicity for the campaign in support of diphtheria immunisation on the lines indicated in the brochure recently issued by the Ministry of Health.

Having approved replies to various inquiries addressed to the Society the Committee adjourned.

BRANCH NEWS

YORKSHIRE BRANCH

President: Dr. J. Galloway (M.O.H., Dewsbury C.B.).
Hon. Secretary: Dr. R. Sutherland (M.O.H., Brighouse M.B.).

A meeting of the branch was held at Bradford on May 1st. The President was in the chair and was supported by eleven members. The minutes of the last meeting were read, approved and signed by the President.

The Medical Planning Committee was instructed to consider the by-laws of the branch and to submit any recommendations it wished to make for their amendment in the near future.

It was resolved that this was not the time for the medical profession to apply for increases in remuneration, but that the war bonuses payable to other public officials should be payable to the personnel of the public health services. The Secretary was instructed to write to the Secretary of the Society accordingly.

This meeting was followed by a joint meeting of the branch with the Royal Sanitary Institute.

After a cordial welcome had been given by the Lord Mayor, Dr. F. T. H. Wood, who was in the chair, introduced Dr. John M. Gibson, M.O.H., Huddersfield, who gave an address on "Regionalisation of Hospitals," which was to be published in the July issue of the *Journal of the Royal Sanitary Institute*. He was followed by Sir George Martin, Chairman of the Health Committee of the City of Leeds, and by Dr. Rennie, Senior Physician to the Bradford Royal Infirmary.

A meeting of the branch was held in Leeds on May 29th. The President was in the chair and was supported by 30 members. The minutes of the last meeting were taken as read, approved and signed by the President.

The officers of the branch, members of the Branch Council, and the representatives of the branch on the B.M.A. Branch Council, were then elected by ballot as follows: President, R. Watson; Vice-Presidents, J. F. Galloway and N. Gebbie; Hon. Secretary and Treasurer, R. Sutherland. *Members of Branch Council*: E. C. Benn, J. J. Buchan, W. J. Frain, J. A. Fraser, E. D. Irvine, J. J. Jervis, D. D. Payne, G. H. Pearce, G. C. F. Roe. *Representatives on B.M.A. Branch Council*: J. F. Galloway, J. J. Jervis, T. N. V. Potts, R. Sutherland.

Dr. H. Edelston, Medical Psychologist to the City of Bradford, then gave an address on "Some Social Implications of Modern Medical Psychology." Opening the discussion, the President asked if an M.O.H. was justified, after only one hour's interview, in expressing an opinion in court upon a child delinquent which might affect his whole future. Dr. Roe considered heredity more important than environment in causing emotional problems and stressed the modern danger of standardised personalities. Dr. Gibson said he believed that the heredity element was more important than environment in determining character. Mr. Emmerson, Director of Education of Dewsbury, thought it important that magistrates should be educated in the value of the psychological treatment of child delinquents.

In reply, Dr. Edelston said that cases referred by courts for a doctor's opinion were antagonistic and lying; he thought, therefore, that a doctor should refuse to give an opinion until he had had an opportunity of seeing the child and the parents on several occasions and of gaining their confidence and their co-operation. Little was known about heredity on the psychological side. One inherited a constitution upon which one's character would develop. Nevertheless, environment would determine to a large extent whether a child was to develop a problem or not. A medical psychologist could not alter heredity, but he could attempt at least to alter environment so as to make the best of heredity. For a town of 100,000 people he would recommend the appointment of a psychiatric social worker who in six months would ferret out the cases requiring treatment and would thus enable the Authority to measure the need for psychiatric treatment. Once established, child guidance would lead to adult guidance. Child guidance should be started in the home by the mother immediately after birth of the child. One should be very chary about interfering in the child's home and with the mother's natural loving actions.

Mr. Barraclough, Secretary of Education of the North Riding County Council and President of the Yorkshire Branch of the Association of Directors and Secretaries for Education, pointed out that the elementary child had only £13 per annum spent on its education and only about 9s. 6d. on its medical care. He thought that these figures could be increased.

The Council decided to request the Council of the Society to consider the question of the future of the school medical service and the relationship of the M.O.H. and Director of Education.

HOME COUNTIES BRANCH

President: Dr. D. H. Geffen (M.O.H., Enfield U.D.).
Hon. Secretary: Dr. C. E. E. Herington (M.O.H., Dagenham U.D.).

A meeting of the branch was held at Tavistock House, Tavistock Square, on June 5th. An invitation had been extended to the President and members of the Metropolitan Branch, and some 23 members were present.

An interesting paper was read by Mr. L. Logue, M.V.O., Hon. Treasurer of the British Society of Speech Therapists. Classifying the various types of speech defect, he said that certain of the categories could be considered incurable whereas others were readily cured, especially if treated at the age at which such treatment was most effective. He stressed the danger of the gap which often existed between leaving school and early manhood. During this period many opportunities for treatment were lost, and the ground could only be made up with difficulty. Dr. Boon, Speech Therapist to the L.C.C., discussed the subject with Mr. Logue, and expressed his appreciation of the lecture. A vote of thanks was proposed by Dr. Adamson and seconded by Dr. Clark Trotter, who expressed the thanks of the Metropolitan Branch for the invitation extended to them.

A meeting of the Branch was held on July 10th, there being present the President and 13 members. The minutes of the meeting held on June 5th were confirmed and signed.

Dr. J. Ferguson, County M.O.H., Surrey, was elected President of the Branch for the session 1942-43, all other officers remaining as before.

A member of the Branch raised the question of the remuneration of part-time medical officers of health holding more than one appointment. The member concerned gave details of the conditions governing the two appointments held by himself. The question was discussed at length, but at the request of the member concerned action was deferred pending his further negotiations with the local authorities in question.

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Virginia Saunders-Jacobs.
Hon. Secretary: Dr. Katherine M. Hirst.
Hon. Assistant Secretary: Dr. Violet Russell.

A meeting of the Group was held in conjunction with the Children's Section of the R.S.M. on May 22nd. Dr. A. G. Maitland-Jones, O.B.E., President of the Children's Section, occupied the chair, with the President of the Group on his right. An audience of about 60 included 26 members and visitors of the Group.

Dr. Alan Moncrieff opened the discussion on the prevention of chronic lung diseases in young children (tuberculosis and allergic asthma being purposely excluded). He stressed the importance of environment in avoiding chronic droplet infections and drew attention to sepsis of the nasal sinuses as a potent factor in the causation of chronic lung disease. The reason for the association of rickets and bronchitis was not yet clear, but the association undoubtedly existed. In young children measles and pertussis were likely to leave a sequel of chronic lung disease, and it was desirable to take all possible steps by the use of serum and vaccine to postpone these infections till later childhood. He stressed the importance of convalescent treatment after both these illnesses. A collapsed lung should receive early treatment, and its early diagnosis was a matter of urgency.

Dr. Nora Wattie reported that the position in Glasgow with regard to chronic lung disease in children was better now than it was 20 years ago; she attributed this to an improvement in nutrition. Unfortunately children who did well in hospital often relapsed when they returned home. Dr. Constance Field spoke on the preventive treatment of bronchiectasis and showed photographs and skiagrams to illustrate the origin of the condition. With Dr. Moncrieff, she doubted the wisdom of giving belladonna in pneumonia, as this caused a sticky sputum which tended to block the bronchioles. Collapse of the lung should be treated by immediate bronchoscopic suction.

Dr. Saunders-Jacobs emphasised the care necessary to exclude tuberculosis in the young child. She would like to see a more extended use of radiography and patch tests in school entrants. She agreed with previous speakers about the need for convalescent

treatment after measles and whooping-cough and the desirability of keeping these children under careful observation. Artificial sunlight, when given under expert advice, could be helpful. Throat and ear clinics, with their associated breathing exercises, were useful adjuncts to the health services.

In the ensuing discussion it was agreed that bronchoscopy should be more frequently employed and that sulphapyridine should not be used indiscriminately. There was a division of opinion as to the value of ultra-violet light, but a unanimity on the value of whooping-cough vaccine.

Following the National Conference on Maternity and Child Welfare, a clinical week-end was held at Great Ormond Street Children's Hospital on July 4th and 5th. Dr. Donald Paterson and Dr. Wyllie both commended the growing liaison between hospital paediatricians and medical officers engaged in child welfare.

On July 4th Dr. Donald Paterson lectured on premature babies and feeding difficulties. Mr. Denis Browne then spoke on orthopaedics, with special reference to minor degrees of deformity. Dr. Wilfrid Sheldon opened the afternoon session by speaking on some disorders in infancy, laying stress on the conditions found by medical officers in their work at the welfare centre sessions. Dr. Wyllie lectured on the work of an asthma clinic. This was followed by a demonstration of skin tests, skiagrams, and breathing exercises by Dr. Gimson. On July 5th Mr. Apperly spoke on the care of the teeth and orthodontic treatment in children, showing lantern slides in illustration. Dr. Frew described the history of the hospital, and conducted a tour through the new building. The effect of the cubicle construction and barrier nursing in reducing the incidence of infection is worthy of note.

This, the third week-end refresher course arranged during the session 1941-42, was attended by about 80 doctors.

WEST OF ENGLAND BRANCH

President: Dr. P. H. Stirk (formerly M.O.H., Exeter C.B.).
Hon. Secretary: Dr. I. G. Davies (Deputy M.O.H., Bristol C.B.).

A meeting of the Branch was held at Bristol on July 10th. Eight members were present. In the absence of the President and Vice-President, Dr. R. H. Parry took the chair. The minutes of the last meeting were read and confirmed.

It was proposed and seconded that Dr. Brewer be recommended as a life member of the Society. The Hon. Secretary read his report on the work of the Medical Planning Committee, of which he was the Branch representative; a letter from Dr. Lishman dealing with medical planning was also read.

The following officers were elected for the coming session, 1942-43: *President*: Dr. J. B. Lowe, Deputy County M.O.H., Wiltshire. *Vice-President*: Dr. W. J. Doyle, Assistant M.O.H., Devon County Council. *Hon. Secretary and Council Representative*: Dr. I. G. Davies, Deputy M.O.H., Bristol. *Hon. Treasurer*: Dr. J. F. Black, M.O.H., Bath.

Dr. Greta Hartley, Assistant M.O.H., Bristol, then read a paper on nurseries. An interesting discussion took place.

NORTH-WESTERN BRANCH

President: Dr. A. G. Glass (M.O.H., Farnworth U.D.).
Hon. Secretary: Dr. W. E. Spence (M.O.H., Eccles).

The annual meeting was held at Preston on June [illegible]th, when the President occupied the chair and 67 members and friends were present. The Society was welcomed by Lieut.-Col. Roddy. The minutes of the last annual meeting were confirmed.

It was agreed that the Council be recommended to appoint Dr. Veitch Clark an honorary life member of the Society.

The President then presented a framed portrait to Dr. F. H. Wood, O.B.E., a Past-President of the Society. Dr. Wood thanked the Branch for the portrait, which was handed back to the President to be formally presented to the Society.

The balance sheet and statement of accounts and the Hon. Secretary's report were presented by the Hon. Treasurer and adopted.

Dr. Spence was elected President of the Branch for the ensuing year, and the following officers were also elected: *Vice-President*: Dr. A. G. Glass. *Hon. Treasurer*: Dr. F. T. H. Wood, O.B.E. *Hon. Secretary*: Dr. W. C. V. Brothwood. *Council Representatives*: The President, Dr. F. A. Sharpe, and the Hon. Secretary. The Committee was re-elected.

NORTHERN BRANCH

President: Dr. G. Hurrell (T.O., Newcastle-upon-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the Branch was held in Newcastle on June 20th. The President and 15 members were present.

Dr. James Grant gave a brief statement of the proceedings of two Medical Planning Committees which he had attended in London. After the meeting of the first Medical Planning Committee, the Council of the Northern Branch had met and prepared a short memorandum which was forwarded to the Central Officer for distribution to members of the Medical Planning Committee for discussion at the meeting held on June 5th.

Surgeon-Commander George A. Mason, R.N.V.R., Regional Adviser in Thoracic Surgery, delivered an address on the scope of thoracic surgery and its relationship to public health.

SOUTHERN BRANCH

President: Lieut.-Col. T. G. Cheyne, O.B.E., M.C. (Assistant Director of Hygiene, Southern Command).
Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B. and Port).

A meeting of the Branch was held at Netley, Hants, on July 10th. Five members and six visitors were present.

The Secretary read a letter he had received from the President stating that, having been transferred from the Southern Region, he could no longer continue the office of President of the Southern Branch. The Secretary was instructed to thank Colonel Cheyne for his valuable service to the Branch during his term of office. Dr. I. McLachlan was in the chair.

The minutes of the meeting held on April 17th, 1942, having been circulated, were, after correction, approved and signed by the President.

The officers elected for the ensuing year are:—*President*: Dr. T. E. Roberts. *Hon. Secretary*: Dr. H. C. Maurice Williams, O.B.E. *Hon. Treasurer*: Dr. H. L. Cronk. *Representative on the Council*: Dr. H. C. Maurice Williams, O.B.E. *Executive Representatives on Tuberculosis Group*: Dr. W. Templeton and Dr. Capes. *Executive Committee of the Branch*: Dr. A. B. Williamson, Major G. Chesney, Dr. W. J. Hart. *Representative on the School Medical Group Committee*: Dr. T. E. Roberts. *Representative on the Central Medical Planning Committee*: Dr. H. C. Maurice Williams, O.B.E.

Dr. I. McLachlan submitted particulars of two interesting cases of pneumococcal meningitis, from which types 14 and 18 were cultured from the cerebro-spinal fluid. Both cases made a complete recovery. Dr. R. M. Warren, Clinical Venereal Diseases Officer and Pathologist, Southampton, gave an address embodying suggestions for improving existing venereal diseases scheme.

RECENT APPOINTMENTS IN THE PUBLIC HEALTH SERVICE

The following are some recent appointments in the health departments of various local authorities:—

BARKING M.B.: Deputy M.O., Dr. Harold Franks.
HIGH WYCOMBE M.B.: Temp. M.O.H., Dr. Julia Marcella Browne-Kutschbach.
NORTHUMBERLAND C.C.: C.M.O.H., Dr. J. Boston Tilley (Deputy M.O.H., Northumberland).
POOLE M.B.: M.O.H., Dr. George Chesney (Deputy M.O.H., Poole).
WARWICK C.C.: M. & C.W. Officer for the County, Dr. Agnes Young.

OBITUARY

LOUGHRIDGE, M.B., CH.B.

We announce with regret the recent death, at the age of 63, of Dr. J. A. Loughridge, a Fellow of the Society of Medical Officers of Health.

James Anderson Loughridge, a native of Northern Ireland, was educated at Belfast and qualified M.B., Ch.B., at Edinburgh in 1905, in which year he also received the Certificate of Tropical Diseases. For 30 years he has been M.O.H. for Amble U.D.C. He has also been Police Surgeon, Medical Officer of the Post Office, Medical Officer of the Port Sanitary Authority of Warkworth Harbour, Surgeon to the Trinity Lighthouse Keepers, and Medical Officer to the Board of Education. He was a Fellow of the Royal Institute of Public Health and Hygiene. During the war 1914-18 he served in the R.A.M.C. with the rank of Captain, and was taken prisoner.

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