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EDITORIAL

The Medical Use of Sulphonamides

The M.R.C. War Memorandum* on the medical use of sulphonamides, though it may quickly become outmoded by the rapid developments in chemotherapy, has apparently satisfied a widely felt need; it has been issued to all medical personnel in the Services, besides being freely distributed among hospital medical staffs. The memorandum begins with a simple description of the chemistry and chemical formulae of most of the sulphonamides now in use—sulphanilamide, sulphacetamide, sulphapyridine, sulphathiazole, sulphadiazine, "sulphamezathine" (for which the non-proprietary name sulphadimethylpyrimidine is suggested), sulphaguanidine and succinyl sulphathiazole (sulphasuxidine), and it strongly urges that these names be used in preference to the host of trade synonyms on the market. There follows an excellent section on the pharmacology of the sulphonamides: their absorption and excretion, their action as bacteriostatic rather than bactericidal agents, the quantitative rather than qualitative differences in their potencies which makes sulphathiazole more effective than sulphanilamide against a wide range of organisms and not just against the staphylococcus, and the acquisition of bacterial drug-resistance, which may be a plague in hospital cross-infection, but probably has little significance in the treatment of acute primary infections. Among some general considerations about dosage, choice of drug (dependent in wartime on available supplies), blood-concentrations and the like, the need is stressed for a large initial "loading" dose, particularly in severe infections, since the sulphonamides act quantitatively, while their rapid excretion requires that the drug be given regularly day and night to maintain an effective blood-level. This effective blood-level probably varies with the potency of the different sulphonamides, but it is doubtful if, apart from septicaemic conditions, a concentration of 10 mg. per 100 c.cm. will overcome an infection more quickly and effectively than one of 5 mg. per 100 c.cm. Children not only tolerate but also require relatively larger doses than adults.

In the sphere of preventive medicine, most interest attaches to the usefulness of sulphonamides in the treatment and prevention of infectious diseases and their complications, and although the memorandum was not primarily designed as a guide to those engaged in this branch of medicine, it does, in fact, contain much useful information for them. The infectious diseases which in this country have responded particularly well to sulphonamide therapy are erysipelas and puerperal sepsis, the pneumonias, meningococcal and gonococcal infections, and bacillary dysentery. Erysipelas is an example of a spreading streptococcal infection against which the sulphonamides are especially effective. Puerperal infection with the streptococcus has almost ceased to be a cause of maternal mortality, mainly because the drug is given at once to most cases of puerperal pyrexia so that any incipient streptococcal infection is nipped in the bud. The drug is much less effective in well-established streptococcal septicaemia. Sulphonamides are not recommended in the acute stage of scarlet fever, and there is still no unanimity about their value when given orally in streptococcal tonsillitis. The pneumonias were brought into the list of susceptible infections by the introduction of sulphapyridine, which, a sign of the times, is now relegated to fourth place after sulphathiazole, sulphadiazine, and sulphadimethylpyrimidine—presumably because of its irritant action on the stomach, for it is doubtful if the other sulphonamides are clinically more effective against the pneumococcus. Despite the obvious value of sulphonamide therapy in pneumonia, there has been no dramatic fall in the crude death-rate from this disease. It is important in this connection to realise that these drugs are bacteriostatic, not bactericidal—that is, they can only prepare the bacteria for destruction by the host's tissues. If the tissues are not healthy and reactive the infection will not be overcome, and this may partly explain the high toll which pneumonia still takes among those past middle age.

The sulphonamides have perhaps had their greatest victory against the *Neisseria*. They came in time to effect a great saving of lives, estimated at some 7,500, in the recent epidemic of cerebrospinal fever, in which the case-mortality was reduced from 70% to 20%; indeed, with expert medical and nursing care—and here the initial intravenous doses are essential—the fatality has been less than 10%. In acute gonorrhoea, cure can be obtained with 5 g. of sulphathiazole, properly spaced, on each of two successive days, but it is advisable to continue this dosage for five days. With ambulant patients liable to spread the disease, the aim must be to cure as quickly as possible and with the minimum of discomfort. Gonococcal infections in children, such as vulvo-vaginitis and ophthalmia, respond equally well. Bacillary dysentery alone among the intestinal infections in this country responds dramatically to the more active sulphonamides; sulphaguanidine and succinyl sulphathiazole are the preparations of choice because they are so poorly absorbed from the gut. Treatment with these drugs may be expected to produce bacteriological as well as clinical cure, an important matter in view of the frequency and persistence of convalescent dysentery carriers. Incidentally, no mention is made of the treatment of nasal diphtheria carriers with sulphonamide snuff.

The part which chemoprophylaxis may play in the control of infectious diseases is only touched upon in the memorandum. Given in small doses (1 to 1·5 g. daily) during the winter months, sulphanilamide has prevented recurrences of rheumatic fever, and there is some evidence, though no reliable statistical data, that the more active preparations will reduce the incidence of complications after measles, pertussis and

* M.R.C. War Memorandum No. 10: H.M.S.O., London, 1943. Price 9d. net.

influenza. American workers have claimed success in the prophylaxis of gonorrhoea among troops; with doses of 2 g. sulphathiazole before leaving camp, 2 g. on return and 2 g. next day, the admission rates of gonorrhoea was eight per 1,000 per annum compared with 171 in the control group. Sulphaguanidine given to intimate contacts has proved effective in the control of institutional dysentery among the insane and mentally defective. Sulphonamide temporarily cures the meningococcal carrier. Here is an aspect of the medical use of these drugs which may prove a fertile field for the public health worker.

Fair Pay for Midwives

Midwifery stands in such close relation to nursing that it is not always realised that it is a distinct profession with its own traditions. While a nurse attends the sick and infirm, a midwife normally deals with a healthy woman discharging a physiological function. Nurses work at all points under medical supervision; midwives have the total care of their patients, subject only to the obligation to call in a medical practitioner to deal with abnormalities and disease. The title "midwife" is protected by law, and unqualified practice is illegal, yet although the Central Midwives Board is 40 years old, public opinion has been slow to realise the status and importance of the midwife or the vital part she plays in health services. Two-thirds of the 600,000 births in England and Wales every year are attended by midwives, and, as maternity nurses acting under a doctor's direction, they also attend most of the other confinements.

Six months after the appointment of the Nurses Salaries Committee at the end of 1941 a Midwives Salaries Committee was set up, also under the chairmanship of Lord Rushcliffe, and has recently made its report to the Minister of Health.* The committee's recommendations must be considered in the light of the well-known fact that for some years past there has been an insufficient number of midwives. It is true that the number of women who complete their training as midwives would more than meet the demand, but a large proportion of them do not make midwifery their career. They are State-registered nurses who take midwifery training because the double qualification helps them to advance to higher posts in the nursing world. Thus while there are 65,000 women on the Midwives' Roll, only some 16,000 are actually practising as midwives.

The committee has made a differentiation in salaries between midwives practising in hospitals or maternity homes and domiciliary midwives carrying out their work in the homes of the people. The great majority of the former preside over their institutions, whereas the majority of salaried domiciliary midwives employed by local authorities practise from their own homes, so that it would be difficult to include both classes in the same schedules.

The salary ranges and scales recommended may be briefly summarised as under:—

Institutional Midwives.—Matron of training institution of 100 or more beds; range of salary (not a scale) of £300–£500, with six increments of £25, provided maximum is not exceeded, with a slightly lower range for smaller institutions, always exclusive of emoluments, reckoned at £150. Sister-in-charge of maternity home with fewer than ten beds, but with six or more pupils (if she holds the midwife teachers' certificate or was in office before April 1st, 1943), and assistant matron in institution with 50 or more beds, a scale of £230 × £10–£290, again exclusive of emoluments, reckoned at £120.

Superintendent midwife in a training institution, a range of £240–£340, with four increments of £15 within this range; if in a non-training institution the range is lowered to £220–£320, with a similar provision as to increments. Midwifery teacher, with six or more pupils, holding midwife teacher's certificate or in office before April 1st, 1943, and not holding certificate, £230 × £10–£280, otherwise only to £260, in all cases exclusive of emoluments. Departmental midwifery sister on similar scale.

Midwifery sister, who is a State-registered nurse as well as a State-certified midwife, or, being the latter only, was in office on April 1st, 1938, £150 × £10–£200, plus £20 after ten years' service in grade, exclusive of emoluments (£100). If a State-certified midwife only, appointed after the date mentioned, the scale is £130 × £10–£180. Staff midwife, who is also a State-registered nurse, £120 × £5–£160, or if a State-certified midwife only, £100 × £5–£150, plus emoluments (£90). Pupil midwife who is also a State-registered nurse, £65 (£75 emoluments); if not a State-registered nurse, £40 in first year, £60 during second period of training.

Domiciliary Midwives.—Superintendent in charge of district midwives' home employing 20 or more midwives, £250 × £20–£330, exclusive of emoluments, reckoned at £120. Sister-in-charge of home, with pupil midwives, and with five to nine midwives employed apart from pupils, if herself a State-registered nurse as well as a State-certified midwife, or, if the latter only, having been appointed before April 1st, 1938, £230 × £10–£290. If no pupils, but a similar number of midwives employed, £170 × £10–£240. If a State-certified midwife only and appointed after April 1st, 1938, the corresponding figures for a similar size of home with and without pupils respectively, £210 × £10–£270 and £150 × £10–£220. These figures again are exclusive of emoluments.

District midwife resident in hospital or home, who is also a State-registered nurse, £140 × £10–£200; if not a State-registered nurse, £120 × £10–£190. Village nurse-midwife, resident, £110 × £10–£170, all exclusive of emoluments. District midwife not resident, if also a State-registered nurse, £270 × £10–£360; if a State-certified midwife only, £250 × £10–£350; village nurse-midwife, £210 × £10–£270, all inclusive of emoluments. Certain charges for rent, board and lodging, laundry, and attendance are prescribed in these latter cases, when the premises are provided by the local authority. When the midwife practises from approved premises which she herself rents or owns, an allowance of £25 is made if the premises are in the administrative county of London, and of £15 if they are in the rest of the metropolitan police district.

Hitherto there has been no recognised protected uniform for midwives. They have exercised their own choice in this matter or have worn the different uniforms provided by their employing authorities. It is an offence for any person other than a registered nurse to wear her uniform, but there is no similar restriction in respect of midwives. A badge is, indeed, provided, but the Rushcliffe Committee does not consider this to be enough. It believes that a national uniform for midwives would contribute to their public standing and give the profession itself a sense of unity. Another recommendation is that employing authorities should in suitable areas and circumstances establish district hostels. The 96-hour fortnight is recommended for industrial midwives (except in the case of those in supervisory positions), this time to be inclusive of lectures and tutorial classes. The maximum continuous periods of night duty should, if possible, be six months for midwifery sisters and staff midwives and two months for pupil midwives. In the case of domiciliary midwives the employing authority should provide these women with professional equipment and stationery, medical supplies, uniform, professional laundry, telephone, and means of transport, or reimburse them for reasonable expenses incurred in providing them for themselves. Hours of duty in the case of domiciliary midwives are difficult to regulate, but it is recommended that in three weeks out of every four each district midwife should be given at least two consecutive nights and one intervening day off duty a week, and in the fourth week a long week-end of 60 consecutive hours. All grades of midwives, institutional and domiciliary, should have 28 days' annual leave with pay, and certain minimum periods of sick pay are also laid down.

There will be few to quarrel with these modest proposals on behalf of women who perform one of the most important functions in the State. Members of a profession who are in the nature of things subject to frequent exigencies should have their lot made as agreeable as possible from the point of view of remuneration and conditions of service.

Good Riddance

Houses, like bodies, have excretory functions which are disregarded to the peril of the whole organism. Whether in country cottage or modern luxury flat, the hygienic disposal of waste products ranks as a priority for attention. The Institute of Public Cleansing devoted the major part of its forty-fifth annual conference, held in London the other day, to the subject of refuse collection and disposal and the temporary storage of waste matter in the house in relation to

* Cmd. 6460. H.M.S.O. 6d. net.

domestic hygiene. The President of the Institute, Mr. A. L. Thomson, mentioned some glaring examples of failure to make adequate provision for satisfactory domestic storage and collection. In the metropolitan area, for example, the refuse has actually to be carried through the house—often through the living room—either by the dustman or by the occupier himself, in 63% of cases. That insanitary contraption, the ashpit, which should be condemned outright for its offensiveness and danger, still survives. The enforcement of the provision of a satisfactory refuse receptacle is not universal, with the result that nondescript containers, often with some of their contents spilled beside them, are to be found in many streets of towns, while the primitive dust chute, in which the refuse is expected to find its way by gravity to a subterranean pit, is in use even in relatively modern buildings.

Mr. Thomson, in his address to the conference, was not prepared to condemn the portable bin. Bins, he said, were not a source of nuisance unless misused, but they should be periodically cleansed, or, better still, cleansed after every emptying, so that they were as clean and presentable as other domestic sanitary fitments. A greater measure of effective control over bins seems to be called for. This might be carried out, as it is already in some progressive towns, by taking powers to supply and maintain bins on a rental basis, or, as in other towns, by making this cleansing service a charge on the rates.

A special subject of importance is the disposal of refuse from block dwellings. The early types of chutes were insanitary abominations, but this, as Mr. Thomson said, does not necessarily condemn the chute system. Those early chutes were badly designed, but if chutes are properly constructed they do provide a ready means of refuse disposal and so discourage the prolonged retention of refuse in the flat. If tenants have to descend flights of stairs in order to dispose of their refuse there is every temptation to let it remain for longer periods before getting rid of it. The problem is one of arranging convenient early disposal, and, pending disposal, of satisfactory household storage. One workable scheme mentioned is to provide every house with a small covered pail. In block dwellings in Germany special lifts are provided to take the dustbin down and the coal scuttle up. One method used employs water for the removal of solid as well as liquid wastes, and it is said that in the United States large use is made of mechanical systems whereby a good part of the domestic waste passes down the sink. A grinding unit is fitted to and immediately under the sink for the purpose of macerating food wastes into a pulp which can then be washed down the ordinary plumbing and drainage systems. Such devices are capable of dealing with food wastes at the rate of 1 lb. per minute, but as they also consume water at the rate of two and a half gallons a minute they would be likely, in this country, to bring the Water Board to the alert. Moreover, the cost of the grinder, worked by electricity, is said to be high, and clogging does occur with some materials, such as pea pods. All that can really be said for it is that it does eliminate the inartistic garbage tin. The Garchey system is, again, more expensive than satisfactorily managed bin storage and removal, but it does enable the housewife to get rid immediately of any refuse of less than 5 inches diameter.

Some figures were presented to the conference concerning the effect which the war has had on refuse disposal. Generally speaking, there is in town refuse now a very small amount of paper content and putrescible matter and an increase in fine dust and in unclassified non-combustible matter. In Glasgow, for example, in the summer of 1936, the amount of vegetable and putrescible matter in the refuse of a small part of the city was 20·35% of the whole, and of paper 20·30%, and in the summer of 1943 these amounts had fallen to 4·27 and 1·60% respectively. On the other hand, the proportion of fine dust increased from 29·74 to 43·68%, and of unclassified non-combustible matter from 4·73 to 11·02%. These changes are to be attributed, in the main, to the controls placed on paper and textiles, to the general practice of separate household collections for waste food and bones, and to the relative scarcity and poorer quality of coal. This has had a remarkably adverse effect on incineration for steam-raising or power production. In Glasgow the units generated at the refuse power works, which were 38 million in 1938-39, fell to eight million in 1942-43, and the units per ton of refuse received fell from 235 to 91. If the present compulsory powers with regard to the separation of salvage materials are continued after the war there will be difficulty in justifying any attempt at incineration of city refuse, at all events on a large scale.

Health Record

The Summary Report of the Ministry of Health for the year ended March 31st, 1943, has just been issued.* In his foreword the Minister of Health observes that the year was remarkable for a series of favourable records in the vital statistics. The general death-rate among the civilian population, the Report states, was remarkably low. Among females the standardised rate was 6·84 per thousand living—8% better than in any previous year, notwithstanding the inclusion of deaths in this country from enemy action and the withdrawal of large numbers of healthy young women from the civilian population. Among civilian males the standardised rate of 9·52 was also the lowest recorded, in spite of the considerable effect of selective recruitment. Mortality of children at ages 1 to 5, which had declined by no less than 47% between 1931-35 and 1939, showed a further improvement of 2% in 1942. At the school ages of 5 to 15, the low level reached in 1939 was regained. The total of live births (654,039) was greater than that in 1941 by 66,811, and, taken with the total of deaths registered in England and Wales, gives a natural increase during 1942 of 173,902. The rate of 15·8 per thousand is the highest since 1931.

For many groups of diseases, new low records in the number of deaths (including non-civilians dying in England and Wales) were established. These include pneumonia, influenza, diphtheria, scarlet fever, rheumatic fever, gastric ulcer and other diseases of the stomach. Deaths from influenza (3,401) were fewer by 3,500 than in 1941. The principal diseases showing an increase in deaths compared with 1941 include cancer (though the standardised death-rate showed no rise), Hodgkin's disease, coronary disease, angina pectoris, enteritis and diarrhoea. The total incidence of infectious disease was less by nearly 30% than in 1941. Scarlet fever was the only disease in which there was a substantial increase. Diphtheria figures were the lowest in the past 19 years. The incidence of enteric fever (typhoid and paratyphoid) was the lowest ever recorded.

Sickness benefit claims on Approved Societies under the N.H.I. Scheme were much above the pre-war average. This is true of all four quarters of the year, and is not accounted for by any epidemic. After making due allowances for members of the lower age groups who have left civilian employment for the Armed Forces, these claims suggest a considerable increase per head in short-term sickness. The number of civilians suffering from syphilis attending treatment centres for the first time in 1942 was 9,046. With Service cases added, this represents an increase of 29·6% compared with 1941—as against a rise of 40% between 1940 and 1941. The increase in new syphilitic infections since the beginning of war now amounts to about 120%. With regard to tuberculosis, "the position in the third year of war was better than could reasonably have been expected two years ago." There was a distinct check in the wartime increase in the death-rate from tuberculosis. Total number of deaths from all forms was 25,547—about 2,500 less than in 1940, 3,000 less than in 1941, and much the same as in the last pre-war year, 1938. (The 1938 figure was the lowest on record and well under half the corresponding figure for 1918.) "While these figures give ground for satisfaction," says the Report, "vigilance must be maintained. There was a rise of about 3% in the number of new cases reported last year, and under the trying conditions of total war it is not unlikely that the death-rate will tend to rise again."

The infant mortality rate of 49 per thousand live births compares with 59 in 1941, and is the first rate below 50 ever recorded. Maternal mortality rate was 2·47 per thousand.

* H.M.S.O. Price 1s., post free 1s. 2d. Cmd. 6468.

THE BEGINNINGS OF LOCAL GOVERNMENT*

By J. E. Spence, M.B., CH.B., D.P.H., F.S.A.

At the present time our outlook is directed towards post-war reconstruction of local administration with large-scale advances in the social services, but it may be interesting to pause and survey the road we have traversed, and it is my intention to go along the first part of that road up to the end of the sixteenth century.

Before the Norman Conquest

Such local administration as existed before the Norman Conquest was the responsibility of the Reeve of the shire. The larger shires were unwieldy and were divided into more manageable administrative areas. The large County of York was divided into "trithings" or "ridings," while Lincolnshire was divided into "parts," which to-day remain independent administrative counties. Parishes had been constituted after the conversion of the country from paganism, but as a rule they were large in extent and had no relation to local administration. The shires were subdivided into "hundreds," which were areas comprising a hundred hides of land or the land settled by a hundred families responsible for military service; in the Eastern Midlands the term "wapentake" is used instead of hundred, while in Cumberland and Westmorland the term "ward" is used. Each hundred had its moot or court, and the hundred court still exists for minor legal administration although in a much modified form.

When the country was consolidated into a single entity instead of a number of petty kingdoms, and the King became a national ruler, he had to administer it through his ealdormen. The lack of means of communication owing to few and intolerably bad roads, the lack of money to maintain a standing army, and the existence of innumerable codes of customary law which even a King dare not ignore, made it essential to link the responsibility for good order and the payment of the King's revenue with the possession of land, which was held by the Ealdorman in homage from the crown. The hundreds were apportioned into parcels of land of varying size which were held by smaller landowners either direct from the King or through a tenant-in-chief in return for military service to their immediate overlord and the payment of geld or tax to the Crown. These small estates were originally the unit of property on which tax was paid and were known as manors.

After the Conquest, William redistributed the land to his followers as a reward for their services. The land still remained the property of the Crown and the tenants-in-chief did homage and undertook military service in return for their holdings. The tenants-in-chief, in their turn, subinfeudated their holdings to knights in return for homage and military service. In this way the larger landowners had at their command a considerable force of armed men which, either alone or in combination with their powerful neighbours, might become a menace to the security of the Crown. To minimise this risk, the holdings of the tenants-in-chief usually consisted of widely scattered manors, seldom more than a few being adjacent in any district. Where the country was thickly populated, manors were contiguous, but in the wilder parts of the country they might be separated by wide tracts of waste land which remained in the King's hands, but over which the manor had rights of wood, pasture and turf.

The Manor and the Manorial Court

Under the Conqueror the liabilities attached to the possession of land remained as in Saxon England—namely, homage to the overlord or King, the provision of levies for the King's service, the maintenance of roads and bridges, and the preservation of law and order. For the regulation of manorial life and the preservation of order there were the two manorial courts presided over by the lord or his steward. The Court Leet dealt with minor criminal matters, more serious offences being reserved for the Sheriffs or County Court, which was later superseded by the Quarter Sessions or Court of Assize, presided over by the King's Justices in Eyre. The court-baron—the assembly of the freehold tenants of a manor under the presidency of the lord or his steward—concerned itself with the civil administration of the manor. It dealt with general management of the manorial land, the working of the common fields, the succession to holdings of land in the manor, the customary services and payments due to the lord from the villeins, and the appointment of manorial officers. The Lord of the Manor formed the link between the poorest tiller of the soil and his overlord, whether king or baron, and the importance of this link cannot be exaggerated. In his manor the lord was in a position to discover what was in the minds of his villeins, and as suitor to the King's Court he could convey information as to the people's needs and grievances. The manor thus became a unit of civil administration.

The manor originally was a self-supporting unit having but little contact with the outside world. The land supported the community that dwelt on it and provided all that was requisite—food, clothing, and shelter. Money was not in common use, and the few necessities or luxuries which could not be produced at home were obtained by barter. Life was hard and bare, and famine was an ever-present menace. Agriculture was primitive and the yield of crops was low. In a good season there was sufficient; in a bad season there was difficulty in surviving the winter.

The focus of the manor was the lord's house. Near it the lord usually erected a chapel for himself and his tenants and provided a priest; in consequence the manor also became a unit of ecclesiastical administration or a parish, although in some instances two or more manors were combined to constitute a parish. The homesteads were grouped near the manor house, and were often surrounded by a fence owing to the danger of predatory outlaws and wild animals. Examples of such fenced villages still remain to-day.

The manorial land was farmed in common on the open field system, in which each villein had his scattered strips allocated to him in the Manorial Court and changed from year to year. In addition to his work in the common fields the villein was liable for certain days' work each week on the land which the lord held in demesne, and to boon work or extra days' work at busy seasons such as hay-time or harvest. He was also liable for customary payments in kind at stated times. He was not a slave but a free man, with rights to his holding in return for the customary services, and his holding passed at death to his heir. Although not a serf, he was not free to leave the manor without his lord's permission, but if he did escape and remained at liberty for a year and a day his lord could not compel him to return. He was also subject to other disabilities, which varied from manor to manor. He might not sell his horse or ox without his lord's permission, he had to pay a fine on the marriage of a daughter, on his death the lord had right to heriot—originally the return of the horse and armour lent for military service, later the right to the best horse or ox—and in addition the heir had to pay a fine on entry to his inheritance.

As well as the cultivation of the land in common, the herding of cattle and swine was a communal duty. To these offices the villeins in the Manor Court elected some of their number—*i.e.*, the reeve, hayward, swineherd, beeman, etc., and these officers, who worked impartially for the lord and the villeins, were exempt from the communal ploughing, their strips in the common fields being cultivated for them in return for their official services.

Pre-Conquest Towns

In pre-Conquest England there were towns such as London, York, and Bristol which had been towns since the Roman era, and others such as the five towns of the Danelaw—Derby, Leicester, Stamford, Nottingham, and Lincoln, centres of trade, and Danish fortresses, for the Danes were keen traders as well as hardy warriors. In Saxon times a few other towns had also grown up round centres of civil or ecclesiastical administration. The Normans were a progressive and vigorous race, but they were also luxurious, demanding many articles for which Saxon trade had made no provision. Skilled craftsmen from Flanders, France, and Italy followed the Conqueror, and the Norman enthusiasm for architecture led to an influx of stonemasons and artisans. These craftsmen settled in convenient localities, turning manorial villages into towns; towns grew up at nodal points on the system of communications, at the tidal limit of navigable rivers, at important fords, around large monasteries, or near the castles of powerful barons, where the craftsmen could profitably ply their trade. The development of the wool trade between East Anglia and Flanders was responsible for the development of a host of towns from the Wash to the Thames, and later in the Cotswolds. The influx of refugees from the Continent, or the deliberate importation of craftsmen to develop the home wool industry, encouraged the growth of towns in the South East, but the North and West remained largely agricultural.

At first there was little to distinguish the town from the village. The majority of the inhabitants tilled the common fields in accordance with manorial custom, and were legally of the same status as the villein. A change began by the townsman freeing himself from the customary day's work on the manor demesne by the payment of a rent for his holding, but he still remained subject to the other disabilities of the manor. He was not free to leave it; he paid fines on marriage and succession, heriots, dues, and tolls on trading which were collected by the Manor Steward. Under such conditions trade had not the necessary freedom to flourish, and the townsman's next effort was to free himself from the remaining irritating manorial restrictions. In most towns there had developed an organisation for mutual assistance known as the Guild of Merchants, founded in honour of one of the numerous saints.

The principal object of the guild was to provide assistance for poor or distressed members and their dependants, but it was an association which could be made to serve other purposes, and the earliest and most important function it assumed was the protection of trade from the exactions or possible oppression by the Lord of the Manor or his bailiff. The Crusades, French Wars, or extravagant living often reduced the lord to urgent need of money, and the townsmen were not slow in taking advantage of his straitened circumstances. Through the Merchant Guild they offered money in return for a charter releasing them from the irksome manorial restrictions and dues, conferring the privileges of free trade within the town, and granting the right to hold a market. Similarly, charters which conferred on the town the right to govern itself and defined its boundaries were obtained from the Crown in return for grants. In some instances the town also obtained the right to pay their annual tax direct to the King's exchequer instead of through the Sheriff of the County, and the town then appointed its own Sheriff, assuming the powers of a County. Some of these old towns still rejoice in the style "City and County of So-and-so."

The Guilds

The chartered towns thenceforth were free to develop on their own lines, to make their own regulations for trade within their boundaries and prevent competition by outsiders. The government of the town naturally passed into the hands of the merchant guild which had obtained the Charter, and they formed the governing body. Membership of the Guild was restricted to craftsmen who had served an apprenticeship to a member of the Guild, but as the guilds became more wealthy they became more exclusive, limiting apprenticeship to sons of members or sons of wealthy county families. The ordinary townsman not a member of the guild was thus excluded from participation in local government, which became oligarchic, not democratic.

The guild carefully regulated trade by prescribing prices, quality, hours of labour and wages, endeavouring to ensure sound merchandise at a fair price. They also regulated competition by exclusive control over the admission of apprentices and members. As the town grew and the number of crafts increased, the Merchant Guild was unable to supervise all the crafts and guilds for the protection and regulation of special trades were subsequently formed. The Merchant Guild, however, maintained its pre-eminence in the town, and the management of civic affairs remained in its hands. In some instances the civic business was conducted by the Merchant Guild as a whole; in others, by a council elected from among the members of the guild, in which the general body of burgesses had no voice.

Throughout their existence the guilds celebrated the feast of their patron saint by a procession to church on the saint's day, at which every brother was bound to be present, followed by a banquet; this custom has survived to the present, though in a curtailed form, when the Mayor, shortly after his installation, goes to church in procession with the members of his council and a number of the citizens. In the City of London, which has adhered to many of its ancient customs, where many of the ancient Guilds or Livery Companies still exist, the procession still retains much of its ancient pageantry.

In the fifteenth century the guilds began to decay. They had maintained a high standard of commercial morality, but by their exclusiveness they had checked trade. With the recovery of the country from the Black Death and the Wars of the Roses a demand for goods in plenty arose, but the guilds could not or would not supply them. The common journeyman and the labourer could see no possibility of improvement in their station, as admission to guild membership was restricted to the privileged few. In consequence many left the towns and settled in villages to ply their trade free from the control of the guild. They were then free to meet the demand for goods, unfettered by guild restrictions on quality, price, wages, or output, while the guilds, which failed to adapt themselves to changing conditions, gradually lost influence to such an extent that the government in the reign of Edward VI was able to suppress many of them and annexe their wealth. The settlements of the free journeymen and labourers on the other hand prospered and in time developed into towns, of which Birmingham is an example.

Governing Bodies in the Towns

In the sixteenth century towns were still governed by organised bodies over which the citizen had little or no control. The council usually consisted of two parts—one a body of aldermen known as the "Mayors Brethren," or the "Twenty-four," the other known as the "Forty-eight" or "Common Council." The number of members of the two bodies and their relationship to each other varied from town to town, but in all towns they formed the governing body, and only direct interference of the Crown could vary their decisions. Whether the governing body of the town had developed from the merchant guild, the manorial court, or a group of free citizens, it tended to be a close oligarchic corporation. The general body of citizens was not eager to undertake the responsibility of civic office, as the privilege of self government had to be paid for and the governing body had to shoulder that responsibility. If the dues were not paid to the King or the Lord of the Manor, legal procedure would not be invoked to enforce payment; the King or lord would simply recoup himself by seizing the personal property of one or more of the wealthy citizens.

In most towns the title of "Mayor" was substituted, in the fifteenth or sixteenth century, for the older one of "Towns Reeve," and the Mayor was granted the status of Justice of the Peace. The Mayor's Brethren, or the Twenty-four, became the Aldermen, elected for life or re-elected annually, unless disqualified for some misdemeanour, while the Forty-eight became the Council elected by the free citizen householders. Local legislation was usually initiated by the body of aldermen, but the Common Council controlled the corporate seal and had power to accept or reject the proposals of the aldermen. Two persons were usually nominated by the Common Council for election as mayor, but the final choice rested with the mayor and aldermen. The City of London has clung tenaciously to many of its ancient privileges and customs, and has had sufficient weight in Parliament to ensure that new legislation left their ancient rights intact. It still preserves its ancient constitution, having a Common Council of more than 200 members elected by persons with a property qualification and members of the Ancient City Livery Companies. There is also a Court of Aldermen elected on a democratic franchise, one for each of the 20 wards of the city. They are elected for life, but the Court has the power of veto on the admission of a new alderman, however large his majority may have been. The Lord Mayor is elected by the retiring Lord Mayor, the Sheriffs, the Court of Aldermen, and the members of the City Guilds.

Chartered boroughs were represented in Parliament usually by two members, whose expenses were paid by the borough. As the privileges of the town rested on its charter granted by the King, and not on an Act of Parliament, the citizens were not greatly interested in parliamentary representation, especially as it involved them in expense, with the result that many towns were willing to accept as representatives the nominees of interested persons, particularly if those persons were willing to pay the expenses of the representatives.

Many of the formalities and rules of procedure practised to-day at Council meetings developed during the sixteenth century. Formal notice of the Council meeting had to be given to every member unless the Council met at the same time each week, and absentees, unless they had a reasonable excuse, were fined. To leave the meeting before the mayor was considered to show a lack of courtesy to the first citizen, and in some towns offenders were fined. In Oxford every member addressing the Council, except mayors (past or present) and aldermen, had to stand uncovered, and anyone interrupting was fined, except the mayor, "who may speak to him as he listeth." The reading of the minutes of the preceding meeting was instituted in the first place to remind those councillors who were the officers responsible for carrying out the various decisions of the council of the decisions which had been arrived at. In Coventry the books of the two previous meetings were open for inspection by the Council "to see what is kept and what is broken and see it reformed"; and it was further ordered "that they determine these matters afore they enter upon any other." Before the end of

* Presidential address to the North-Western Branch of the Society.

the century the reading of minutes became general, "so that if anything be mistaken it may be reformed before it is entered in the Council Book."

Sixteenth-century Epidemics

Owing to the frequent occurrence of epidemic disease during the sixteenth century the period has earned an unenviable record for bad sanitary conditions. The main epidemics, however, cannot be attributed to gross lack of sanitary measures, as the diseases mainly responsible for epidemics were plague, typhus, and sweating sickness. The epidemics varied in intensity, the most severe which is recorded being the outbreak of plague in Norwich, a city with a population of approximately 17,000, of whom about 5,000 died. Sweating sickness had been experienced in the fifteenth century, probably introduced by soldiers returning from the Continent; during the first half of the sixteenth century there were four epidemics, the last being in 1550, after which the disease disappeared. It was a most deadly disease, but could not be attributed to bad sanitation any more than the pandemic of influenza in 1918-19. Typhus was endemic in the overcrowded prison, which provided a focus for epidemic spread. Agriculture was primitive, and after a poor season famine was a serious menace during the winter. Wheat was scarce, and rye or barley, often of poor quality, was used for bread; consequently ergot poisoning was common.

Isolation and Prevention

However careful town authorities might be, epidemics became firmly established before they could be aware of the fact, the first intimation they received being entries of burials. Some authorities in the sixteenth century adopted measures to obtain early notification of disease. In Gloucester any householder having a sick person in the house for 24 hours "must declare the same to the Mayor and what he thinks of it upon his burgess oath," while at Shrewsbury the authorities sent two women to search a girl and report on her illness. Isolation and quarantine were practised. Infected persons were often commanded to stay in their houses for a prescribed period under pain of penalty, the period varying in different towns. Watchers were paid to watch and prevent infected persons leaving their houses, and people were imprisoned for disobeying the order. In some instances infected persons were fenced within the infected area, and the authorities provided food to maintain them in isolation. In other cases keepers were paid to reside in the infected house, as in Winchester, where eight women were appointed to be vergers or nurses in such houses as were suspected of infection.

A very useful regulation was made in some towns requiring that owners should kill their dogs or remove them out of the town on the outbreak of disease, but no one thought of rats being responsible for the spread of plague. In Newcastle, after the bellman had been sent round the town to warn all men to keep up their swine and dogs, a butcher went round and was later paid for killing five swine, 24 dogs, and 16 ducks found in the street after warning had been given. In Liverpool isolation was effected in summer by ordering all persons infested with the pestilence to depart out of their houses and make their cabins on the heath, but in winter they were to remain at home and keep their doors and windows shut until they had licence from the Mayor to open them; their houses were then to be cleaned and dressed as appointed. In Nottingham it was not considered feasible to set up a pest-house remote from the town in winter, so a tower on the city wall was used for the purpose. The public were not slow in appreciating the value of isolation of infected persons, and in Chester the inhabitants of Pepper Street requested the Mayor to remove the infected people to some other convenient spot because they would not obey orders to remain indoors.

The first isolation hospital was probably provided in Cambridge in 1574 to deal with an outbreak of plague when an area known as the Old Clay Pits was levelled, enclosed by a ditch, and a house erected on the site. Other towns soon followed this lead by providing isolation buildings outside the town walls. In Manchester provision was made at Collyhurst, a common over which the freemen had rights. The land was leased for £10, which was paid to the poor box "providing that in time of infection the inhabitants can lawfully build cabins on six acres nearest the town and there bury their dead if need be."

Control of Fairs and Travellers

Although plague was ascribed to various causes it was recognised by some authorities that fomites were a vehicle of infection. The congregation of people and goods at the great fairs was a means of disseminating infection, but to close a fair or market meant a heavy loss to the town, and it was only after careful consideration that a market or fair was abandoned. Exeter abandoned the Fair of St. Nicholas, "for by fairs may plague be spread, and places now free, infected." Shrewsbury closed its market to wool, flax, household stuff, and wearing apparel from London or any other infected town, and citizens were forbidden to visit markets or fairs in infected towns; if they did so they were "not to return within four miles of the town before two months were ended." When Derby was infected "innkeepers and tipplers" in Nottingham were ordered to refuse admission to any person from Derby. Nottingham also forbade its inhabitants under the penalty of being "shut up and disfranchised" to visit the Lenton Fair during an outbreak of plague there. Watchers were stationed at various points on the road, and some honest men were appointed to go to Lenton to see if any inhabitants disobeyed the order. It was a common custom, when the fair was held in spite of the risk of infection, to announce that merchants from infected towns would not be admitted without a "permit" as being free from infection. The Bridgnorth authorities, when Shrewsbury was suffering from plague, informed the Shrewsbury Council that "all persons from that town who wished to attend the Bridgnorth Fair must have a certificate that they and their families were free from plague." That fines were imposed on persons in towns free from plague for receiving goods from infected towns or houses is instanced by Nottingham, where a man was fined for receiving goods "that came from the sickness whereby he put the whole town in jeopardy."

In walled towns watchers were placed on the gate to prevent the admission of refugees from infected towns, and even the inhabitants of the town were often incommoded by anti-plague regulations. At Newcastle coalminers were ordered "to make their homes outside the walls so that it would not be necessary to open the gates at the early hour they went to work." Informers and scouts were rewarded, as at Shrewsbury, where "sixpence was given to a man who brought information that an infected woman was travelling towards the town, while 3s. 2d. was paid to the persons who met and conducted her past the town."

The regulations were harsh, but they must be judged by the standards of the age. In times of pestilence those who should have guided the populace often fled to country retreats. At the outbreak of plague in 1563 the Queen fled to Windsor and drastic measures were taken to prevent infection reaching the town. Gallows were erected in the market place, and all those who came from London by road as well as those who attempted to convey goods between the two places by water were hanged without trial.

In the control of plague during the sixteenth century there is no doubt that the provincial towns were well ahead of London in their preventive measures. The records of the towns show that in a large majority of cases infection was introduced from London, where the disease was practically endemic and where disastrous epidemics were frequent. There is no indication that the City authorities understood how the infection should be controlled.

Government Orders

There was but little government direction to assist the local authorities in the control of infectious diseases. In 1488, as a result of the sweating sickness, the killing of cattle within towns was forbidden. In 1518, when the Court retired to the country, instructions on behalf of the King were given to the Mayor of Oxford to keep infected people within their

houses and persons who had been in contact with them were to carry white rods. A further order was issued in 1543 which was more detailed and formed the basis of succeeding regulations during the sixteenth century. Infected houses had to be marked by a cross for 40 days after a death, and if survivors had sufficient means to subsist without working they were to remain indoors. If, however, they were without, they had to carry white rods as they went about. Straw which had been used as bedding had to be burnt at night and clothes put out in the fields to air. Hounds, spaniels, mastiffs, and all valuable dogs were to be taken out of the town and the remainder destroyed.

Steps had to be taken in London to provide for infected persons who could not support themselves, and in 1581 "searchers" were appointed to view the dead and to certify the cause of death so that the extent of the plague could be registered. Propaganda was employed as early as 1593, when a publication was issued by command of the Queen and the Privy Council to bring to the notice of the people everything then known about the plague. It was in two parts—one dealing with the regulations to be enforced during an outbreak, and the other giving "advice by the best learned physicians of the Realm, containing sundry good rules and easy medicines without charge to the meaner sort of people." The regulations commanded the Justices of the Peace to take charge of any outbreak of plague and prescribe the financial and other arrangements to be made to control the outbreak and secure the maintenance of infected persons. Clothes had to be disinfected or destroyed and a register of deaths kept. Notices were to be displayed in churchyards and market places giving particulars of preventives and remedies suggested by the physicians, and special instructions were given to enforce isolation and the burial of the dead. The advice on the treatment of plague given in the second part of the brochure remained an epitome of current practice for nearly 300 years.

Care of Paupers

The poor, by reason of infirmity or age, were also cared for. Towns registered the genuine indigent sick and infirm and granted them permission to solicit alms. As a means of quickly recognising those authorised to solicit alms, some towns, in the early years of the sixteenth century, introduced badges, consisting usually, of the town's cognizance, to be worn by the poor. This system was put on a national basis 50 years later. Little sympathy was shown to able-bodied paupers. The statute of 1495 gave authorities power to punish and expel undesirable beggars, and later Beadles of the Poor were appointed in many towns whose duty it was to order the poor and drive away vagabonds and lusty beggars. In Manchester, for many years the beadle was elected annually with the rest of the town officials and was allowed fourpence extra for every beggar he had whipped.

So far as the poor were concerned each town was a separate unit; persons from other towns were foreigners who were excluded so far as possible in case they became a burden on the town.

The fear of the burden of immigrant labourers when trade depression developed led to a policy of exclusion and the prohibition of the building of cottages for labourers within the town. As the sixteenth century advanced the number of beggars increased when relief in towns was becoming more general, and the Poor Law Statutes of 1530-31 provided that any person who could prove continuous residence in one parish for three years gained the right to remain and be relieved. In spite of local prohibition cottages were built and barns converted into residences. Great hardship was often caused by authorities intermittently enforcing the regulations against building, as it often chanced that labourers who had resided in the town for nearly three years were evicted. This policy was the result of a statute which gave the poor right to relief, but provided no finance or administrative machinery to make it workable.

In addition to the relief of the aged and impotent poor some towns assisted the poor in other ways. In Ipswich a children's hospital or training school was established, in Lincoln an allowance was made to a foster mother for bringing up an illegitimate child, while at Nottingham the father of an illegitimate child was traced and compelled to pay towards its maintenance. Paupers were also boarded out in some towns, the lame and the blind were cared for, and the indigent expectant mother was not neglected. Chester provided a physician "to undertake to the best of his power to see, cure and heal all the diseased or sick, poor people that live by alms.

The Levying of Rates for Maintaining the Poor

Some towns levied rates early in the sixteenth century for the maintenance of the poor, but this was first generally authorised by the Poor Law Statute of 1572. The ability to pay, and the assessment, was certified to the Court by the Alderman of the Ward, and the amounts due were collected by the appointed tax gatherer; failure to pay was met by imprisonment. The ward continued to be the assessment area for some time, and it was not till later that the parish became the unit of assessment.

Dependence was not placed entirely on the levying of a rate to maintain the poor; other sources of income were devised. Fees were charged on admission to citizenship and for dealing documents with the official seal. Plaintiffs in the towns court who lost their case were compelled to contribute to the poor box, while attorneys' fees were also taxed to assist the poor. It became customary to hold expensive feasts after the churching of women, the expense often being greater than the person could well afford. Feasts at churchings were forbidden in some towns "save only one dish of meat for gossips and midwives," and a scale of payments in aid of the poor was fixed. In Leicester, on his marriage or at the churching of his wife, an alderman had to pay 2s. 8d., a councillor 1s. 4d., and a commoner 4d.; an official was appointed to attend the church and collect the fees.

Money and property were also left by the benevolent for the maintenance of the poor, many of the charities still being extant, almshouses were built and endowed and free schools for the children of the poor, and scholarships to the universities, were founded.

This brief survey of the development of Local Government takes us to the end of the sixteenth century. Under the early Stuarts further development, particularly in connection with the Poor Law, took place, but, with the Interregnum, progress ceased. Conditions remained practically static for 150 years, and it was not until the accession of William and Victoria that further improvements in local government took place and central control as we now know it developed.

I wish to acknowledge my indebtedness for much of the information relating to the 16th Century to J. H. Thomas's *Town Government in the Sixteenth Century.*

MEDICINE IN THE U.S.S.R.

By E. Sendlbeck, M.D.

The Anglo-Soviet Medical Council has asked me to write about my experiences as a doctor during the 16 months I worked in the U.S.S.R. in 1936-37. I saw a good deal of the medical services and public health organisation, although unfortunately my experiences were limited to the conditions in one small place only and I had no opportunity to observe the work of institutions, which are probably more advanced in the big centres. Language difficulties also hampered me in conversation with Russian colleagues, and I was not able to follow research work and progress published in Russian medical literature.

The Polyclinic

The central supervising authority for all public health services was in Moscow. Its divisions are perhaps comparable with the English county authorities, and these again are responsible for numerous local public health authorities in towns and rural districts, which in turn control subdivisions directing the medical services of smaller units—collective farms, villages, industrial plants, etc. During part of my stay I was

employed by an urban authority, but for most of it I was with a big iron foundry which maintained for its employees and their families two polyclinics (out-patient departments), a maternity home, an isolation hospital, a laboratory, several day nurseries for babies and bigger children, and a number of so-called "med-points"—that is, first-aid stations with trained staff, some even with a doctor on duty day and night. All these institutions were under the supervision of a medical superintendent and a clerical director. But both were sub-ordinated to the local authorities in the town.

The polyclinics employ several general practitioners and specialists to deal with all ambulant cases. Treatment is free for everybody, but only insured persons receive benefit in the form of money if they are incapable for work, and they have to get certificates signed weekly by a doctor. A committee was set up to examine at intervals all patients drawing benefit. In polyclinics and hospitals one of the doctors always acted as medical superintendent. Working hours in polyclinics were from 9 a.m. till 7 p.m. A doctor and trained staff were on duty during the night and on Sundays (every sixth day).

I worked in the gynaecological and surgical department. In the latter I had to see, on an average, 80 patients daily, but sometimes up to 150, and I had to perform small surgical operations. Those patients unable to walk, especially any that had had serious accidents, were sent to hospital. Treatment in patients' homes was not given as a rule—only exceptionally in cases of short duration. A record was kept for each patient. One or more trained nurses, so-called feldshers, some female and some male, were attached to each department, and untrained staff was kept for cleaning work. All tests and investigations were done in the laboratory under medical supervision. An *x*-ray department worked for both polyclinics. A department for physical treatment was under the care of a specialist, and was quite well equipped with diathermy and other electrical apparatus.

One doctor was always on call to pay urgent home visits, and each doctor in turn had to take over this duty during the night and on Sundays. It was quite an adventure to go on these trips, which often meant miles of travel through rain and snow in an old ambulance or any odd vehicle, perhaps a high, two-wheeled horse-drawn strawcart, or a sleigh.

Maternity Arrangements

The hospitals and maternity homes were up to date and well equipped, and in cleanliness and hygiene justified all the claims made for them. The patients were well fed and looked after by the nursing staff. Hospital treatment also was free for all. Patients as a rule stayed in hospital for a much shorter period than is the custom in England, and were discharged as quickly as their condition would allow. For example, uncomplicated maternity cases were discharged on the seventh day, but were often brought back to their homes in the hospital lorry. The hospital kept a waiting-list for the less urgent cases. New hospitals and maternity homes were built everywhere to meet the urgent need for beds.

Ante- and post-natal welfare did not exist in the same form as they are known in England. That is, the women were not seen and examined at regular intervals during pregnancy by a doctor or midwife, and came to the polyclinic only when they felt that something had gone wrong, or to get their benefit certificates signed. As a consequence diagnosis, prevention, and treatment of complications were limited. The number of cases of eclampsia or untreated breech-presentation was much higher than in this country, and there was a relatively high stillbirth and neo-natal rate. Every woman, working or not working, was treated free of charge, but only working women received maternity benefit, which they could claim for the period from six weeks before to four weeks after delivery.

Attached to each polyclinic were trained midwives, who went to fetch the women from their homes to the hospital and who were prepared to deliver them on the way if necessary. Breast-feeding was carried through in practically all cases. Treatment of babies' eyes with silver nitrate was compulsory. Since 1936 artificial abortion has been made illegal unless medically indicated, but contraceptive advice was given.

The choice of drugs was rather limited, and even essential ones, as well as dressings, were not always obtainable in sufficient quantities. They were supplied only in dispensaries, and some (*e.g.*, dangerous drugs or spirits) could be obtained only on a medical prescription. The dispensaries also sold toilet articles. I do not remember if medicaments were supplied free of charge to insured persons, but they were at all events comparatively cheap.

Child Welfare

The children's welfare also was not organised as in England—*i.e.*, with supervision of all children by home visitors and in clinics. Naturally, all sick children could be brought to the polyclinics, and all the children who were kept in the day nurseries were under close medical supervision. One of the great advantages of these institutions was that the mothers were able to work free from worry about their children. They were encouraged to keep up breast feeding, or at least mixed feeding, and whenever possible they visited the nurseries at feeding-time. But perhaps even more valuable was the education they received in bringing up their babies and bigger children to clean and hygienic habits. This education was imparted both by direct advice and also indirectly through example.

Vaccination of all children was compulsory, and I do not remember any case of smallpox occurring during my stay.

T.B. and V.D.

Tuberculous patients were under medical care in the polyclinics, or if necessary in hospitals. Selected cases could be sent to sanatoriums in the Crimea or elsewhere. Home-visiting nurses were sent to advise and supervise the relatives of diseased persons.

Patients with venereal disease attended clinics. I do not remember if their treatment was compulsory, but I think nurses visited defaulters in their own homes. Cases of gonorrhoea were much more frequent than syphilis in the first or second stage. Its treatment was still on the older lines, with irrigations—sulphonamides not yet having been introduced at the time of my stay in the U.S.S.R.

Convalescent and Rest Homes

The magnificent service of the convalescent homes in Soviet Russia is well known. Convalescent patients, as well as people needing rest, could be proposed for admittance by doctors or could be sent to several spas equipped for the treatment of rheumatic, urological, gynaecological, and other diseases. It goes without saying that such homes existed also for children.

Another excellent institution was the provision of rest homes where the workers could spend their days off in pleasant surroundings and well provided with good and plentiful food. "Parks for rest and culture" were equipped for every taste, with hammocks for rest, playgrounds, sports grounds, and often a tennis court. Some of the larger ones also had open-air dancing grounds and buildings for indoor entertainment. Much attention was given to sport. A doctor was present at bigger football matches, not only to deal with accidents but also to examine players before and after games.

Some Infectious Diseases

The struggle against infectious diseases is made difficult by reason of the climate—the hot, dry summers, the dusty roads, and the cold winters, which do not permit much airing of dwellings. Then there is the housing problem. People live pressed together, often still in barracks. There is lack of drainage, and sanitary accommodation is found only in the newly erected buildings, which were all fitted with water-closets. Although in the barracks and in the older and often very primitively built houses one would find electric light, there was no running water and no water-closet. An expression is used in this connection—"going noi dworie"—that is, "into the courtyard," and these courtyards are certainly the breeding-places of many germs. Typhus, typhoid, dysentery, and other diseases are endemic. All infectious diseases have to be reported to the local authorities and are kept strictly

isolated in fever hospitals. Their homes are disinfected and there is quarantine of possible contacts. Much is also done by educating the population in nursery schools and clinics, by posters and booklets.

Malaria, mostly in tertian form, is endemic, and fatal cases occur. I have frequently seen recurrent attacks during the puerperium. Quinine tablets were distributed in clinics to all patients suffering from this disease, and, if available in sufficient quantities, also as a preventive measure. In some cases quinine was also given by injection.

I had less opportunity to study the conditions of other public health services. There was a department concerned with the disinfection of drinking-water, and I suppose also with drainage and related matters. The condition of food-shops and the handling of food certainly gave evidence of supervision by food inspectors. Dairies impressed me as very clean and hygienic.

Working Conditions of Doctors

I would like to add a few lines about living conditions of the medical and nursing staff. Their work, like that of other trades and professions, is organised in working units, so-called "staffkas." One staffka might equal 25 weekly working hours in a polyclinic, or 30 hours in a hospital, or still another number of hours teaching. In a working week of five days this meant five or six hours a day, and the doctor was paid 300 to 400 roubles a month, except when in a high position. A doctor could work up to two and a half staffkas, the half-staffka made up with night duty, but was not allowed to earn more than 1,000 roubles a month. Anyone who wished to work less time was allowed to do so. Out of this salary 10% was deducted for a State lottery, which at the same time was a kind of investment, and another 8% went in insurance and taxes. It is hardly possible to translate a Russian doctor's salary into English currency, because of the great difference in purchasing power. Rent and fuel, both of which were exclusively provided through the employing management, were comparatively cheap.

The employing management also provided a certain sum for the establishment of a newly appointed doctor. During illness salary was paid, to at least 75%, and four weeks' holiday was fully paid; or if it was not taken, this time was paid double. Private practice was not prohibited in principle, but naturally it was difficult to become established in a locality or to procure instruments privately. Insurance certificates and other attestations could not be signed privately. Moreover, such practice was heavily taxed in order to prevent a doctor from doing private instead of government work. But I heard that some specialists, especially dentists, had quite an extensive private practice.

—— and of Nurses

The nursing staff also works on the system of staffkas, always doing six hours daily in a staffka, with a payment of 150 to 200 roubles a month. With few exceptions there was no untrained staff. In my area there was no training centre for general nursing, but only for midwives; and their training included little real nursing. All the staff, qualified or in course of training, lived out; many of them were married. I never found that this interfered with their work or discipline. They devoted all their strength and interest to their profession, without neglecting their families. I have the most pleasant memories of the colleagues and nurses with whom I had to work. They did everything to help foreign doctors over language difficulties and the different conditions of life and work.

It can only be hoped that the enemy will soon be driven from Russian soil. Then the Government of the U.S.S.R. will be able once more to take up its gigantic task in the struggle against disease and in the rearing of a healthy population, training more and more doctors and nursing staff, by increasing the number of hospitals, maternity homes and other institutions, and, last but not least, by improving living conditions.

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DENTAL ORTHOPAEDICS*

By B. R. Townend, L.D.S. (Liverpool),

Senior Dental Officer to the County Council of the West Riding of Yorkshire

Before the work of William Hunter showed that dental disease could have far-reaching effects upon the general health of the body, it was regarded as a purely local condition, very painful in its manifestations, very disfiguring in its end results, and causing some interference with mastication and speech. Before the beginning of this century dentistry was little more than a service for the relief of pain and the restoration of cosmetic appearance. The realisation of its wider and more serious implications caused the introduction and the rapid development (perhaps not so rapid as some of us would wish) of various public dental services, the first and most important being the school dental service. The magnitude of the task which faced these services of controlling an almost universal disease with very inadequate weapons in the way of personnel and facilities has to some extent blinded us to certain other services which the science and art of dentistry has to offer.

The title of the paper is something of a trick to interest medical colleagues in the subject of straightening malplaced teeth—or, as we call it, orthodontics. Perhaps the trick can be defended because orthopaedics and orthodontics have much in common. They both aim at the restoration of function, and irregular teeth cannot function to the best advantage. They both aim at the restoration of symmetry and beauty, and irregular teeth are obviously not symmetrical and cannot be beautiful. They both demand the same approach—namely, a correct diagnosis of the defect and its cause or causes, and its treatment by removal of the cause and/or appropriate stimulation of the defective part by operation, mechanical contrivances or controlled exercises.

Aetiology of Malocclusion

The aetiology of dental malocclusion is a very complicated subject. Such predisposing causes as endocrine imbalance, metabolic disturbances, acute and chronic infections, deficiency diseases, pre-natal abnormalities, congenital defects, heredity, etc., indicate the wide range of knowledge required by the skilled orthodontist, and the need for and importance of close co-operation with the various branches of the medical profession dealing with these conditions. Broadly speaking, the determining causes may be summed up as some upset in the balance of growth, which growth has the genetic potential of arriving at the normal. Deviation from the normal may be produced,

1. If the change-over from deciduous to permanent dentition does not occur at the correct physiological age. Premature loss of deciduous teeth may allow the permanent teeth near them to move in the jaw and occupy a faulty position in relation to their neighbours. Conversely, prolonged retention of deciduous teeth may cause the permanent successors to erupt irregularly.
2. If the balance between the growth of the jaws and the development and eruption of the permanent teeth is not maintained. The importance of endocrine balance and freedom from metabolic disturbances coupled with the need for adequate exercise to stimulate bone growth will be evident.
3. By the fact that bone is a fluid medium. The effects of abnormal pressure can easily cause distortion. Postural and sleeping habits, thumb, finger and dummy sucking if persisted in, faulty swallowing habits, malfunctioning muscles surrounding the mouth acting either too weakly or too vigorously, all these things can interfere with and upset the balance of growth and development which is so essential to normality.

Abnormalities of Breathing

Abnormalities of breathing have a direct influence upon both the regularity and consequent efficient functioning of the teeth and the general health and well-being of the individual. Let us consider for a moment the physical differences which exist between normal nose breathing and pathological mouth breathing. In nose breathing the muscles of the tongue in a state of tonus cause that organ to be forced into the palate,

* Paper read before the Yorkshire Branch of the Society. (Abridged.)

occupying the whole of the vault and exerting a spreading pressure against the palatal surfaces of the upper and lower teeth. This is necessary to occlude the oral air-way. The muscles surrounding the lips are also in a state of tonus to keep the mouth closed. The upper and lower teeth are almost closed but not clenched, and the vertical muscles of the cheeks are relaxed.

Contrast this with the state of affairs when mouth breathing is practised. The tongue lies flaccid and atonic in the floor of the mouth, the lips are open with atonic muscles. The teeth are more widely separated, with a consequent tension on the cheek muscles. In short, the physical balance within the mouth is completely reversed. As we have seen that bone is a fluid medium which can be readily modified by pressure, instead of the various forces tending to spread the arches into a normal roughly semi-circular shape, the lack of support provided by the tongue and the external pressure of the cheeks tends to produce a narrow pointed arch-form of the Gothic type. That is the dental side of the picture, and the rabbit-toothed Englishman, as depicted by Continental caricaturists, is the typical mouth breather.

There is a very considerable weight of evidence to show that a healthy condition of the nasal sinuses is largely dependent upon efficient aeration and that sinus infections are much commoner in the young than was previously thought. Mollinson* found 20% of children requiring T. & A. operations had affected sinuses. Gillespy† found evidence of same disease in 32 children out of 50 suffering from chronic nasal catarrh. The primary infection of tonsils and adenoids, according to Watson Williams,‡ very often lies in the nasal sinuses, and as the surgery of sinus disease is by no means satisfactory, C. N. Strong§ stresses the importance of restoring ventilation in all sinus cases. This means, of course, the establishment of nasal breathing. Nasal obstructions, if gross, must be removed, but I am inclined to think that many tonsils and adenoids are sacrificed with the consequent loss of a valuable section of the drainage system of the body which might be rendered healthy and functional by adequate aeration, and removal of the overload to which they are subjected. I agree that the attitude towards tonsils and adenoids has become much more conservative during the past few years, but I submit that closer co-operation with the dental profession might still further reduce this slaughter of the innocents.

How best can we establish nasal breathing? Much can be done by breathing exercises, but the difficulties with these methods are, first, the fact that considerable patience is required by the patient if the exercises are to be persevered with, and, second, even if co-operation is obtained, the length of time devoted to them is insufficient to produce any very marked results. Ten minutes a day gives a total of 61 hours a year. If the habit of mouth breathing, particularly during sleep, can be broken, with an average of eight hours sleep, a total of 3,000 hours a year is obtained, or nearly as much in a week as we get in a year of exercises. It is at this point that the dental and medical professions can co-operate and, if necessary, kill two birds with one stone by means of a very simple piece of apparatus.

A mouth screen is worn at night by children suffering from protrusion of the upper incisor teeth. The appliance consists of a thin screen of vulcanite or acrylic resin moulded roughly to the outline of the muscular attachments of the sulcus and extending back to the molar region. Two knobs are made on the inner side of the screen to engage on the labial aspect of the upper centrals so that the appliance rides on these. The establishment of nasal breathing, coupled with the pressure of the lips on the screen, causes the protrusion to be reduced and the arch to be expanded in the canine and premolar region.

I would like to conclude my discourse on the medico-dental aspects of mouth breathing with a speculation which is more medical than dental. We know of the close relation of the nasal sinuses to the sella turcica and pituitary. Pituitary medication causes expansion of the arch, and an increased activity of that gland causes increased growth of the facial bones. We have seen that the establishment of nasal breathing does the same. May not mouth breathing so affect the pituitary as to inhibit its action? Such an idea may on the face of it sound fantastic, but in our present state of comparative ignorance as to the function and mechanism of the endocrines, what appears fantastic to-day may well be a commonplace to-morrow.

The Future

There is little doubt in my mind that when the lay public become aware of the service that the science and art of orthodontics can offer, the demand for it will be great. My limited experience during the last few years has demonstrated this fact forcibly. Orthodontics can be, and will be, a great help in breaking down many of the prejudices which exist against dentistry and dentists. The old belief that we are little better than the tooth-pullers of the market place is by no means dead. This being so, how best can the school dental service run a universal orthodontic scheme throughout the country? It should be realised at the outset that orthodontics is a specialty requiring a certain degree of experience, skill, and knowledge, before it can be carried out adequately, and it would seem that a centrally co-ordinated regional orthodontic scheme with a specialist officer or officers in control would offer the best solution.

I have indicated the necessity for accurate and intelligent diagnosis as the first essential in treatment, and such diagnosis would be within the province of such a specialist officer whose duty it would be to suggest appropriate treatment, and advise on the construction of suitable appliances which would be made by a technician under his direction. I believe that a large degree of standardisation in treatment could be attained after a few years intensive study of the problems. The dental hospitals and teaching schools might well become centres of research and experiment, and close co-operation should be established and maintained with cognate medical specialties, particularly nose and throat work, and the study of metabolic and endocrine disturbances and disharmonies.

* *Guy's Hosp. Rep.*, 1922, **72**, 225.
† *Lancet*, 1939, **2**, 773.
‡ Chronic Nasal Sinusitis. By Watson Williams. Bristol. 1933.
§ *Proc. roy. Soc. Med.*, 1936, **29**, 1547.

OBITUARY

Sir Francis Fremantle, M.P., D.M., M.Ch., F.R.C.P., F.R.C.S.

The sudden death of Sir Francis Fremantle, on August 26th, ended a life which had been almost wholly devoted to the advancement of the health and social services.

Born in 1872, the fourth son of the Very Reverend the Hon. William Fremantle, D.D., Dean of Ripon, Francis Edward Fremantle passed from his preparatory school to a King's Scholarship at Eton, and from there to Balliol, Oxford. From his early youth onwards Fremantle was possessed by a tremendous sense of duty, and having chosen public health as his career he determined to qualify himself for a close and informed co-operation with all branches of the medical profession. From Guy's he graduated M.B., B.Ch. Oxon. in 1898, and in succeeding years he took the D.P.H., the Oxford M.Ch., the F.R.C.S. and the M.R.C.P. In 1910 he was elected F.R.C.P., and some years later he completed his academic record with the Oxford D.M.

Before seeking a public health appointment Fremantle served as a civil surgeon in the South African War and later (1903-4) as a plague medical officer in the Punjab. From there he went on to act as special correspondent of the *Lancet* in the Russo-Japanese War. Meanwhile he had been appointed the first County M.O.H. (part-time) for Hertfordshire, and on his return from overseas he set up his "office" in a student's sitting-room in the college of Guy's Hospital. As he developed his schemes he removed to two rooms at Zetland House, where many Guy's students had their lodgings. By this time Fremantle had decided that to play a full part in the development of preventive medicine and public health administration he should seek election to the House of Commons, and very soon he secured his adoption as candidate for the Rotherhithe Division, which he could "nurse" with a minimum expenditure of time from his quarters in Guy's.

When war broke out in 1914, Fremantle, who had long been a keen Territorial, was at once mobilised, and he eventually succeeded Sir David Munro as D.A.D.M.S. (San.) in Mesopotamia with the rank of Lieut.-Colonel. For his services in this capacity he was mentioned in dispatches and awarded the O.B.E. After the armistice he hurried home to contest a favourable vacancy in his own county, and at the famous Khaki General Election he became M.P. for the St. Albans Division, the seat he held for the rest of his life.

In 1916 he had rather unexpectedly inherited the Bedwell Park estate, near Hatfield, with its fine mansion, pictures and parklands, so he resigned his appointment to become Honorary Consulting County Medical Officer, and proposed to devote his whole time to parliamentary and other public duties. On entering the House of Commons he was soon recognised as a spokesman of the medical profession, and the Speaker would call him on almost every occasion when health and social matters were the subject of debate. In addition, he rarely failed to attend during the Question Hour, and he became an expert in finding material for a medical or health "supplementary" arising out of the most unlikely questions.

He was from 1923 Chairman of the Parliamentary Medical Committee, which includes members of all parties, and he was also Chairman till he resigned the office in January last of the Health and Housing Committee of the Conservative Party. Apart from medical interests, he was Chairman of the Select Committee on Publications and House of Commons Debates Reports. He was a member of the Industrial Health Research Board in 1930-34, a member of the Departmental Commission on Rent Restriction Acts in 1923, 1931 and 1937 and on the Midwives Act (1908) and a member of the Central Housing Advisory Committee of the Ministry of Health and of the Interdepartmental Committee on Nursing Service. In 1920 he was President of the Society of Medical Officers of Health, in 1928 President of the Section of Epidemiology and State Medicine of the Royal Society of Medicine, and he was a Fellow and Vice-President of the Royal Sanitary Institute. He received the honour of knighthood in 1932.

By his persistence, integrity and high character, Fremantle won for himself the affection and respect of members of all parties. But he was held in equal regard by all sorts and conditions of people outside the House engaged in various movements to promote social betterment. Before the war, when the House sat till midnight or much later, he would spend hours in the library answering the letters of countless correspondents, often taking infinite pains to help social workers and others who had no immediate claim on his time. For his old colleagues in the Public Health Service nothing was too much trouble, and he often referred with pleasure to his long membership of the Council of the Society of Medical Officers of Health. They in their turn will long remember Fremantle for his loyalty as a friend and for his untiring devotion to a multitude of good causes.

A Deputy Lieutenant and Justice of the Peace for Hertfordshire, Fremantle was actively interested in the local affairs of his county. He was also a frequent correspondent of *The Times* and the author of a number of books, including "Impressions of a Doctor in Khaki" (1901), "Traveller's Study of Health and Empire" (1911), "The Housing of the Nation" and "Health of the Native" (1927), and "The Doctor's Mandate in Parliament"—a Chadwick Lecture (1936).

In 1905 he married Dorothy Marion Travers, the only daughter of the late Mr. Henry Joseph Chinnery, J.P., of Frigford Manor, Bicester. Their only son, Lt.-Col. David Fremantle, R.A., is now on active service.

Mr. Spence, Chief Clerk of the Hertfordshire Health Department, who was with Sir Francis from the earliest days of his county appointment, has sent us some interesting notes on the evolution of the work.

In 1908, Sir Francis Fremantle inaugurated the scheme of school medical inspection, using as assistant school medical officers the then district medical officers of health, with the addition of a few general practitioners in more scattered areas.

The argument for this was that these men knew their localities, and that they would have a certain variation in the work as compared with assistant school medical officers specially appointed to do nothing more than inspections. This original scheme was in operation up to about 1940-41 without great modifications. In November, 1910, Sir Francis was appointed full-time and later given an official staff.

Motor cars were not in these days in general use, but in spite of being on part-time Sir Francis spent two or three days every week visiting the County and his assistant school medical officers, using train and cycle for his journeys.

In 1913 the tuberculosis scheme was started by Sir Francis in conjunction with Dr. Hyslop Thomson, the newly appointed tuberculosis officer for the county, and in the same year the office was transferred to Hertford.

Public health in these early days was not taken as seriously as it is now, and there was a great deal of cold water thrown on his suggestions, but Sir Francis always took things good naturedly and stuck to his guns. He was a great worker, and spent hours on end in studying the records of school inspections as they were received. He was always full of ideas in connection with his work, and was an active supporter of many health and social organisations, especially in connection with the garden city movement and housing generally.

Dr. J. L. Dunlop, County Medical Officer for Hertfordshire, writes:—

My personal acquaintance with Sir Francis was, of course, limited. As soon as I was chosen for this job, he wrote to me and invited me to meet him to discuss the many problems in this County. I called on him soon after I took up duty, and found that he was still intensely interested in the public health problems here. From time to time during the past three years we have had conversations or correspondence on subjects of public health interest and problems peculiar to this County. I always found Sir Francis very willing to consider new ideas without prejudice, and he was always prepared to listen to destructive criticism of ideas on which he held strong views.

Sir Francis's Annual Report for 1908 gives details of the school medical service he set up in this County in that year. His foundations were well laid, and the services remained pretty well unchanged until the evacuation of school-children to this County in 1939. In his 1908 Report, he makes a strong case for a combined appointment as Assistant School Medical Officer and Medical Officer of Health. The arguments he used then to support his case have more recently been accepted by many other Counties which did not at that time see eye to eye with him.

Fremantle had always been a great supporter of the County Nursing Association. In 1910, he wrote a long report warning the Education Committee that they would have to face up to the question of appointing school nurses, and advising them very strongly that the ideal way of doing school nursing was by the employment of district nurses. Friends who worked with him in Hertfordshire tell that Sir Francis throughout his career was tremendously enthusiastic about his public health work. He did not always get the support which he had hoped for, but this did not damp his enthusiasm.

G. H. Patterson, M.R.C.S., L.R.C.P., D.P.H.

We regret to announce the death of Dr. G. H. Patterson on September 12th, within a few days of his 87th birthday. He had retired at the end of 1942 from the post of M.O.H. of the Ulverston Combined Sanitary District, which he had held for nearly 45 years, but he retained that of Medical Officer to the Ulverston Joint Hospital Board up to the very end.

George Henry Patterson was born on September 14th, 1856, and received his medical education at St. Bartholomew's Hospital, taking the M.R.C.S. and L.R.C.P. in 1879, and the D.P.H. in 1896. After holding various house appointments at St. Bartholomew's and elsewhere he settled in Dalton, where he engaged in general practice. In January, 1886, he was appointed part-time M.O.H. of Dalton Urban Sanitary District, and in 1898 he became M.O.H. of the Ulverston Combined Sanitary District, comprising the Urban and Rural Districts of Ulverston and the Urban Districts of Dalton and Grange, with a combined population of some 43,000 and an area of 220 square miles. During his long period of service as M.O.H. he did much to improve the sanitary circumstances of the area under his control, particularly in relation to improved methods of excrement and refuse disposal, and the provision of water supplies. In the Dalton Urban District he waged unceasing war against "that abomination, the privy-midden," and was instrumental in securing the conversion of large numbers into water closets. The conversions were accompanied by progressive decline in the incidence of enteric fever until the disease, looked upon as endemic when he first assumed office, finally disappeared. In the large rural district Dr. Patterson constantly advocated schemes for the provision of water supplies and sewerage—schemes which, he stated in his last annual report, reflected great credit upon successive generations of councillors. Though much was accomplished in this direction, Dr. Patterson, at the time when he relinquished office, was well aware of the fact that much still remained to be done. In the last few years he devoted himself to the immunisation of children against diphtheria, and the results achieved were a great credit to a man of his advanced years.

Dr. Patterson was a native of the Furness area in which he laboured so long and so successfully. In his later years he was affectionately known to the whole community as "Owd Doctor." He had long since ceased to be regarded as an official and had come to be looked upon as a personal friend. Can any higher tribute be paid to the memory of a Medical Officer of Health?

BOOK REVIEW

Hygiene for Nurses. By John Guy and J. T. Linklater. 6th edition. Edinburgh: E. & S. Livingstone. 1943. 240 pp. Price 5s. net, postage 5d.

This small book is written with the laudable intention of interesting the nurse in preventive medicine early in her career. Unfortunately, the concentrated presentation of facts and the absence of any strong link between the various sections has not resulted in a book which is very interesting to read. Taken as a "cram book," however, it is well printed and easy to carry, and its success is shown by the appearance of this sixth edition.

The authors write primarily from the Scottish point of view, which may explain such things as the omission of any allusion to the pasteurisation of milk in the prevention of bovine tuberculosis, the delay in giving mixed diet to infants, and the presence of that abomination to most people—"milky tea"—in the diet of the pre-school child. On the other hand, there is much to be said for the authors' recommendation to train infants to sleep from 7 p.m. to 6 a.m.; and the inclusion of porridge and oatcake in the baby's diet brings back pleasant memories of Scottish holidays. But why do Dr. Guy and Dr. Linklater tell these energetic young probationers so dogmatically that "the old man should not be allowed to doze after his meals"? Perhaps they may live to regret such an emphatic statement.

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BRANCH NEWS

WEST OF ENGLAND BRANCH

President: Dr. J. B. Lowe (Deputy M.O.H., Devon C.C.).
Hon. Secretary: Dr. I. G. Davies (Deputy M.O.H., Bristol).

A meeting of the West of England Branch of the Society was held at Taunton on July 28th. There were altogether about 150 members and visitors present. Owing to the importance of the subject to be discussed, chief sanitary inspectors, milk inspectors, food inspectors, veterinary surgeons, and others interested were invited from the counties of Gloucester, Somerset, Wiltshire, Hereford, Devon, Cornwall and Dorset. The President, Dr. J. B. Lowe, was in the chair. The minutes of the last meeting were read and confirmed.

The following officers were elected for the 1943-44 session: *President*, Dr. W. J. Doyle (absent on war service); *Vice-President and Acting-President*, Dr. J. F. Davidson, O.B.E., County M.O.H., Somerset; *Hon. Secretary and Council Representative*, Dr. I. G. Davies, Deputy M.O.H., Bristol; *Hon. Treasurer*, Dr. J. F. Blackett, M.O.H., Bath; *Representative on T.B. Group Committee*, Dr. J. S. Harper, T.B. Officer, Wilts (to replace Dr. Ward, who has resigned from the Committee).

Government Milk Policy

The meeting was then addressed by Dr. W. A. Lethem of the Ministry of Health, on "The Government Policy in Relation to Milk." He outlined the general points of the Government White Paper, as follows: *Health of Cattle.*—Dairy farms and cows to be inspected by veterinary inspectors. Accredited herds to be inspected not less than once a year. The most debatable point here is the transfer of functions from the local authority to the Ministry of Agriculture. Arguments: (*a*) The housing of cattle is most important. (*b*) Varying standards between local authorities. Necessity for uniform standard. The local authority is still in charge of everything outside the farm—including transport, handling and sale of milk.

Production of T.T. Milk.—The bonus on this is increased to 4d.

Proposal to increase heat treatment.—The Ministry of Food must be satisfied that an area has sufficient plant to heat-treat milk. They may make "scheduled areas," in which all milk must be heat treated. Local authorities will be given powers to set up heat-treatment plants in their area if there are insufficient, or the dairymen are unable or unwilling to act. The plants must produce a phosphatase-negative milk. Heat-treated milk is not synonymous with pasteurised milk.

The local authority must maintain close contact between medical officer of health and safe milk officer, Ministry of Food. The district veterinary inspector of the Ministry of Agriculture must enforce Milk and Dairies Order and Special Designations Order. Where an area is scheduled he must take frequent samples of raw milk.

A large number of speakers put questions, which were answered by Dr. Lethem.

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EDITORIAL

Public Health and Local Government

The onlooker sees most of the game, but if the onlooker is to see it understandingly it is desirable that he should already have played the game himself. What Sir Arthur MacNalty has to say about the reform of public health services deserves all the more attention because he was on the medical staff of the Ministry of Health from the beginning. His experience in Whitehall must have given him an unrivalled opportunity for seeing things clearly if not always seeing them quite whole, while at the same time his present position of greater freedom and less responsibility enables him to write in a way which he could hardly have done while occupying his official position. Sir Arthur has contributed a report on "The Reform of the Public Health Services"* to a Local Government Sub-committee set up by the Nuffield College Social Reconstruction Survey, and this is being studied by that sub-committee with a view to the formulation of suggestions covering the field of local government as a whole.

The report, which is both a history and a forecast, begins by pleading for a wider outlook in medical teaching and practice. The author thinks that remedial medicine has dictated too exclusively the teaching of medical students. Moreover, owing to recent invention and discovery, clinical observation has made immense progress, and its triumphs have outshone the advances made in preventive medicine and public health. The wide conception and importance of preventive medicine need re-emphasis. It is a great thing, as he points out, to bring a patient successfully through an attack of typhoid fever, but a greater achievement to prevent a typhoid epidemic. His suggestion for the establishment at a leading university of a professorship of preventive and social medicine has already materialised, and the preservation of health and prevention of disease are increasingly recognised as subjects of cardinal importance in medical education. Other desirabilities are more nutritional institutes, as in Russia, to conduct researches on nutrition and train dietetic specialists, and an underlining of public health considerations in town-planning and housing and in school and factory arrangements.

Sir Arthur MacNalty goes on to make some remarks on the intrusion of politics into national health. "Health reforms and progress should not be counters," he says, "in the game of politics." From 1935 until 1941 the Ministry of Health had on the average a fresh Minister every year. Apart from other disadvantages of these brief tenures, they have one danger—namely, that a young and enthusiastic Minister, anxious to make a name for himself as a health reformer, and aware that he has only a short time to do it in, might in his excess of zeal launch schemes precipitately, without proper consideration of and consultation with the interests involved. This view seems, with deference to Sir Arthur, to overlook the considerable braking power which permanent officials can exercise on a Minister, and it is not easy to see how the Ministry of Health can be taken out of politics. Many other Ministries have health functions. With regard to these, he proposes the setting up of an interdepartmental committee at the Ministry of Health on which the chief medical officers of all these departments would serve, pooling their resources, and tackling their problems as a whole. He thinks it also highly important that the advice of medical officers of health who are familiar with day-to-day problems of administration should be readily available to the Ministry of Health. When he was at the Ministry he advised the setting up of an organisation for this purpose; it was delayed, principally because difficulty was experienced in the matter of selection, but it is now in existence and is doing useful work.

The defects of the present system of local government so far as health services are concerned are chiefly attributable to the number of small local authorities entrusted with health duties which their finances do not permit them to perform efficiently. A proposal was once made to place large areas of the country under the control of a representative of the central government, a revival of the heptarchy of the Anglo-Saxons, but it was considered to be out of conformity with the genius of the English people. Sir Arthur favours the division of the country into a number of regional health areas—large counties or aggregations of counties, with their county boroughs—with an interchange of medical resources between the regions. The health services of the region would be in charge of the county and county borough medical officers concerned, but policy would be decided by a regional medical advisory committee, whose members would be the chief medical officers of the different branches of the health services, the medical staffs of voluntary hospitals, representatives of the local branches of the B.M.A., and a certain number of leading medical men resident in the area.

Three important steps are urged for the better integration of general practitioner services and preventive medicine and public health services—namely, the inclusion of dependants in National Health Insurance, the transfer of medical benefit from Insurance Committees to local authorities, and the merging of public assistance medical services into a comprehensive general practitioner service. But even if Insurance Committees survive for the present, the author of this report thinks there might be in each regional area a general practitioner service with a specialist service; the service for non-insured patients to be paid out of the rates aided by an Exchequer grant, while Insurance Committees would make agreements with the Regional Health Council for general practitioner and specialist services for insured patients and pay for them out of their own medical funds.

* Oxford University Press. 1943. 2s. 6d. net.

The hospital, in Sir Arthur MacNalty's view, has loomed too large in public health reform. After all, the hospital is only one branch of the local government system of health services, not the directing centre or goal of such schemes. After making certain suggestions for the regionalisation of hospitals similar to those made elsewhere, he suggests certain defects in the present medical officer of health service: that, with a number of brilliant exceptions, it does not attract the best men in the medical profession; that the medical officer is inclined to bureaucracy (though this depends upon the man who holds the position);* that the local authority does not always select the best men; that a good man may be unsuccessful in obtaining transference to a larger area, a difficulty which might be met by vesting the appointments in a State service under the Minister of Health, allowing transfers and promotions to men with good records of work.

Sir Arthur MacNalty's plan for public health services in a region is based partly on the Dawson report of 1920, and partly on the interim report of the Medical Planning Commission. The two principles to be satisfied in a scheme of comprehensive health services are that the whole of the medical profession should be willing to co-operate, and that a State scheme should be provided for insured persons and their dependants (meanwhile a State scheme of voluntary insurance for persons with higher incomes should be explored). He adopts the health centre idea; the centres should be educational as well as curative; the building and equipment should be provided by the Regional Health Council; each centre should be in charge of a whole-time medical officer on the staff of the county or county borough medical officer of health; and the general medical care of persons in the vicinity of such a centre should be undertaken by general practitioners of their choice. He foresees a large amount of the routine work now done at specialist health clinics being transferred to these health centres.

Altogether, Sir Arthur MacNalty is an evolutionist. He does not believe in the clean sheet of the root-and-branch reformer. The reform he wants will come through the development and improvement of existing health services and not as a new creation. The pulling up of the foundations and beginning anew is possible enough in a totalitarian State, but in his view it is not in keeping with the way in which we do things in this country. We have a great respect for our inheritance, and in public health the inheritance, though a mixed one, is one of which we can be proud and upon which we can build.

Investigation Into Bovine Tuberculosis

The Medical Research Council has arranged for a careful and widespread investigation into non-pulmonary tuberculosis, with a view to discovering what proportion of such cases are due to infection with the bovine bacillus, and what with the human bacillus. Scottish authorities are conducting a similar inquiry. Pathologists in different parts of the country are examining specimens for the tubercle bacillus, and a small number are engaged in typing. Specimens are being collected from cases of meningitis, of tuberculosis of bone and joint, of glands, and of the abdomen, and from cases of miliary and disseminated tuberculosis, but not as a rule from cases of genito-urinary, skin, or primary pulmonary tuberculosis. Medical Officers of Health and Tuberculosis Officers are being asked to give the typing pathologist various details of the history of patients from whom the specimens are obtained—for example, history of contact with other cases of tuberculosis, and of milk-drinking habits. Medical Officers will subsequently be informed of the results of typing, and thus will have some idea of the extent of bovine tuberculosis in the areas in which they work. This knowledge may enable them to discover from what dairies tuberculous milk is being issued. Medical Officers of Health have a closer concern with the purity of the milk supply than any other section of the profession. Local prejudice and local vested interests as often as not defeat their attempts to secure a safe milk supply. The most powerful weapons against these are facts, and the inquiry now on foot will show M.O.s H. the extent of bovine tuberculosis in their health areas, and will give them further exact knowledge on which to base their advocacy for the pasteurisation of milk.

DIPHTHERIA: 1. ADMINISTRATIVE ASPECTS*

By J. A. Scott, M.D. (Liverp.), D.P.H.,
M.O.H., Fulham

Before immunisation was widely practised in this country the incidence of diphtheria, taken over a term of years, was reasonably uniform. Thus, the annual number of births in England and Wales averaged 600,000 and diphtheria averaged 60,000 cases annually with some 3,000 deaths. The risk of catching the disease before one's 15th birthday was, therefore, 1 in 10.

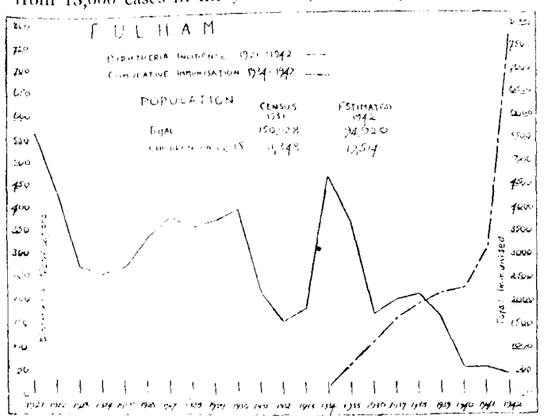
Investigations on the carrier state and of immunity as indicated by the Schick test would suggest that the remaining nine children became immune by attacks of latent infection. In the unprotected community between 1 and 5% of children at any one time are carriers of the diphtheria bacillus, and just before and during epidemic times this carrier incidence rate rises to as much as 15–20%. Active immunisation would not appear to influence the carrier rate; in fact, there is evidence from the work of Dudley and other people that whilst the proportion of those actively immunised is slowly increasing the carrier rate may actually rise and the risks therefore to the non-protected members of the community of encountering infection may temporarily increase. The process of inducing an active immunity confers, of course, an antitoxin immunity. The risks of harbouring diphtheria bacilli, temporarily or permanently, in the nasopharynx are unaltered. This is clearly of importance in view of the large number of organisms which can cause tonsillitis and pharyngitis in children. A swab taken to help in the diagnosis of such a condition in an immunised child may, on routine examination, reveal the presence of diphtheria bacilli with a consequent error in diagnosis. That this is a real possibility is evidenced to some extent by the Fulham experience of the incidence of diphtheria in immunised children.

Experience at Fulham

Immunisations began in 1934 and, until 1941, took the form of a regular weekly session in which most attention was paid to the under fives. This resulted in the immunisation of rather over 3,000 children. (Births at that period averaged 1,800 per annum.) Since 1941 four and even five sessions a week have been held and all children under 15 have received attention, with the result that the number immunised now exceeds 10,000. The procedure has been thoroughly scientific, and until 1941 included a pre- and post-Schick test. The necessity of dealing with large numbers since that date has led to the omission of the pre-Schick test, but every child, without exception, is post-Schick tested. There is, therefore, scientific information about the level of antitoxin in the blood of these children at the time the posterior Schick test was performed. Bearing this fact in mind, the actual incidence of conditions diagnosed as diphtheria in immunised children in Fulham is of interest. Twenty-two such diagnoses have been made. In one case it was made after the child had been Schick tested but before immunisation had begun, in one case before the course was completed, in three so soon after the course that immunisation was not fully established (1–2 doses of T.A.M.; 1–1 dose of A.P.T.; and 1–2 doses of A.P.T.). Four cases had mild attacks, one case had a severe attack, and one case (on whom there had been no final Schick test) a fatal attack. In five cases there is no information of the clinical course of the disease, and in six the diagnosis was not confirmed. No fewer than five of these six cases occurred in the years 1942 and 1943, and two only of the cases had diphtheria bacilli in their swabs. They have averaged two per year, with the exception of the years 1936, 1937 and 1942, when there were four, five and four respectively. The graph showing the incidence of diphtheria in Fulham since 1921 is of interest in this connection. More than half the children under 15 are now immunised, and the incidence of the disease has dropped from an average of 350 cases per year to an average of 50 cases per year. A graph of the incidence of diphtheria in the county of London is also shown in which

* Read at a discussion held by the Fever Hospital Medical Services Group.

the course is strikingly parallel to that in the individual Metropolitan Borough illustrated. Unfortunately, I have not available a graph of diphtheria immunisations in London, but it has been actively pursued in most of the boroughs since 1934 and such influence as it has had in the one case is probably as prevalent in the other. Certainly a diminution of the average from 13,000 cases in the year to 1,800 is very striking.



Importance of Immediate Treatment

For some years strong efforts have been made to persuade medical practitioners to notify and so to have admitted to hospital cases of diphtheria without awaiting for the results of bacteriological swabs. The justification for this policy is a case mortality of practically nil if the case receives serum on the first day, of 3% if it is treated on the second day, of 6% if treated on the third day, and of over 10% if not treated till the fourth day. Unfortunately, diphtheria is a disease with an insidious onset, and it is the rule rather than the exception for practitioners to be called in as late as the second or third day. This makes the process of prompt admission to hospital, rather than waiting for the result of swab examinations, all the more important. It has, however, led to the admission of a great many cases in which diagnosis subsequently is not confirmed and this aspect of the problem is dealt with in more detail by Dr. Begg and Dr. Cruickshank. Unfortunately, notification is a rigid process and the information obtained by notification is regularly transmitted to the County Medical Officer and the Registrar-General, appearing in the official returns. The process of correction of notifications is not so automatic, and the information rarely filters through to the Registrar-General.

False Figures

The figure of published notifications of diphtheria is, therefore, an incorrect figure, the total being too large. This is of importance for two reasons. First, it may mask the full effect of immunisation (when 70% of the population are immunised there is a diminished incidence in the non-immunised), and secondly, it gives an incorrect idea of the incidence of diphtheria in the immunised population. The best method of correcting the errors in the official returns is far from being a simple problem. De-notification rattles the *amour propre* of the general practitioner and shakes the confidence of the parent in the doctor. He (the parent) is much more apt to get excited about the wrong admission of his child to an infectious disease hospital than grateful for the increased chances of saving the life of his offspring which such admission gives.

The possible course of prompt administration of anti-serum in the patient's home by the practitioner, together with the taking of a swab, is the counsel of perfection. In actual fact, in my own area the amount of anti-serum issued to practitioners averaged ten doses of 8,000 units annually or one dose to each five notified cases.

Admissions to Hospital

Homes in urban communities, particularly in London, are apt to be overcrowded and to shelter more than one family. Employers (particularly public bodies) are apt to be touchy about allowing intimate contacts of infectious diseases to come to work, and the isolation of suspicious cases saves serious disadvantages to both the patient and the relatives. Even a diphtheria carrier in a closely packed urban community such as London arouses concern among parents, among neighbours in the same or adjacent houses, among employers and workmates, and among teachers. The well-being of the patient and the comfort of the populace are, therefore, both promoted by an easy system of hospital admission, and from an administrative point of view the only serious difficulty arises from the need to correct the preliminary notification figures in the light of the final diagnosis. From the hospital point of view it is, of course, appreciated that things are not so easy. The institutional treatment of this kind of case requires a large amount of cubicle accommodation, which in turn means a large amount of glass, and the use of this kind of accommodation in a vulnerable area in war-time presents difficulties. These difficulties must, presumably, however, be eased by the striking fall in the incidence of the disease, producing a consequent lessening of the demand on the accommodation.

An alternative method of meeting the human difficulty and at the same time avoiding giving false impressions of the incidence of the disease would be to admit cases on a diagnosis of suspected diphtheria. There is no reason that I know of why this should not be done, provided cubicle ward facilities are available in sufficient quantity. It would simplify the difficulties connected with the notifying doctor's *amour propre* and the susceptibilities of the patient's relatives.

The other step which is needed administratively is a routine system for correcting the diagnoses. The borough M.O.H., on the discharge of a patient from hospital, is notified of the discharge and receives some spasmodic information about cases in which the diagnosis is not confirmed. My own impression, however, is that in the past the transmission of information on these corrections of diagnoses has been a little haphazard.

The Immunised and the Non-immunised

The risk of an immunised child catching diphtheria is 12 times less than that to a non-immunised child, and the risk of an immunised child dying is more than a hundred times less. These figures are already true in this country, where the proportion of immunised children, whilst growing rapidly, is still not completely satisfactory. The anti-vaccination societies are busy denouncing immunisation, and they will no doubt suggest that steps making it simpler to correct the diagnosis after admission to hospital are simply further administrative efforts to mislead the public. This does not matter. In everything connected with this disease and with the great campaign to prevent it, scientific accuracy is all-important and will provide the only answer the anti-vaccinationists need.

DIPHTHERIA: 2. HOSPITAL MANAGEMENT

By Norman D. Begg, M.D. (Aberd.), D.P.H.,
Medical Superintendent, Eastern (L.C.C.) Hospital

A major problem in fever hospitals is the disposal and management of doubtful cases of diphtheria. Diphtheria has always ranked very high among diseases which tend to be wrongly diagnosed. In a representative year at the Eastern hospital we have a diagnostic error among diphtheria admissions of 35·4%, as compared with 13·3% in scarlet fever, 11·5% in measles and 10·7% in whooping-cough—and this figure is really not out of the way. At times it has reached 40%, and the problem is fairly common to all fever hospitals.

Diagnostic Errors

An analysis of the final diagnosis in 1,058 certified diphtheria cases (Table I) shows that the commonest mistake is to confuse diphtheria with other infection of the throat, particularly simple tonsillitis and haemolytic streptococcal infections. But

TABLE I

Showing Final Diagnosis in 1,058 Cases Certified to be Suffering from Diphtheria

No.	Final Diagnosis		No. of Cases	Per cent. of Total	
1	Diphtheria		486	45·9	Δ or Δ carrier Condition confirmed 64·6%
2	Diphtheria	(After Schick Testing, etc.)	142	13·4	
3	Diphtheria carriers	(" ")	56	5·3	Δ Not confirmed 35·4%
4	Scarlet fever	(" ")	6	0·5	
5	Measles	(" ")	4	0·4	
6	Vincent's Angina	(" ")	13	1·2	
7	Simple Tonsillitis	(" ")	105	10·1	
8	H.S. throat infections	(" ")	122	11·5	
9	Other respiratory infections	(" ")	85	8·0	
10	Other diseases	(" ")	28	2·7	
11	No disease	(" ")	11	1·0	
	Totals		1,058	100·0	

many conditions have been mistaken for diphtheria at one time or another. For the purpose of assessing the diagnostic error, diphtheria carriers have been included in the confirmed group in the table—*i.e.*, cases have been divided into those with a diphtheritic infection and those without. If carriers are excluded, as strictly speaking they might be, the diagnostic error reaches the 40% already mentioned. Viewed purely as a hospital problem of disposal, it will be seen that only in the first group of cases—that is, in less than half of all diphtheria admissions—was it feasible to admit direct to an open diphtheria ward. This means that every time a bed is provided in an open ward for confirmed diphtheria admissions at least one other bed must be provided in isolation for a further investigation of doubtful cases. It is true that these isolation beds can be turned over very rapidly. Nevertheless the strain on them is great so far as diphtheria is concerned. At the Eastern Hospital, at present, we have to be content to provide this accommodation in barrier nursing wards, or largely so. I believe there is little to be feared from this, provided that the investigation is carried out with dispatch and cases found not to be suffering from diphtheria are sent home or re-allocated to appropriate wards. Whether many of them need ever have been admitted to hospital at all is, of course, another question which we may leave for the moment.

Investigation of Doubtful Cases

The investigation of doubtful diphtheria is very much standardised nowadays in fever hospitals. There is the clinical investigation, the bacteriological investigation, and the estimation of the patient's immunity, usually by the Schick test. In any one case all these may have an interrelated importance. Thus, in the very large group of admissions where the balance of clinical evidence is against a diagnosis of diphtheria, bacteriological investigation by itself inevitably leads to mistakes unless the state of the patient's immunity is also revealed. The importance of clinical investigation cannot be overstressed. Medical officers who commit themselves to a probable diagnosis on clinical grounds become very much better diphtheria diagnosticians than those who simply sit on the fence until all accessory investigation has been completed. In hospital we work under optimum conditions, and it might be well if we tried to find out why so many apparent mistakes in diphtheria diagnosis occur before admission to hospital. Looking again at these 1,058 cases we find (Table II) that the

TABLE II

Showing Source of Admission and Percentage Error in Diagnosis in 1,058 Certified Diphtheria Cases

	Source of Admission	No. Certified	Diagnosis Not Confirmed	Error in Diagnosis %
1	Home	686	221	33·1
2	Hospital Outpatients	212	107	50·5
3	Hospital Inpatients	158	47	29·1
	Totals	1,058	374	35·4

biggest error occurs *in the general* hospital outpatient department, where the figure is over 50%. Many of these cases may have been general practitioner's problems referred by him to the hospital. The presence of a possible infectious case in a crowded outpatient department is undoubtedly a more urgent problem than it would be were the child seen in its own home.

Incidentally it is a rather sad commentary on the need for a second opinion in infectious cases when approximately one-fifth of all diphtheria admissions should have to come to us via a diagnostic centre in a general hospital outpatient department. It is of course certain that many cases, whether admitted from hospital or home, do not really represent true mistakes in diagnosis—the certificate of diphtheria having been given simply as a rapid and easy means of access to the fever hospital. Nevertheless it does appear that there is a tendency to attach the widest possible significance to bacteriological findings, sometimes almost irrespective of the clinical condition present. Schick tests are virtually not performed outside hospital in the diagnosis of doubtful diphtheria. To give first priority to bacteriological investigation is always a dangerous practice. It becomes increasingly so if, as is too often the case, investigation stops short at partial identification of the diphtheria bacillus or fails to take into account other common causes of nose-and throat infections, such as haemolytic streptococci or Vincent's organisms. But even good bacteriological investigation cannot be interpreted properly in many cases unless the state of the patient's immunity is known. As things stand at present it is rather tempting to speculate on what would happen if no bacteriological investigation of suspect diphtheria cases were possible until after admission to hospital. There would be obvious disadvantages, of course, but there is little doubt that indiscriminate and incomplete bacteriological investigation of suspect cases and contacts creates many more problems than it ever solves. In addition, the practice of waiting for bacteriological confirmation of probable diphtheria sometimes has the most dire results on the patient, and I am sure it is still much too common. But whatever one may feel about that, we certainly cannot blame bacteriologists for becoming diphtheria diagnosticians. This is a part they play with the most obvious reluctance. Diphtheria diagnosis is essentially a clinical problem, and it is often a difficult one. If there is to be any improvement at all in the position, it must be tackled first in the clinical field.

Immunised Patients

One of the most acute aspects of the whole problem is the readiness with which diphtheria is diagnosed and formally certified among immunised children. Not only is the diagnostic error here very high, but there are all the added unpleasant implications as far as the diphtheria immunisation campaign is concerned. In a small series of 66 immunised (or allegedly immunised) cases admitted to the Eastern Hospital, a final diagnosis of diphtheria was confirmed in only 13 cases (Table III). The diagnostic error is enormous; it is

TABLE III

Showing Final Diagnosis in 66 Immunised Cases Certified to be Suffering from Diphtheria

No.	Final Diagnosis	No. of Cases	Per cent. of Total	
1	Diphtheria	13	19·7	Δ Not confirmed 80·3%
2	Diphtheria carrier	6	9·1	
3	Vincent's angina	7	10·6	
4	H.S. tonsillitis	13	19·7	
5	Simple tonsillitis	11	16·7	
6	Other conditions	16	24·2	
	Totals	66	100%	

rather over 80%. When we look into the details of immunisation among these 13 cases (Table IV) it becomes obvious that whatever

TABLE IV

Diphtheria in Immunised (?) Children
Details of 13 Cases

Case	Sex	Age, Years	Prophylactic used	No. of injections	Post-Schick Test	Interval between last injection and onset of disease	Severity of attack
1	F.	7	T.A.M.	3	Negative	6 months	Mild
2	M.	4	A.P.T.	2	Not done	1.5 months	Fatal (Tracheotomy)
3	M.	2	A.P.T.	2	Not done	1.5 months	Mild
4	M.	3 6/12	T.A.M.	3	Negative	10 months	Moderate
5	F.	10 9/12	T.A.M.	3	Not done	3 days	Mild
6	M.	6	A.P.T.	1 (incomplete)	Not done	8 days	Severe
7	F.	8	T.A.M.	2 (incomplete)	Not done	14 days	Mild
8	F.	8	A.P.T.	2	Not done	20 months	Mild
9	M.	6 3/12	T.A.M.	3	Negative	1 yrs. 9 mths	Mild
10	F.	10 9/12	T.A.M.	2 (incomplete)	Not done	1 months	Mild
11	F.	6	T.A.M.	3	Not done	11 months	Severe
12	M.	5	A.P.T.	2	Not done	1 month	Mild
13	M.	11 6/12	T.A.M.	3	Negative	8 years	Moderate

standard you adopt (and there is an unfortunate tendency to dispense with the posterior Schick test) even by minimum standards of a completed course, with a reasonable interval of, say, three months to follow, many of these 13 cases were really not immunised at all. Case 5, for example, became ill within three days of receiving the third injection. Cases 6 and 7 and 12 also had little time to develop immunity before they encountered diphtheria. The one fatality, a tracheotomised laryngeal case, is the only death from diphtheria in an immunised person I have seen at the Eastern Hospital in five years. It would be quite unjustifiable to speculate whether this child had actually been immunised or not, but the details obtained from a rural evacuation area were so uncertain as to the amounts of A.P.T. injected that I confess to have some doubts about it.

The main impression to be gained from this comparatively small series is that a history of immunisation, whether subsequently fully confirmed or not, is an immediate reason for questioning a present diagnosis of diphtheria. At least it calls for a most meticulous investigation, including, wherever possible, a Schick test, or, better still, an estimation of the patient's blood antitoxin level.

Disposal of Suspect Cases

What steps should be taken for the disposal of suspect diphtheria cases? Dr. Scott clearly favours unlimited admission to hospital with or without a formal certificate of diphtheria. This policy, which already exists in some provincial hospitals, has now been agreed in principle by the L.C.C. so far as diphtheria is concerned. The advantages are obvious. It would encourage the early admission of true diphtheria cases and avoid that painful necessity of attaching a definite certificate when serious doubt must exist about diagnosis. Unless diphtheria figures are to be rendered quite useless, however, there must be a rapid system of correction of diagnosis between the hospital and the health authority. I need add nothing to what Dr. Scott says about this. But unlimited admission to hospital will not lead to more accurate diagnosis of diphtheria in the home; nor will it solve the hospital problems of shortage of isolation accommodation which are really very pressing at present; nor will it avoid the unnecessary admission to hospital of a large group of cases with mild respiratory infections, mild streptococcal sore throats, and so on.

And so I feel—and this is a purely personal opinion—that unlimited admission of suspect cases to hospital cannot be a final solution to the problem. What is really required is a clinical consultant service, closely linked with a good laboratory service, all to be freely available to see cases in their own homes, in hospital or in outpatient departments, wherever they may first be encountered. But if such a service is to do any good, consultation should be sought not in isolated cases of doubt, but in all cases—that is, in all cases for which hospital admission would normally be sought under an unlimited scheme. It is rather difficult to see how such a service could be staffed other than from fever hospitals, at least as things stand at present. Again, if such a consultant scheme is the correct solution for the diphtheria problem, it obviously has a wider application among other major infectious diseases.

DIPHTHERIA : 3. LABORATORY ASPECTS

By ROBERT CRUICKSHANK, M.D. (ABERD.), M.R.C.P., D.P.H.,
L.C.C. Group Laboratory, North-Western Hospital

(*From the L.C.C. Pathological Service*)

The clinical diagnosis of diphtheria is obviously not an easy matter. Of the cases admitted to the North-Western Hospital as diphtheria, five or six out of every ten are not diphtheritic infections (Table I). It seems to me that a great deal of unnecessary trouble would be avoided if doubtful cases were given a dose of antitoxin by the practitioner in the child's own home and a throat swab were sent to a reliable laboratory, preferably in the area in which the practitioner is working. Many doctors are still unaware of the modern refinement in antitoxin which allows an adequate dose for an early doubtful case of diphtheria to be given in 2–3 c.cm., with the minimum risk of reaction.

TABLE I

342 Cases Certified Diphtheria and Admitted to North-Western Hospital, 1942

Corrected Diagnosis	*Number*	*%*
Diphtheria (clinical cases and carriers)	125	36·5
Tonsillitis (40% haemolytic streptococcus)	140	40·9
Vincent's Disease	20	5·8
Laryngitis	13	3·8
Glandular Fever	4	1·1
Miscellaneous	40	11·7

In hospital it is less easy to assess the diagnostic error made by the expert in fevers, but even with his ancillary tests it is somewhere around 10%. A fair proportion of these errors in diagnosis concern cases of streptococcal infection which, if left in a diphtheria ward, may do a great deal of harm by cross-infection, besides running the risk of getting diphtheria. The Schick test cannot tell whether a child is suffering from a streptococcal tonsillitis; it only tells the physician whether the child is susceptible or not to diphtheria. I want to make a plea, therefore, for a well-equipped laboratory attached to the fever hospital and serving also the practitioners in the area. Unfortunately, fever hospitals are badly served in the way of laboratory facilities, and even to-day the laboratory diagnosis of diphtheria in many fever hospitals is done from a Loeffler slope by junior medical officers who have had no laboratory training. It is now generally accepted that the Loeffler culture is inadequate for the laboratory diagnosis of diphtheria. I wish to point out the advantages of a tellurite-containing medium not only in the diagnosis and prognosis of diphtheria, but also as an essential aid in the discharge of patients from hospital and in the detection of carriers, and as a valuable adjunct in the epidemiology of diphtheria.

Diagnosis and Prognosis

Swabs from a suspected case of diphtheria should be inoculated on to a Loeffler slope, a plate of tellurite blood (or serum) agar, a blood-agar plate, and, if the clinical condition warrants it, a smear for Vincent's organisms should be made. The Loeffler slope is still needed for diagnosis because it gives an early report where there is urgency, and occasional strains of *C. diphtheriae* are inhibited by tellurite. Unfortunately it misses 10–30% of positive cultures in cases of clinical diphtheria; in our experience about 30% of admission swabs are negative on Loeffler. It is not that the organism does not grow on the Loeffler slope, for sub-culture on a tellurite medium from the Loeffler culture will usually reveal its presence. It means rather that the diphtheria bacillus is overgrown by other bacteria or is difficult to demonstrate by the selective stains. The Loeffler slope also provides a proportion of false-positive cultures in swabs from ear, nose, or wound. The tellurite medium, on the other hand, has many advantages. It confirms diphtheritic infection in 95-98% of cases; it identifies the infecting types as *gravis*, *intermedius*, or *mitis*; it eliminates false-positive cultures, and it minimises the need for virulence testing because practically all *gravis* and *intermedius* strains are toxigenic. Its one disadvantage is that it requires 24 hours, and in some instances longer, for diagnosis. Incidentally it is unnecessary to take a nasal swab for diagnosis unless the case is one of suspected nasal diphtheria. The plain blood-agar plate is essential for the recognition of streptococcal infections, which form a large proportion of the cases wrongly certified as diphtheria. Even so, there are many cases of tonsillitis which fail to yield a recognised pathogen, and the aetiology of these infections is still obscure.

A knowledge of the infecting type should be of some help to the clinician in his handling of a case of diphtheria. The severity of the infection and the incidence of complications varies with the type, the more severe toxaemic infections with a fairly high incidence of paralysis (10–15%) being due to *gravis* and *intermedius* types, while *mitis* is nearly always associated with a mild infection except when it produces laryngeal diphtheria. Thus the prognosis in cases which at onset would not be regarded as severe infections will vary according to the infecting type, and I suggest that such a

child with a *gravis* or *intermedius* infection will require more careful nursing than the patient with an apparently similar *mitis* infection. It is important to remember that the *intermedius* type produces as severe an infection as *gravis*, and, in some areas, for example Liverpool, it has for a number of years been the most virulent of the three types.

Discharge from Hospital

Use of the tellurite medium in the discharge of patients from hospital has been criticised. The main objections are that its use prolongs the stay of the patient in hospital, and that it encourages unnecessary detention of the patient just because he has a few diphtheria bacilli in his throat. It is further argued that there is no harm in discharging convalescent carriers from hospital since they help to immunise the community.

The first objection—that use of the tellurite medium prolongs stay in hospital—is true, but, as the figures in Table II

TABLE II

Discharge Cultures in 204 Cases, North-Western Hospital, 1939

Tellurite Plate v. Loeffler Slope

2 -ve cultures simultaneously on Tellurite and Loeffler	150	78·5%
2 -ve cultures earlier on Loeffler than on Tellurite	54	21·5%

Interval in days between 2 -ve Loeffler and 2 -ve Tellurite cultures	Days	Cases	%
	0–7	2	>159%
	8–14	11	
	15–21	10	>28%
	22–28	5	
	29–56	2	>3%
	over 56	5	

show, the difference in days between discharge on two negative Loeffler cultures and two negative tellurite cultures is not so great as is generally supposed. With the tellurite medium, about one-fifth of the cases would be kept in hospital longer, and nearly 90% of that proportion would be fit for discharge within the ensuing month. On this point I should like to recommend that dismissal swabs should not be taken until the patient is clinically fit for discharge, and that one negative report should be followed by repeat swabs *immediately*, so that two negative cultures could be obtained in quick succession, say within a week's time. The apparent intermittency of the convalescent carrier state is due often to re-infection.

The second point—that if the patient is discharged on the Loeffler culture only light carriers are likely to be missed—is refuted by the findings recorded in Table III. There it will

TABLE III

Tellurite Plate v. Loeffler Slope

A Quantitative Comparison

Tellurite Culture	+ + + +	+ + +	+	±	Total
Tellurite +ve	38	137	170	46	391
Loeffler +ve	29	78	86	11	204
% Loeffler +ve	76·3%	59·9%	50·6%	23·9%	52·1%

+ + + + = Confluent growth. + + + = Heavy ,, + = 50-200 Colonies. ± = Under 50 ,,

be seen that the Loeffler slope misses one-quarter of the heavily positive tellurite cultures, and 40 to 50% of those with a moderate growth. If, therefore, a patient is discharged on a negative Loeffler culture, he is as likely as not still to be a moderately heavy carrier of diphtheria bacilli and, therefore, a potential source of infection to his contacts at home.

The third argument—that no great harm is done by the discharge of a diphtheria carrier—is not likely to commend itself to any prudent health authority. The analogy which is often drawn with the streptococcal carrier following scarlet fever is not to me a valid one, for the streptococcal carrier-rate among London school-children is, according to a recent (unpublished) survey, about 16%, whereas the diphtheria carrier-rate is well under 1%. All the same, the superiority of the tellurite medium over the Loeffler slope in the examination of discharge swabs must not blind us to the difficulties which the acceptance of such a procedure would involve, particularly in regard to prolongation of stay in hospital. In pointing out the advantages, I am expressing a personal view which is not necessarily representative of the views or practice of administrators of fever hospitals.

CROSS-INFECTION

What we need to do is to prevent, if we can, the protracted stay in hospital by dealing with the conditions which predispose to the convalescent carrier state *i.e.*, persistence of the diphtheria bacillus longer than the average period of five to six weeks. The most important of these predisposing factors are unhealthy tonsils or nasal mucosa, cross-infection with other types of diphtheria bacillus, and secondary infection with the haemolytic streptococcus. The unhealthy tonsil can be dealt with by tonsillectomy, which effects cure in most of the pure tonsillar carriers. The nasal or combined nasal and tonsillar carrier is more difficult to deal with, and I shall return to this point later. Cross-infection with other diphtheria types occurs, in our experience, in 15–20% of the cases. Naturally it varies with the proportion of the individual types in a ward; for example, if there is a large number of *gravis* infections and a small number of *mitis* cases, 30–40% of the latter will pick up the *gravis* strain. But cross-infection with another diphtheria type is probably less important in producing the convalescent carrier than is infection with the haemolytic streptococcus.

Boissard and Fry (1942) showed in a series of hospital cases in Carmarthen that nasal diphtheria carriers with an associated streptococcal infection had an average stay in hospital of 87·5 days against 42·7 days for all other patients; nasal carriers of *C. diphtheriae* only had an average stay of 51 days. Now in our experience about 10% of cases of diphtheria carry haemolytic streptococci in the nose on admission and then usually in scanty numbers, whereas more than a third of Boissard and Fry's cases were heavy streptococcal carriers after some weeks in hospital. The logical assumption is that they acquired the streptococcus in the ward, which is a strong argument in favour of a careful bacteriological examination of all cases on admission so as to exclude those with streptococcal infection from the diphtheria ward. The cure of this type of mixed infection can apparently be accomplished by the use of sulphanilamide snuff, which must be applied five or six times a day, preferably in a small ward set aside for that purpose with adequate nursing staff to carry out the treatment efficiently. Cross-infection in diphtheria wards would probably also be minimised by the use of oiled floors and oiled bed-linen, which we have found to be remarkably effective in reducing the cross-infection rate in both scarlet fever and measles wards.

Detection of Carriers

For the detection of carriers in hospitals, schools and institutions, the tellurite medium is undoubtedly the method of choice. Here, as with the discharge swab, nose as well as throat cultures are essential. The advantages of the tellurite medium are that a reliable report (usually including virulence) is available in two days' time; that the report is a quantitative one, which means that light, and therefore probably temporary, carriers can be separated from heavy, and probably more persistent, carriers; that it eliminates false-positives; that it is much less laborious to laboratory staff; and that, by finding which is the infecting type, it helps to trace the probable source of infection.

As examples of its value in this last direction, I may quote the case of a nurse who developed a fatal infection due to the *gravis* bacillus. The contacts in the ward were swabbed, but only throat swabs were taken. It happened that in two of these cultures, both from children, a few colonies of diphtheria bacilli (in the one case *gravis*; in the other, *mitis*) were present. Repeat swabs, this time from nose as well as throat, were taken, and these two children were found to be

heavy nasal carriers, one of the *gravis* and the other of the *mitis* type. The nurse had apparently been infected from the *gravis* nasal carrier. An outbreak of diphtheria characterised by nasal discharge occurred among the infants in a Maternity Department. Routine swabbing of all mothers, infants and nursing staff revealed a number of carriers among both mothers and infants, and these were removed to an infectious diseases hospital. A week or two later infection broke out in another part of the hospital, which suggested that we had missed a carrier. However, the first outbreak was a *gravis* infection, whereas the second was due to the *mitis* type, the source of which was later traced to a nasal carrier introduced from another institution.

Epidemiology

We are still ignorant of the factors responsible for the varying incidence and severity of diphtheria in different areas. A knowledge of the distribution of the three biological types of diphtheria bacillus in any area over a period of years should help to resolve some of these difficulties. It is customary to assume that *gravis* is the epidemic type, and evidence from cities like Leeds and Hull, and more recently from the whole of Scotland, supports this assumption, but the experience of Liverpool indicates that *intermedius* infection may also occur in epidemic form, producing diphtheria of as severe a type as *gravis*. I have analysed data on the distribution of types in the North-West of London during the last ten years (Table IV),

TABLE IV

Incidence of Types of C. Diphtheriae in North-West London

Year	Cases	Gravis	Intermedius	Mitis
*1932–5	877	42·5	43·0	14·5
1937	626	25·9	38·2	35·9
1939	231	54·1	29·9	16·0
1941	192	40·5	27·1	22·4
†1942	196	56·6	19·6	23·8

* MAIR, W. (1936). *J. Path. Bact.*, **42**, 635.
† Cases typed in North-Western and North-Eastern Hospitals.

and, if the figures are by no means conclusive, they suggest that, in the period 1932–35, when diphtheria was unusually prevalent and severe in London, both *gravis* and *intermedius* were the epidemic types, whereas in the past two or three years, although diphtheria has been steadily diminishing in incidence, *gravis* has become the most common type. The relation of these findings to the degree of immunity in the population on the one hand and to the incidence and severity of the infection on the other are matters for further study. For those who are interested in the complexities of the epidemiology of diphtheria I would recommend the series of papers by Frost and his collaborators in Baltimore (1936, 1942) and the recent study of Russell (1943).

Summary

1. A well-equipped laboratory serving both the fever hospital and the surrounding area is essential for the accurate diagnosis of diphtheria and other throat infections.

2. Throat swabs for diagnosis should be cultured on Loeffler's medium, on a tellurite-containing medium and on blood-agar.

3. The tellurite medium has advantages over the Loeffler slope in the detection of convalescent and contact carriers. Both nose and throat swabs must be examined.

4. The conditions which predispose to the convalescent carrier state are unhealthy tonsils and mucous membranes, re-infection with other diphtheria types and secondary streptococcal infection. Measures for the prevention and treatment of the convalescent carrier are discussed.

5. A knowledge of the incidence of the different types of the diphtheria bacillus is essential for the study of the epidemiology of diphtheria.

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RUSSELL, W. T. *Spec. Rep. Ser. Med. Res. Coun.* No. 247, Lond., 1943.

NOTE.—Owing to lack of space the publication of report of the discussion on these three papers has had to be held over.

WHITE PAPER ON THE NATION'S MILK SUPPLY

The following Memorandum relating to the Government's White Paper on the measures to improve the quality of the nation's milk supply has been forwarded by the Council of the Society of Medical Officers of Health to the Ministry of Health.

The Council of the Society of Medical Officers of Health are gratified that the Government have had under review all measures relating to the quality of the milk supply but are surprised and disturbed at the drastic changes in administrative control which are recommended, particularly as these involve the displacement, by Government departments and their officers, of local authorities and their officers who have heretofore been responsible for the performance of most of the duties in respect of the milk supply. This aspect of the subject, however, is one mainly for the consideration of local authorities and their associations, in whose hands it may properly be left by this Council for such action as is called for.

The Council, however, desire to submit the following observations or suggestions on matters with which they are more directly concerned :—

1. A definite standard of cleanliness or keeping quality of raw milk should be established so as to ensure that milk will keep fresh for a reasonable length of time.

2. The proposals of the White Paper in so far as veterinary inspection is concerned will result, in certain areas, in a reduction in the number of veterinary inspections at present carried out. Furthermore, the added responsibilities placed upon the veterinary inspectors in respect of the production of milk will encroach still further upon the available time of these officers. It is clear that for many years to come it will not be possible to achieve an optimum or even a passable standard of inspection owing to the dearth of veterinary practitioners. The Council of the Society feel that even though the introduction of the scheme should be delayed in consequence, there should be no diminution of the existing standard of inspection in any area, and that any proposals to introduce a type of veterinary inspector who is not a qualified veterinary practitioner should be strongly deprecated.

3. Section 6 of the Milk and Dairies Order should be extended to include the registration of producers, and powers should be granted to the responsible authority to refuse or cancel a registration, with the right of appeal to a Court of Summary Jurisdiction.

4. A shorter period should be substituted for the 18 months, as stated in Article 1 (1) of the Milk and Dairies Order, 1926, which should elapse after the service of a notice by the local authority.

5. The responsibility for carrying out structural alterations required by the authority should be placed upon the owner of the premises instead of on the occupier except where (*a*) the farm was not let for the purpose of milk production and the owner does not agree to the change; or (*b*) the structural alterations are to buildings not previously intended for use as cowsheds.

6. If the Government proposals are accepted means should be provided by which there would be the fullest co-operation between the Veterinary Officer and the Sanitary Inspector who is responsible for the enforcement of the building bye-laws in the district and for the supervision of the water supply and drainage and who, with his knowledge of building construction, could be of the greatest assistance.

7. The powers and duties of the Medical Officer of Health in relation to the control of infectious disease arising from milk should remain unimpaired.

8. As the only available method of rendering milk safe for human consumption is heat treatment under proper control (pasteurisation) all milk, other than that from tuberculin-tested herds,* should be heat-treated by an approved method and sold as such, and all milk which has been subjected to any form of heating should be required to be labelled accordingly.

* This exception is made not because tuberculin-tested milk can be considered at all times safe but as a concession to progressive agriculture.

Surgeon-Commander George A. Mason, F.R.C.S., has been appointed thoracic surgeon to the British Legion Village (Preston Hall, near Maidstone; Nayland Sanatorium, near Colchester; and Douglas House, Bournemouth. Since the death on service of Mr. Laurence O'Shaughnessy in the early days of the war, there has been an interruption in major thoracic surgery at Preston Hall, but it is now hoped to use Preston Hall as a centre for surgical treatment of patients from all three institutions now under the British Legion.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

ANNUAL REPORT OF COUNCIL, 1942–43

New Members and Resignations

During the past session 73 candidates have been elected as Fellows or Associates of the Society: 15 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) three 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, 1942, of Sir Arthur Newsholme (Hon. Fellow), Sir Francis Fremantle, M.P. (Cons. M.O.H., Herts C.C.), Drs. James Bennett (M.O.H. Warrington R.D. and Lymm U.D.), J. P. Brown (formerly M.O.H., Bacup M.B.), James Craig (M.O.H., Biddulph U.D.), G. B. Dixon (Chief T.O. and Med. Supt., City San., Birmingham), W. J. Fordham (formerly Clinical T.O. and Dep. M.O.H., Gateshead C.B.), W. Giles (Dep. M.O.H., Enfield U.D.), W. E. Henderson (formerly C.M.O.H., Westmorland C.C.), C. R. P. Mitchell (M.O.H., Malvern U.D.), Louis Parkes (formerly M.O.H., Chelsea Met. B.), D. A. Powell (P.M.O., King Edward VII Welsh National Memorial Association), H. Meredith Richards (formerly M.O., Ministry of Health), G. A. E. Roberts (M.O.H., Winchester R.D.), Frank Robinson (formerly C.M.O.H., Cambs. C.C.), Gladys J. C. Russell (A.M.O. M. & C.W., Leeds).

Present Strength and Recruitment

Allowing for resignations and deaths, the membership at the close of the session shows an increase of 43 members, making the total strength 1,806 on September 30th, 1943.

Honours Conferred on Members

During the session congratulations were accorded to members of the Society on the conferment of the following honours: the K.C.B. to Sir Wilson Jameson, C.B.E., the C.B.E. to Dr. F. Hall, the O.B.E. to Drs. W. M. Ash and James Dunlop, the M.B.E. to Dr. R. Hamilton Moyes.

Meetings Held During the Session

Again this year, owing to the difficulties of travel and other war conditions, it was only possible to hold two general meetings as follows: November 20th, 1942: Installation of Dr. Cyril Banks as President for the session 1942–43, and election of new members. May 28th, 1943: Election of President for 1943–44 (Dr. R. H. H. Jolly), and election of new members.

Work of Council and Committees

During the session there were held five meetings of the Council and four of the General Purposes Committee. As chairman of the Medical Planning Committee, Dr. G. F. Buchan has reported from time to time on proposals in connection with the probable extension of medical services. At the close of the session the policy of the Society as set out in "A Health Service for the Nation," was reaffirmed pending publication of the White Paper expounding the Government's proposals. Other important matters which occupied the attention of the Council and Committees during the year were the preparation of evidence for the Departmental Committees on Schools and on Dentistry, and a Memorandum on the Government's Milk Policy. Members will welcome the decision to appoint a special committee to draft suggestions for the early revision of the Askwith Scale of Salaries.

The Retiring President

The Council desire to express the thanks of the Society for the valuable services rendered by Dr. Cyril Banks as President during the past session. As immediate past-chairman of the General Purposes Committee, Dr. Banks took office with an intimate knowledge of the Society's affairs and the Council regret that he had so few opportunities of presiding over their deliberations. On several occasions he worthily represented the Society at important public and professional functions, but war conditions again made it impossible to hold the customary banquet of the Society. In spite of these limitations, the Council are glad that Dr. Banks has had the honour of serving as President, a fitting reward for his long and loyal devotion to the interests of the Society and his colleagues.

Other Officers and Retiring Members of Council

Special thanks are due from the Society to the Hon. Treasurer (Dr. G. F. Buchan), the Chairman of the General Purposes Committee (Dr. J. A. Charles), and the chairman of the Journal Committee (Professor R. M. F. Picken). In addition to their special duties these officers of the Society give frequent and ready assistance to the Acting Executive Secretary in dealing with matters which call for immediate decisions.

The annual exchange of officers and Branch and Group representatives involves the retirement from the Council of Sir William Savage, Dr. F. A. Sharpe, Dr. K. E. Tapper, and others who have given the Society valuable service. Especially regrettable are the resignations owing to ill-health of Dr. John Macmillan and Dr. Ernest Ward, who for many years took a conspicuous part in the work of the Council.

Secretariat

The Council wish to accord their appreciation of the services rendered by the Executive Secretary and staff during a very difficult year.

COUNCIL MEETING

A meeting of the Council was held at Tavystock House, Tavistock Square, London, W.C.1, on Friday, September 24th, 1943, with the retiring President (Dr. Cyril Banks) in the chair.

There were present: Drs. J. S. Anderson, H. Stanley Banks, W. C. V. Brothwood, G. F. Buchan, J. J. Buchan, J. A. Charles, G. Lissant Cox, W. Allen Daley, Jas. Fenton, Jas. Ferguson, D. H. Geffen, J. M. Gibson, E. A. Gregg, J. W. Hunter, J. J. Jervis, R. H. H. Jolly, Sir Alexander Macgregor, H. L. Oldershaw, T. Orr, R. H. Parry, Prof. R. M. F. Picken, Drs. T. N. V. Potts, F. Virginia Saunders-Jacobs, J. E. Spence, J. A. Stirling, J. A. Struthers, K. E. Tapper, Mr. A. G. Taylor, Drs. G. McKiny Thomas and H. C. Maurice Williams.

Apologies for absence were received from Drs. Gordon Lilico, C. F. Herington, G. V. T. McMichael and Dr. Hugh Paul.

Minutes of the Council meeting held on May 28th, 1943 (Public Health, July, 1943, p. 120) were approved and signed.

Votes of Condolence. The Council placed on record their sorrow at the loss to the Society caused by the deaths of Sir Henry Newsholme, K.C.B., and Sir Francis Fremantle, M.P., past-presidents, and it was agreed that letters of sympathy should be forwarded to Dr. H. P. Newsholme and Lady Fremantle.

General Purposes Committee. The report of the General Purposes Committee (see p. 24) was submitted by Dr. J. A. Charles. Arising out of the report of the Central Midwives Board it was agreed to ask the Minister of Health whether any changes were contemplated in the syllabus for the training of health visitors bearing on the course for the Board's certificate.

It was further agreed that a Committee to prepare the case for the revision of the Askwith Scale should be constituted as follows: The President (Dr. R. H. H. Jolly), the Hon. Treasurer (Dr. G. F. Buchan), Prof. R. M. F. Picken, Drs. J. A. Charles, R. H. Parry, Jas. Ferguson, W. A. Daley, Jas. Fenton, G. V. T. McMichael, E. V. Saunders-Jacobs, H. Stanley Banks, C. F. Herington, G. Lissant Cox, W. C. V. Brothwood, Mr. J. F. Pilbeam, L.D.S., and Dr. W. A. Ramsay, T.D. (nominated by the Medical Superintendents' Society).

The minutes of the General Purposes Committee were then approved and adopted.

The Government's Milk Policy. Following representations from the Yorkshire Branch and others the Council approved a memorandum (see p. 19 relating to the Government's White Paper of the Nation's Milk Supply to be forwarded, after final revision by Drs. Orr and Charles, to the Ministry of Health.

Elections to Council.—Vacancies on the Council for the session 1943–44 were filled as follows: *Under Article 19(d)* Dr. James Fenton, *Under Article 19(f)* Dr. W. Allen Daley.

Central Council for Health Education. Before the nomination of representatives on the Central for Health Education for the session 1943–44, it was decided to appoint a committee to consider the general question of health education in relation to the work carried out by the Ministry of Health, the C.C.H.E. and medical officers of health in their respective areas. The committee was appointed as follows: Drs. R. H. H. Jolly, G. F. Buchan, Prof. R. M. F. Picken and Dr. J. A. Charles (*ex officio*); with Drs. J. Fenton, D. H. Geffen, T. Orr, W. A. Daley and J. W. Hunter.

Representation of the Society.—Dr. Gordon Lilico was re-elected to represent the Society on the Central Medical War Committee.

The Design of State-aided Dwellings. The Subcommittee on the Design of Dwellings of the Central Housing Advisory Committee having invited the Society to submit memoranda of evidence on various subjects under their consideration, a committee was constituted as follows: Drs. J. A. Charles, J. J. Jervis, W. B. Stott, J. A. Struthers and Sir Alexander Macgregor. The committee to deal

especially with (1) bedroom sizes, cubic air space per person; (2) methods of ventilation; (3) the value of proper heating arrangements from the health point of view; (4) the value of refrigeration for food storage; (5) the position of bathroom and W.C.; (6) the value of proper orientation; (7) methods of education in good housekeeping.

Fully-paid Life Membership. Dr. James McConnell, formerly Medical Officer of Health for Tynemouth, was elected to fully-paid life membership of the Society on the nomination of the Northern Branch.

Annual Report of Council. The annual report of the Council was adopted and approved for publication in Public Health (p. 20).

The Retiring President.—On the completion of his year of office a very cordial vote of thanks was extended to Dr. Cyril Banks for his services as Chairman of Council during the past session.

The Council then adjourned.

Report of the Honorary Treasurer for the Session 1942-43.

Income. The total income for the year has been £3,796 13s. 11d. as compared with £3,728 13s. 8d. in the previous year.

Expenditure. The actual expenditure during the year was £3,258 16s. 1d. as compared with £3,246 13s. 4d. in the previous year. It should be observed that the travelling expenses exceed the travelling expenses for the year 1941–42 by a sum of £115 4s. 8d.

Revenue Account. It is satisfactory to record that the revenue account shows a credit balance of £537 17s. 10d. on the year's working.

Balance Sheet. The market value of investments at September 30th, 1943, was £9,905 11s. as compared with £9,354 7s. 2d. at the same date in the previous year.

Staff. I desire to record my appreciation of the assistance given me by Captain G. S. Elliston, M.P., Acting Secretary of the Society, and the staff generally in respect of my work as Treasurer.

George F. Buchan,
Hon. Treasurer.

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Catherine Morris Jones.
Hon. Sec.: Dr. Violet Russell.
Hon. Assistant Secretary: Dr. Katherine Hirst.

The annual general meeting was held in London on July 9th, being combined with a social evening: 49 members and friends attended.

Reports were presented by the Group Representative on the Council and by the Secretaries, and the Officers and Committee for the ensuing year were elected.

The President reviewed the large amount of work carried out by the Group Committee during the past year. In making the usual annual stock-taking it was desirable to give thought to the morrow and to define the trend of measures largely introduced as war emergencies. The long-term policy for maternity and child welfare would affect the well-being of future generations of women and children. The principles behind the present work were sound and should be embodied in future plans. Members of the M. & C.W. service had the opportunity of seeing people as they are. Doctors engaged in curative work knew their patients under abnormal conditions when pain and anxiety were to the fore; it was when people were seen in their everyday frame of mind that character could be assessed at a fair level. The doctor in the maternity and child welfare service was regarded as a friend and adviser by the mothers who came for consultation and they could testify to the genuine concern of most of the mothers to do their best for the children in spite of home difficulties. The future of medicine, housing and education had been discussed *ad nauseam*, but the point of view of the mothers of the families had perhaps not been sufficiently ascertained. Had it not been assumed that they should have what was thought to be good for them—like cabbage and rice pudding for children—rather than any investigation as to what they really wanted for themselves and their families in a changed social order?

After the last war, continued Dr. Morris Jones, came the extension of the franchise and the enforced celibacy of many women owing to the loss of the men of their generation. The extension of the franchise did not produce the results anticipated, but the shortage of men resulted in an increased number of women taking up careers and to a certain extent coming into competition with men.

What would be the outcome of the present struggle? We saw already a levelling of the community with less difference between rich and poor. Large country mansions had been transformed into hostels, nurseries and maternity homes, and their broad acres ploughed up for the common need. These would not return in their old form. Feudal traditions which had been responsible in the past for the encouragement of much culture, beauty and craftsmanship and for fine feelings of responsibility and loyalty would die, and we yet did not know what would take their place.

The old cleavage between town and country was also dying; the village girl used her lipstick and tripped in high-heeled shoes, while the village yokel no longer had straws in his hair. Town dwellers had brought shrewdness and humour to the countryside as well as less desirable things, and had themselves learned the benefits of space, fresh air, and sunlight.

In another sphere the dearth of domestic assistance had resulted in women of all classes undertaking housework and housekeeping, with a consequent realisation of other peoples' cares and difficulties. In other words, one-half of the world was beginning to know how the other half lived.

In life actively related to the war, women had taken a greater part than ever before. Their war contribution, in which they had shared the same hardships and dangers as men, entitled them to hope for security in their own homes after the war, and to know that their children would have an opportunity of reaching the sphere which their capabilities would allow. Other women had found an outlet in work which they did not desire to lose and should not be obliged to lose. Women wanted to continue to share in the life of the community and to accept their responsibilities in a new world and they should be allowed to do so.

COUNTY BOROUGH GROUP

President: Dr. J. Johnstone Jervis (M.O.H., Leeds).

Vice-President: Dr. J. A. Charles (M.O.H., Newcastle).

The 5th Annual Meeting of the County Borough Group of the Society was held at Leeds during the week-end July 16th-19th. The chair was occupied by the President, and there were present 41 members and one visitor.

The following were appointed as Officers of the Group for the year 1943-44: *President*, Dr. Charles, M.O.H., Newcastle; *Vice-President*, Dr. Massey. M.O.H., Coventry; *Executive Committee*, Dr. Williamson, M.O.H., Portsmouth; Dr. Walton, M.O.H., West Bromwich; Dr. Jolly, M.O.H., Wolverhampton; *Hon. Sec., Treasurer and Representative in Council*, Dr. Lilico, M.O.H., Derby.

The Hon. Secretary stated that a financial grant was now given to the Group by the Society, and the statement of accounts was placed before the meeting and accepted.

A memorandum was received from the County Medical Officers relating to a circular letter (Oct. 10th, 1941) from the Central Midwives Board. The County Medical Officers suggested that a new rule should be added by the Board—namely, "4(a) Where a hospital or institution has accepted responsibility for the attendance on a patient for her confinement in that hospital or institution, they and their Officers shall be responsible for seeing that all the rules appropriate to the case are observed"—and that the Group should support an application to the Ministry for an alteration in the law to enable this rule to be added. Although the Group were in full agreement with the suggested new rule, they were not prepared to asked the Ministry of Health to take action now.

Dr. Semple, Carlisle, opened a discussion on staffing of hospitals, direction of nurses, etc. This brought forth the number of difficulties encountered following the introduction of the Rushcliffe scales and the omission from that scale of various members of hospital personnel. The following resolution was passed, and the Secretary was instructed to forward it to the Council of the Society:

"That the Association of Municipal Corporations be asked to take up the question of salaries of all staffs in hospitals and public health departments who are not already covered by national or other trade agreements."

Two sessions were directed to a study of the Beveridge Report—Assumption B. The subject was introduced by Prof. Mackintosh, Glasgow University, in a masterly oration, and the discussion which followed was both spirited and illuminating.

During the afternoon a visit was made to St. James's Hospital, where the Group was entertained by the Superintendent, Dr. Dick, who showed the recent extensions to the hospital, consisting of a suite of operating theatres, a radiological unit, physiotherapy and rehabilitation unit, a pathological block and a nurses' training school with lecture theatre, library and demonstration rooms.

Owing to the unfortunate indisposition of Dr. Charles (Newcastle), a session on rehabilitation was introduced by Dr. H. Balme, Ministry of Health. Without a note, Dr. Balme gave a discourse on a subject which was new to most of those present.

The Sunday evening session was occupied by Dr. Ingram, Leeds University Skin Department, who talked on modern trends in industrial health. He showed how medicine had been linked up with industry in Leeds, and gave details of the constitution of a Joint Council of Industrial Medicine which had been formed in Leeds and the type of work which was being carried out.

On Sunday afternoon the Group was entertained by Sir George Martin, K.B.E. (Chairman of the Health Committee).

Election of Officers, Session 1943-44.—Southern Branch: *President*, Dr. W. P. Cargill.

The Society of Medical Officers of Health

BALANCE SHEET

At 30th September, 1943.

1942. £ s. d.		1943. £ 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—		
5744 11 5	At 30th September, 1942 ...	5949 8 7	
	Add Excess of Income over Expenditure for the year ended 30th September,		
482 0 4	1943	537 17 10	
6226 11 9		6487 6 5	
	Less Loss on Requisitioning of £4099 17s. 5d. 3% India Stock by H.M.		
277 3 2	Treasury		
5949 8 7			6487 6 5
60 14 0	Sundry Creditors	244 10 7	
58 16 0	Subscriptions received in advance	59 16 0	
25 0 0	Journal Subscriptions unexpired	45 0 0	
41 5 0	Neech Prize Accumulated Income	46 10 0	
185 15 0			395 16 7
£10736 13 7			£11484 13 0

GEORGE F. BUCHAN,
Hon. Treasurer.

G. S. ELLISTON,
Acting Executive Secretary.

1942. £ s. d.		1943. £ s. d.	£ s.
	*INVESTMENTS AT COST		
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 0 0	£1000 3% Defence Bonds	1000 0 0	
400 0 0	£400 3% Savings Bonds 1955-65	400 0 0	
4000 0 0	£4600 3% Savings Bonds 1960-70	4600 0 0	
9234 19 7			9831 19 7
65 3 5	FURNITURE at cost *less* amounts written off		65 3 5
	SUNDRY DEBTORS		
110 0 0	Advertising	127 10 0	
12 12 0	Lettings		
26 19 2	Miscellaneous	32 7 6	
149 11 2		159 17 6	
25 0 0	*Less* Provision for Doubtful Debts and Discounts ...	25 0 0	
124 11 2			131 17 6
	CASH BALANCES		
1244 19 3	At Bank	1389 14 4	
67 0 2	Petty Cash	59 18 2	
1311 19 5			1449 12 6
£10736 13 7			£11484 13 0

* *Note.*—The Market values of the Society's Investments last year and at 30th September, 1943, were:

1942. £ s. d.		1943. £ s. d.
514 16 0	£514 16s. 0d. Metropolitan 2½% Consolidated Stock at 100 and 101¼	521 4 8
690 12 6	£650 3½% War Loan at 106¾ and 104⅝	680 1 3
264 13 8	£320 16s. 7d. 2½% Consols at 82½ and 79¼	254 5 1
536 5 0	£500 3½% Conversion Stock at 107¼ and 104½	522 10 0
965 0 0	£1000 Local Loans 3% Stock at 96½ and 94¼	942 10 0
475 0 0	£500 Manchester Corporation 3% (1891) Red. Stock at 95 and 94½	472 10 0
495 0 0	£500 Birmingham 3% Red. Stock 1956-58 at 99 and 100	500 0 0
1000 0* 0	£1000 3% Defence Bonds at 100 and 100	1000 0 0
403 0 0	£400 3% Savings Bonds 1955-65 at 100¾ and 100½	401 0 0
4010 0 0	£4600 3% Savings Bonds 1960-70 at 100¼ and 100¼	4611 10 0
£9354 7 2		£9905 11 0

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

We have examined the above Balance Sheet dated 30th September, 1943, 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.
29th October, 1943.

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

REVENUE ACCOUNT

For the Year ended 30th September, 1943.

EXPENDITURE

1942. £ s. d.		1943. £ s. d.	£ s. d.
	PREMISES		
200 0 0	Rent	200 0 0	
19 3 4	Insurance, including War Risks	14 11 6	
12 14 10	Fuel and Lighting ...	13 13 4	
28 16 0	Cleaning and Maintenance	28 8 10	
260 14 2			253 13 8
	STAFF		
399 6 9	Executive Secretary (including Pension Contribution)	279 0 5	
	Acting Executive Secretary		
100 0 0	Salary	100 0 0	
100 0 0	Expenses	100 0 0	
398 0 0	Office Staff	442 10 0	
26 0 0	Mrs. Swain's Pension ...	26 10 0	
1023 6 9			948 0 5
	GENERAL		
2 10 3	Roll of Members Printing	3 13 9	
14 7 0	General Printing ...	40 8 6	
94 5 1	Stationery	81 9 11	
86 14 4	Postages and Telephone	75 12 0	
31 7 6	Miscellaneous Expenses	27 10 0	
15 11 0	Library	11 11 0	
35 0 0	Office Equipment ...	-	
42 0 0	Auditors' Fees and Accountancy Charges ...	47 5 0	
320 7 5	Travelling Expenses (Members of Council and Committees) ...	435 12 1	
5 5 0	Neech Prize	5 5 0	
647 7 7			728 7 3
	PRODUCTION OF JOURNAL (for Receipts see *contra*)		
604 13 8	Printing	635 3 4	
9 3 4	Reprints	8 19 10	
151 4 0	Acting Editor ...	151 4 0	
34 18 2	Editorial Contributions	23 15 0	
78 0 0	Clerical Assistance ...	79 10 0	
18 8 8	Libel Insurance ...	18 8 8	
150 8 2	Postages	100 5 6	
1046 16 0			1017 6 4
	PROPORTION OF SUBSCRIPTIONS PAID TO BRANCHES—		
24 2 6	North-Western Branch	24 5 0	
21 2 6	Yorkshire Branch ...	21 12 6	
25 2 6	Metropolitan Branch	26 7 6	
5 17 6	Eastern Branch ...	6 12 6	
9 12 6	Southern Branch ...	9 10 0	
12 17 6	Northern Branch ...	14 2 6	
38 5 0	Home Counties Branch	37 15 0	
10 15 0	West of England Branch	11 0 0	
10 17 6	Welsh Branch ...	11 2 6	
13 2 6	East Midland Branch	13 5 0	
11 12 6	Scottish Branch ...	12 0 0	
15 12 6	Midland Branch ...	16 7 6	
37 0 0	Dental Officers' Group	36 7 6	
236 0 0			240 7 6
—	PROPORTION OF SUBSCRIPTIONS PAID TO GROUPS ...		61 5 0
32 8 10	BRANCH AND GROUP MEETING EXPENSES		9 15 11
482 0 4	*Balance*: being excess of Income over Expenditure for the year		537 17 10
£3728 13 8			£3796 13 11

INCOME

1942. £ s. d.		1943. £ s. d.	£ s. d.
2774 8 0	SUBSCRIPTIONS		2706 6 1
	INCOME RECEIVED FROM INVESTMENTS (*less* tax)		
30 15 0	On £4099 17s. 5d. India 3% Consolidated Stock	—	
6 8 8	On £514 16s. 0d. Metropolitan 2½% Consolidated Stock	6 8 8	
11 7 6	On £650 3½% War Loan	11 7 6	
4 0 4	On £320 16s. 7d. 2½% Consols	4 0 4	
8 15 0	On £500 3½% Conversion Stock	8 15 0	
15 0 0	On £1000 Local Loans 3% Stock	15 0 0	
7 10 0	On £500 Manchester Corporation 3% Stock	7 10 0	
7 10 0	On £500 Birmingham Corporation 3% Stock	7 10 0	
15 0 0	On £1000 3% Defence Bonds	15 0 0	
6 0 0	On £400 3% Savings Bonds 1955-65 ...	6 0 0	
17 18 4	On £4600 3% Savings Bonds 1960-70 ...	64 2 4	
130 4 10			145 13 1
	RENT		
18 18 0	Sundry Lettings		—
	JOURNAL ACCOUNT—		
27 1 7	Sales	26 14 11	
112 15 0	Subscriptions	84 13 2	
11 11 0	Reprints	7 19 7	
653 15 3	Advertising	825 5 6	
805 2 10			944 13
£3728 13 8			£3796 13 1

GENERAL PURPOSES COMMITTEE

A meeting of the above Committee was held at Tavistock House, London, W.C.1, on Friday, September 17th, 1943, with Dr. J. A. Charles in the chair.

Present: Drs. J. S. Anderson, Cyril Banks, G. F. Buchan, J. J. Buchan, J. Fenton, J. Ferguson, J. M. Gibson, C. Herington, R. H. H. Jolly, G. Lilico, Sir Alexander Macgregor, Drs. E. Virginia Saunders-Jacobs, J. A. Stirling, H. C. Maurice Williams and F. T. H. Wood.

Apologies for absence were received from Professor R. M. F. Picken, Dr. Hugh Paul and Dr. T. N. V. Potts.

Minutes of the meeting held on July 2nd, 1943 (see PUBLIC HEALTH, September, 1943, page 144) were approved and signed.

A National Health Service.—The Committee considered the present position of proposals in this connection and decided to await the decisions of the A.R.M. of the British Medical Association and the publication of the Government's White Paper. Meanwhile the policy of the Society remained as stated in the manifesto "A Health Service for the Nation." The officers of the Society were authorised to call a special meeting of the Council when further information of the Government's policy was available.

Interdepartmental Committee on Schools.—As authorised by Council, the Committee revised and adopted the Memorandum of Evidence to be submitted by the Society to the Interdepartmental Committee on Schools. Thanks were expressed to Dr. Oscar Holden, Dr. A. M. Hewat, and Dr. John Buchan, who with assistance from Dr. Dorothy Watterson and Dr. G. O. Barber, had drafted the Memorandum. Drs. Holden and Hewat were appointed to give evidence before the Interdepartmental Committee in support of the memorandum.

Interdepartmental Committee on Dentistry.—The memorandum of evidence drafted by the Dental Officers' Group for submission to this Interdepartmental Committee was the subject of further discussion and revision. As authorised by Council, the Committee finally adopted the Memorandum for submission by the Society to the Interdepartmental Committee. The President-Elect (Dr. R. H. H. Jolly), Dr. J. A. Charles and Dr. Hugh Paul, with Messrs. C. R. Wilshaw, J. F. Pilbeam and A. Gordon Taylor, were appointed to expound the Memorandum if invited by the Interdepartmental Committee. The representatives of the Dental Group expressed their thanks for the great assistance they had received in the preparation of their memorandum, especially from Dr. Paul. The President promised to report this appreciation to Dr. Paul, who had undertaken this duty at his request. The chairman added that the Society was much indebted to the Dental Group for their valuable Memorandum which would be recommended for early publication in PUBLIC HEALTH.

Children's Nurseries.—A memorandum from the M. & C.W. Group dealt with "A four-year plan for Children's Nurseries," a publication of the National Society of Children's Nurseries. The Group were thanked for their memorandum which was deferred for reference in connection with expected provisions in the forthcoming Education Bill.

A National Certificate for Nursery Nurses.—A letter from the Ministry of Health invited representatives of the Society to attend at the Ministry to discuss the suggested establishment of a National Certificate for the certification of Nursery Nurses. The President-Elect (Dr. Jolly), Dr. Violet Russell, and Dr. Gordon Lilico were appointed to represent the Society in this matter.

Early Diagnosis of Tuberculosis in Childhood.—The Committee recorded their thanks to the Tuberculosis Group for their report on the Memorandum of the British Paediatric Association on this subject, and referred both documents to the M. & C.W. Group for their observations.

Central Midwives Board.—Dr. John Buchan submitted the annual report of the C.M.B. and referred to the difficulty of operating new schemes for the training of midwives in present circumstances. However, experience was being gained which would be useful in the post-war period. After some discussion it was resolved:—

"That a recommendation be forwarded to the C.M.B. suggesting that the Board should approve of Part I and Part II Training being given in the same institution where they are satisfied that steps can be taken to keep the essentials of both schemes of training apart."

The Design of Dwellings. The subcommittee of the Central Housing Advisory Committee on the Design of Dwellings invited the Society to submit observations on the suggested revision of the normal by-law ceiling to floor height of rooms from 8 feet to 7 feet 6 inches, on the extent to which such change might influence the health aspect of housing, and also whether the proposed reduction, if adopted, should be applied generally or only in certain areas. It was agreed that the Society would welcome an opportunity of giving evidence on this and other matters now being considered by the Central Housing Advisory Committee.

The Askwith Scale of Salaries. Following on representations from Branches and members, the President moved that the time had come for revision of the Askwith Scale. Supporting this proposal, Dr. G. F. Buchan said that undoubtedly the percentage increases under the scale were much too low. It was agreed to recommend Council to set up a committee to prepare the terms for a revised scale.

Ancillary Services of Health Departments. On the suggestion of the County Boroughs Group, it was resolved:

"That the Association of Municipal Corporations and the County Councils Association be asked to consider the question of salaries of all staffs in hospitals and public health departments who are not already covered by national or trade agreements."

Local Government (Staffs) War Service Acts, 1939. It was agreed to report to the National Association of Local Government Officers cases where medical officers are adversely affected by refusal of local authorities to make up war service pay to the level of civil pay, as authorised by the above Act.

The Government's Milk Policy. Representations from the Yorkshire Branch, the Rural District Councils Association, and various local authorities were received, discussed and referred for full consideration by Council at their meeting on September 24th.

Planning Committee of N.A.M. and Child Welfare Centres. Dr. E. V. Saunders-Jacobs presented the report of this Committee which she had attended as representative of the Society. It was agreed that the report should be referred to the M. & C.W. Group and that meanwhile the Society would not be committed to all the views expressed in the report.

The School Medical Group. The President reported proposals for the reconstitution of this Group which had been welcomed by Dr. Oscar Holden, the retiring President. Owing to war conditions, it was felt the Group would secure a better attendance if meetings were held at convenient railway centres in the Midland counties. Dr. A. A. E. Newth (S.M.O., Nottingham) had consented to call a meeting of school medical officers to elect officers and reorganise the Group, and the President would attend to convey the greetings of the Council. It was agreed that a message of thanks be sent to Dr. Louisa C. Adam for her past services as Hon. Secretary of the Group with best wishes for the early restoration of her health.

The Committee then adjourned.

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PUBLIC HEALTH

SOCIETY OF MEDICAL OFFICERS OF HEALTH

No. 3 Vol. LVII. DECEMBER, 1943

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EDITORIAL

Absenteeism Among Women

Absenteeism is among the most important factors affecting the maintenance of production level. The term is, perhaps, somewhat misleading, as the implication generally made is that it covers only voluntary absence from work, whereas unavoidable causes, sickness and accidents, and sickness in the family in case of married women, are included. It might be supposed that time lost in a factory is known to the administrators, but apparently this is not so in Royal Ordnance Factories, for the Industrial Health Research Board,* at the request of the Ministry of Supply, has conducted a sample inquiry at two factories. The inquiry was confined solely to time lost, the causes not being considered. The sample comprised the records of 819 and 495 women, in factories A and B, who were employed on a three-shift system which was changed weekly and covered a period of six weeks. Although this inquiry was carried out over a year ago, the results have only just been published.

The amount of absenteeism in the two factories was different but the general trend was the same. Married women lost more time than single women; the percentage shifts lost in the two factories were 19·4 and 12·3 for married women, and 13·9 and 7·5 for single women. The younger women, both married and single, lost more time than the older women. Absenteeism was greatest in the morning shift; the night shift was only slightly worse than the afternoon shift. Time lost varied on different days of the week. It was lowest on pay days and highest on Saturdays (only the morning shift worked on Saturdays). In factory A the married women had an absence rate of 46% on Saturday. Time spent in travelling to work was correlated with absence. In factory A percentage of absenteeism varied from 16·0 for journeys of half-hour or less to 21·7 for those who spent one and a half to two hours in reaching the factory.

The results obtained from these two factories cannot be taken as typical of industry as a whole. The reasons for choosing the particular factories are not given, and it seems likely that they may have been selected because of the amount of time lost. There were 66 women absent for the whole period of six weeks, and, as "these had probably left the factories, they have been excluded from the tables." If such a condition exists that the authorities are unaware when an employee leaves the service, it follows that the amount of time lost may be overstated, as the period between leaving the factory and the end of the investigation may be included as absence. There were 1,716 absences of one week, and apparently all who were absent during the last week might have left the factories. The presentation of the data could be improved. It is only by addition from the last table that the numbers of married and single women can be obtained. Tables of percentages without the absolute numbers are apt to be confusing to the reader; in fact, the authors confused themselves. In Table VI they found 46·0% absenteeism on Saturdays among married women in factory A. In analysing this they found the percentages for no Saturday lost, one lost, two lost were 38·5, 20·0, 14·9, the balance being due to longer absences which included a Saturday. They concluded that 14·9/46·0 = 32·4% represented the regular absences. The value should, of course, have been 14·9/34·9 = 42·7%.

Wardens of the Watersheds

"The river glideth at his own sweet will," to the pleasure of the poets, but to the serious embarrassment, sometimes, of such prosaic bodies as county councils, drainage boards, fishery boards, navigation authorities, water undertakers, and those charged with the prevention of river pollution. A river pays no attention to the limits of local government areas. Occasionally a part of a river may be a county boundary, but this also introduces complications, for while one county council may actively administer the powers of the Rivers Pollution Prevention Acts, there is no guarantee that the work will be effectively carried out throughout the river basin. A watershed is a well understood geographical expression, but it means nothing, as a rule, in local government, and many separate authorities have responsibilities relating to the same watershed.

More than 1,600 local authorities in England and Wales have statutory powers for the prevention of river pollution. Drainage boards number 377, and catchment boards 53. A hundred local navigation authorities exercise jurisdiction over tidal river waters. Some two-thirds of the 1,169 statutory water undertakings derive their supplies from rivers, streams and springs, to the amount of more than 1,000 million gallons a day. It is true that most of the supplies are derived from the upper reaches of rivers, where there is little or no contamination by polluting discharges, but with improved methods of water purification there has been an increasing tendency in recent years to obtain supplies from lower down the river. Naturally each authority is inclined to consider its own requirements as paramount and to disregard or underestimate those of others. The drainage authorities regard it as their duty to drain surplus water from the land, but they do not necessarily take into account the effect of drainage on the conservation of water resources. Fishery boards have claims which conflict with those of local authorities and industrial establishments concerning disposal of sewage and industrial effluents.

* Industrial Health Research Board. A Study of Absenteeism among Women. Emergency Report No. 4. H.M.S.O. 1943. Price 2d. net.

The Central Advisory Water Committee, set up under the chairmanship of Lord Milne to advise the Government on the conservation and allocation of water resources, has had an unenviable task, especially in preparing its third report*, which is on the co-ordination of the various river interests. The committee has investigated the desirability of setting up for each watershed area a single river authority responsible for some or all of the functions exercised by the existing bodies. There is general agreement that if such bodies are to be established the watershed area is the appropriate unit; but many of the interested parties who tendered evidence were very reluctant to admit any interference with their work. For example, the County Councils Association wanted catchment and land drainage and other functions, except the prevention of pollution, left in the hands of existing bodies. The Canal Association objected to any general transference of powers and functions relating to navigation. Among the fishery interests there was doubt as to the wisdom of transferring control of fisheries to a comprehensive river authority. The British Waterworks Association objected to any interference with or diminution of the statutory powers and duties of water undertakers. But on the question of pollution the great majority of the bodies which gave evidence were in favour of comprehensive control over the river from source to sea by one authority.

In the Committee's view the principal disadvantage of the present situation is not that the functions of the various bodies overlap or that the interests conflict, but that no single body is charged with the duty of co-ordinating the various river interests or of ensuring that the requirements of such interests are properly served. It proposes accordingly that river boards be set up to replace certain of the existing bodies and to take over some of the powers and duties of others. These boards will be responsible for the conservation of water resources, for enforcing the statutory provisions with regard to pollution, and for planning drainage and other works in such a way as to ensure that all public interests are adequately safeguarded.

It is proposed that each board should administer a watershed area or, in the case of smaller rivers, two or more such areas. Twenty-nine areas have been mapped out in England and Wales. Northumberland and Durham, for example, have two: the Tyne and Wear and the Tees; Yorkshire has two: the Ouse and the Hull area. Another group consists of most of the Lincolnshire rivers, except the Nene and the Welland, which empty from the Lincolnshire coast, and are allocated to another area consisting not only of parts of Kesteven and Holland but of Rutland and Northamptonshire. The Thames and Lee are excepted from the scheme, because the evidence before the committee was that the existing conservancy boards were working satisfactorily to all concerned. The boards will be constituted, as to the majority of their members, of representatives of the county and county borough councils of the area, but there will be direct representation of all interests likely to be affected by the Board's work, including local authorities, water undertakers, industrial interests, agricultural and fishery interests, internal drainage interests, and navigation.

Judging from the amount of objection by the many important bodies tendering evidence, it may be some time before the recommendations find a safe home in legislation, but here in the meantime is another example of the tendency towards regionalisation. We hope, however, that the boards, in their concern for their larger functions, such as drainage, reservoir construction, control of pollution, and coast defence, will not lose sight of the amenities of the river which have meant so much to both town and country life in England.

Mental Health Work of Local Authorities

The development of joint schemes to include all mental health services, as well as child guidance, within the area of a local authority is making progress and is justifying itself where it has been undertaken. A report on the scheme in Portsmouth was given by Dr. Thomas Beaton to the conference, mainly of delegates from local authorities, recently summoned in London by the provisional National Council for Mental Health, a body which incorporates the Central Association for Mental Welfare, the Child Guidance Council, the National Council for Mental Hygiene, and the work of the Mental Health Emergency Committee. Dr. Beaton said that the essential factors in the Portsmouth scheme were the setting up of a central mental treatment department to provide an adequate social psychiatric service and to act as a basis for the organisation, and the formation of a mental treatment committee of the local authority to cover the whole field of mental and nervous disorder and mental deficiency, with the use of the mental hospital for in-patient treatment. He exhibited a plan which showed the central department linked up with the mental hospital, the out-patients' clinic, the voluntary hospital, the mental deficiency training centre and projected colony, the observation wards in the mental deficiency section of the municipal hospital, the child guidance and juvenile deliquency clinics, the education authority, the probation officers, the social welfare organisation, the labour and employment exchange, and the public assistance relieving officer. The municipal hospital, he said, is visited daily by a psychiatrist. It is difficult, of course, to put any results into figures, but some index is afforded by the number of residents at the mental hospital at the end of each year. The number rose rapidly until 1937 or 1938, when the mental health service began to affect the position and caused a distinct fall. The figures for the next two years were complicated by evacuation and bombing, but the situation has now been stabilised, the population of Portsmouth is again rising, but the curve continues its downward course in spite of an increase of admissions. This can be due only to the recoverability of the early voluntary case after a short stay in the institution.

The development of a joint scheme for child guidance was described to the conference by Mr. E. R. Davies, deputy clerk of the Berkshire County Council. Following upon complaints by dissatisfied householders concerning the behaviour of evacuated children, the council decided to set up a child guidance clinic. The Ministry of Health, while favouring the scheme, pointed out that it should serve the whole geographical county, including the county borough of Reading. It was then considered whether the clinic should be established under the Education Acts as a school medical service or under the Mental Treatment Act. It was decided to act under the Mental Treatment Act, because a mental health authority covering the whole of the geographical county was already operating and the clinic could be linked up with existing mental health services. The clinic is administered by the committee of visitors, and its income is made up from payments by the Ministry of Health for evacuated cases, by child welfare authorities for young children, by local education authorities for children of school or higher school age, and for private cases. To enable the clinic to function adequately, the control of admissions to and discharges from certain residential hostels administered by various local authorities has been handed over to the clinic. The scheme, which is intended to be permanent and not a war-time measure, is said to be operating satisfactorily, and to be recommended as a method of establishing child guidance clinics for moderately sized authorities. It is the first clinic of its kind to employ two whole-time psychiatrists and a full staff of educational psychologists and psychiatric social workers.

The question of the residential school was brought before the conference by Mr. J. Duncan, headmaster of Lankhills Special School. Among the points which he stressed were the advantages of boarding schools for children of any intellectual level, and he considered the possibility of giving all children at about the age of 13, when the need for community living is felt, a term of six months or a year under boarding school conditions, also the need for residential schools for children, again irrespective of intellectual level, who are subnormal emotionally.

Sir Laurence Brock, chairman of the Board of Control, referred, as the Minister of Health had done in opening the conference, to the reduction in the incidence of psychosis during the war, but there had been more cases of neurosis, due probably to failure to stand up to the strain of removal from normal surroundings.

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MENTAL HEALTH IN WAR-TIME*

By AUBREY LEWIS, M.D., F.R.C.P.

War is bad for mental health: that is a common and, no doubt, a true belief. But it does not follow that war will increase the amount of recognisable mental illness during the period when the war is being waged. We are apt to expect that it will, and to express gratified surprise when evidence to the contrary accumulates. The chief reasons for this common expectation are, I suppose, that neurosis is known to have been a serious problem in the Army in the last war, and that since war imposes so many privations and makes so many threats, it will act as a stress of greater severity than we are accustomed to, thus causing mental breakdowns. These reasons, however, are less cogent if it is considered that "neurotic incapacity" is not a fixed quantity but a relative one. A man whose incapacity for sustained effort did not interfere with his health or occupation as a civilian may become ill with the neurotic form of "effort syndrome" when, as a soldier, he is obliged to march and carry heavy weights. He has not changed, but his circumstances have, and what are now to be regarded as his incapacitating symptoms were formerly the harmless signals telling him that he must have a rest or change his work. This is a simple and extreme instance; but it is true of neurotic illness in general that it is not merely, like all illness, vastly influenced by the environment, but may become, or cease to be, an incapacitating illness according to the conditions of the environment and without the man himself having changed at all. Consequently many a soldier may be diagnosed as mentally ill, or even discharged from the Army, who in peacetime would never have come under medical scrutiny for such a condition; although he was not really mentally healthy, any more than the man with flat feet or gross myopia is healthy, he would not have appeared on the bills of morbidity. So there is in part a spurious rise, due to more systematic medical examination of the population, to more careful diagnosis, and to a change in the demands of the environment converting a harmless anomaly into an incapacitating disorder. This applies, of course, with especial force to mental deficiency: so-called higher grades—*i.e.*, "dull and backward," "feeble-minded"—will be detected and returned in the statistics of a Service population, whereas they would have escaped attention under pre-war conditions. It is, then, unsafe to assume that the rise in incidence of mental illness which appeared in the Service population during the last war (or any which appears in this war) indicates as great a falling off in mental health, either in the Service population or in the whole community, as the figures may suggest. I am not denying that there may be an increase, but questioning the reliability of the crude statistics which so many people quote as though they were as straightforward as the weekly measles returns.

Human Resilience

The other reason which leads people to expect a rise in mental illness is also less cogent than it first seems. War brings tribulations and horrors which undoubtedly make people miserable and apprehensive, but the bulk of mental illness in any community is not mainly attributable to recent direct stresses. One cannot speak in the same breath of a community like ours at present and of the people in an occupied and invaded country who have to bear over a long period every physical and psychological misery which war can bring. Professor Bartlett said the other day that we had too low an opinion of human resilience; we had hardly realised how much the average person can stand. If you have a community made up of fairly healthy people, such burdens as the last war imposed, or as this war has so far imposed, can be borne without essential increase in mental illness during it; especially if steps are taken to remove some of the remediable anxieties and discontents that prevailed during peace. There used to be people who regarded war as a moral stimulant: you will remember Francis Bacon's "no body can be healthful without exercise, neither natural body nor politique: certainly to a kingdom or estate, a just and honourable war is the true exercise." These pernicious doctrines are never put forward nowadays, at any rate avowedly; but they were perhaps to this small extent justified—that during war reforms are instituted that have been overdue, and measures taken which temporarily, at any rate, are advantageous to mental health and somewhat offset the more harmful concomitants of war. If, for example, production committees, welfare managers, and factory medical officers have improved the mental as well as the physical health of workers, they partly counteract the adverse factors in war-time industry, which need no recapitulation. Having been instituted under the pressure of war needs, they may be laid to the credit of war even though there is no essential link. This is a separate matter from that feeling of corporate unity and usefulness which is more intense during war, and of which the index is good morale: some of the elements creating this feeling are not in the long run conducive to mental health, but may nevertheless, during the war, help to lessen the amount of mental illness.

Thus we find, first, that the fresh factors that have been introduced into our national life during this war have not been wholly, or in equal measure, unfavourable to mental health.

And, secondly, we find that the amount of mental ill-health manifest during the war is not a safe index of what is really happening to the mental health of the community: the evil harvest may be reaped afterwards. The Ministry of Pensions can confirm this, and it was the same in other countries. Thus Dayton[1] writes of the unfavourable influences of the war years 1917 to 1918 in U.S.A.: "In many cases the effects of these experiences were not noticeable immediately but became apparent during the subsequent years . . . (certifiable) mental disorders rose to an admission rate of 85 per 100,000 in 1919, which is higher than those observed in the two war years. The number of workers gainfully employed remained at a high level, wages were high also, an annual average of $1,073 per person employed. In the face of this very favourable economic situation, the large numbers of new cases of mental disorders testify to the extraordinary mental stresses of this demobilisation year. The reaction from the war apparently imposed greater strains on the population than the actual war years themselves."

Some Mental Health Statistics

Having said this, I would like to present what recent evidence I have of the amount of recognised mental illness in adults in this country: I am, as always, including in mental illness all illness characterised predominantly by mental symptoms, whether it be neurotic like hysteria, or organic like G.P.I., or due to defective development like mental deficiency. I have published what data[2] were within my knowledge up to June, 1941 and I will not repeat them. I am omitting consideration of children because the criteria of ascertainment are so different.

It may be remembered that for 1940 the total admissions to mental hospitals were 8% less than in 1938, and that the falling off was greater among men than among women; moreover the percentage of patients admitted on a voluntary basis had fallen from 35% of all admissions to 32%. There are other explanations for these changes than an actual fall in the incidence or form of insanity.

These trends are much less evident in 1941 (figures for 1942 are not yet available). There were only 1,200 fewer admissions in 1941 than in 1940, and the percentage of voluntary patients among the admissions had again reached 35%. As regards the distribution by age: the percentage of direct admissions under the age of 25 has not varied appreciably since 1938; those between the ages of 25 and 34 have fallen steadily among males (from 20% to 17·9%), but among females, having fallen steadily until 1940 (from 17·9% to 16·9%), have now risen slightly, to 17·1%, though the absolute figure has fallen steadily. The absolute number of females under 25 years has risen by 1,000 in 1941 above that in 1940. For the 35 to 44 years group, the percentage of males to admissions of all ages has risen from 18·2 to 19·2. There have been some curious fluctuations in the other age groups since 1938. Thus in the 55 to 64 group the absolute numbers rose in 1939 but have fallen steadily since; the percentage they constitute of all admissions, however, is still higher than the 1938 figure (17·6% male and 18·0% female, compared to 16·4% male and 17·7% female in 1938). This is still more evident, as might be expected, in the group aged 65 and over: the absolute numbers have remained almost constant since 1939 (except that the males declined by 100 in

* Paper read to the Metropolitan Branch of the Society of Medical Officers of Health in April, 1943.

1941 from the 1940 figure), but the percentage they constitute of all admissions creeps steadily higher (from 12·4% for males, and 12·2% for females, to 15·1% males and 15·4% females). This underlines the threatening problems of an ageing population, now hanging over us.

In London the number of admissions to mental hospitals fell from 3,524 in 1939 to 2,464 in 1941, and for 1942 was still lower, 2,314. There has, in fact, been a steady decline in admissions, which is apparent in both sexes. Thus in 1939, 1,520 M., 2,004 F.; in 1941, 1,087 M., 1,377 F.; 1942, 952 M., 1,362 F. The absolute number of voluntary patients admitted has remained approximately constant, but the voluntary percentage of all admissions has risen from 26 to 40. I would not draw sharp inferences from these figures; the population from which the patients come has varied in size, and to some degree the standards of admission may have varied too. A check, however, upon the extent to which changes in available accommodation and standards of admission influence the number actually received into mental hospitals is provided by the observation wards, which have to take acute cases whatever the difficulties. Here are the figures:

TABLE I

	Male	Female	Total	Percentage Vol. Refs.
1939	2,580	3,101	5,681	10·5
1940	2,379	2,829	5,208	10·1
1941	1,754	2,093	3,847	13·7
1942	1,575	2,006	3,581	12·8

The percentage of these admissions referred from the observation ward as voluntary patients to a mental hospital rose, however, in 1941 and 1942, as shown in the fourth column. I think this is partly due to the air raids having damaged and consequently reduced the intake of certain among the admission units whose staff had apparently been less keen on sending people as voluntary patients than had been the case in some other big observation wards which were undamaged, or only put out of action for a short while.

I should be reluctant to conclude from the London figures that there has been a fall in the gross incidence of insanity; but I think it safe to say that there has not been a rise.

The figures for suicide in England and Wales are relevant here:

TABLE II

Year	Half Year	Males	Females	Year	Half Year	Males	Females
1938	1st	1,887	874	1941	1st	1,574	797
	2nd	1,668	849		2nd	1,237	635
1939	1st	1,781	881	1942	1st	1,328	644
	2nd	1,569	808		2nd	1,148	682
1940	1st	1,640	866				
	2nd	1,620	757				

It will be seen that apart from seasonal and minor fluctuations there has been a steady drop, which would of course be partly explicable by the withdrawal of some of the exposed population into the Services, but I doubt if this accounts for it. A similar phenomenon was noted in all countries in the 1914–18 war. In Germany, however, there appears to have been a rise in the suicide rate in large towns during this war.[5]

Some Figures for Neurosis

The figures for neurosis are difficult. Diagnosis is untrustworthy; a patient may appear at several clinics in turn; moreover, at various times since the war clinics have varied in the number of patients they could see. The Ministry of Health is at present making a survey of the number of patients actually seen during the last four years at psychiatric out-patient departments. But this will not give the incidence, for the reasons I have mentioned and also because many neurotic patients, when they come to hospital, are not seen in the psychiatric department, but in the medical or specialist division with which their presenting symptom would appear to be concerned—the man with cardiac neurosis in the cardiac clinic, the compensation hysteria after injury in the fracture clinic, etc. And then many patients with neurotic disability will not come to hospital but will be treated by the general practitioner. So when, for example, we learn that the number of new cases referred to the out-patient department at Jordanburn rose from 251 in 1937 to 316 in 1939, then to 350 in 1940 and to 509 in 1942, it is not safe to infer that there has been any rise in the amount of psychiatric illness in Edinburgh during those years.

But if out-patient figures are no guide the frequency of neurotic illness among the people on a general practitioner's panel can be taken with some confidence, especially when the practitioner is a well-trained physician and psychiatrist. Whitby[6] found that attendances for neurotic symptoms constituted 26% of all attendances in 1941–42, whereas in 1940–41 they were 31%, and in 1937 30%. After allowing for the change in the size of the population at risk, Whitby still found reason to conclude that the mental health of the population remaining in his district of London was better than it had been before the war.

E.M.S. Admissions

I have been so fortunate as to get from Dr. Percy Stocks the result of a provisional analysis of E.M.S. admissions. In a representative sample of 15,885 patients admitted to E.M.S. hospitals from the Services (other than Navy and Air Force) during 1942, mental deficiency and psychoses were responsible for 0·26% of all illnesses, and 4·67% of all illnesses were due to psychoneuroses and abnormal personality. It should be stated that some "functional" disorders are not here included among the psychiatric conditions: thus "functional disorders of stomach and intestines" account for about 2% of all illnesses, and would therefore swell the real percentage of all illness to be accounted psychiatric. I cannot say that these figures give a picture of the number of persons affected, but it is possible that they come reasonably close to it, because when a patient was transferred from one hospital to another he counted in these statistics as a single admission until finally discharged; likewise if he was readmitted for the same complaint within a week. It must, however, be remembered that many people with psychiatric illnesses in the Services are dealt with outside the E.M.S.; many of the less hopeful cases of mental illness would have been discharged outright, never entering an E.M.S. hospital, and many mild or brief cases would be treated by the Army psychiatrists, so escaping inclusion in these statistics. In a reply to a Parliamentary question, the proportion of men invalided for psychiatric reasons from the Army since the beginning of the war was recently stated[4] to have been 23% of the number invalided for all diseases.

An Insured Population

Dr. Collier has kindly let me see the results of an investigation he lately made on an insured population. He took 1,000 male and 1,000 female cases sent in 1940 and 1941 to the medical referee for examination either because they had been "on the funds" for an unduly long period, or because they seemed to the non-medical sick visitor to be fully recovered, or incorrectly diagnosed, or unduly prolonging the period of disability. It was an urban population of the industrial Midlands, and both accident and sickness were covered. (See Table III.)

TABLE III

No. of Cases	No. of Accidents	Indust. Disease	Sickness	Bodily Disease	Psychophysical and "Neurotic"	"Psychiatric"	Year
(a) MALE							
500	83	7	410	387	65	47	1940
500	93	8	399	411	19	40	1941
(b) FEMALE							
500	30	1	469	350	97	53	1940
500	29	2	469	363	81	61	1941
2,000	235	18	1,747	1,511	291	204	
	11·7 per cent.	0·9 per cent.	87 per cent.	75 per cent.	14·5 per cent.	10·2 per cent.	
TOTAL GROSS ..			495 / 2,000 = 24·7 per cent. Neurotic and Psychiatric.				

Caution is necessary in interpreting these figures, since the are based on retrospective data, deal with a population in whic the thrifty will predominate, especially the skilled and sem skilled workers, and are probably too low in so far as rather les

than half of those who are referred actually do attend the medical referee and the remainder who fail to attend may include a higher proportion of neurotics. They do not, of course, give the incidence in the total population, nor the proportion of mental to physical illness in all illness, but only in what seems to be unduly prolonged illness. With these provisos, they are illuminating. If the cases of pregnancy, industrial disease, and accident are deducted, we find that 28% of all these sick persons referred has a mental illness. For males the percentage was 24·6, and for females 32. It was higher in the single than in the married women (36·9% to 25·6%) irrespective of their age, but, for some reason, was lower in the married women in 1941 than in 1940 (21% to 30%), whereas in the single women the reverse was the case (37·0% to 34·8%). Dr. Collier computed that (slightly) less than half of these people with mental illness required expert psychiatric attention. Obviously this is very much a matter of opinion. Dr. Collier has also kindly shown me some figures indicating the size of the total insured population in question, from which he thinks it may be concluded that there are between 7·6 and 3·8 psychiatric cases per 1,000 of population at risk in each year. This is a tentative estimate. I do not know enough about the conditions under which the figures were collected to be justified in expressing an opinion about its validity.

A Small Sample of Referred Cases

A much smaller sample of referred cases has been analysed by one of my colleagues, Dr. Ling, who has been seeing out-patients referred by factory doctors and by local employment exchanges. In the first 100 such cases, 45 had been sent because of some supposedly physical illness and 22 for supposedly mental illness: in 15 both reasons were given. In a majority of them the question of fitness for particular work had arisen: in 8 it was their suitability for transfer to the Provinces, in 47 suitability for transfer to a different job, and in 18 their alleged unfitness for any work that had led to their reference to the clinic. Dr. Ling has analysed these in detail, and finds that 25 of them had lost more than a month through predominantly psychiatric illness during the preceding 6 months. In his judgment 17 needed specialised psychological treatment as out-patients, and 30 were suitable for admission to a special hospital where they could be given brief treatment and rehabilitation, 24 needed "social adjustment."

A Heavily Raided Area

An inquiry by Dr. McKeown, and his associates, has recently been concluded on a town near the East Coast which had been heavily raided, particularly on its residential areas. The survey showed that of the time lost, not in itself considerable, during a period of six months after the raid, half was due to damage to the factories, and half to ill-health. This ill-health was much less physical than mental, in the proportion of 1 to 11. If reckoned in days lost per absentee, the amount due to injury as compared with mental illness was as 1 : 1, but for other physical illness than injury they tended to lose twice as many days. The previous history of the workers was studied for evidence of predisposition: 29% of those who lost time through mental illness had not shown previous signs of susceptibility; I believe this to be a reliable broad estimate. It suggests that very severe stress can upset otherwise stable persons, but that usually there has been earlier evidence of predisposition—the common observation we have all made on alleged air raid neuroses. For all workers the percentage of susceptible persons was assessed at 38%, made up of 5% who still had actual neurotic illness, 27% with neurotic traits, and 6% with organic illness—*e.g.*, ulcer likely to be associated with neurotic predisposition. Among those judged not to be susceptible were included 2% who had had some psychiatric illness years before, from which they seemed to have recovered completely—*e.g.*, "shell shock" in the last war.

In certain industries in which after-raid absence was most evident there were 15 to 20% more workers judged susceptible to neurotic illness than in industries with less after-raid absence. I put these figures before you, not as final measurements but as indications of what a soberly conducted but necessarily incomplete inquiry seemed to indicate.

The work record over the previous six months of the workers who had lost time because of mental ill-health after the raid was checked against the figures of the Ministry of Labour and of the Trade Union, and was therefore reliable: 5% of these men and women had not lost any time through absence during the previous six months; 11% had lost some time less than two weeks; 16% had lost between two and four weeks; and 17% had lost more than four weeks. It was found that the amount of time lost per absentee was not higher after the raid in those who had lost most time previously. (Persons for whom work was not available because of damage, etc., have not been included among those losing time for nervous reasons, even though their continued absence was due to neurosis.)

Of workers who lost time for psychiatric reasons after raids which occurred a year ago, 10% were still not working six months later; 15% of the remainder lost time after later, less severe raids; indeed, all but 13% of those who lost time because of nervousness after these minor raids had lost time after the severe raids a year ago.

TABLE IV

	Total Time Lost Through Absence by Whole Group of Workers	Time Lost due to Probable Neurotic Illness	Time Lost due to Definite and "Pure" Neurosis	Total Loss due to Neurosis
Men ..	2·5 per cent.	0·47 per cent.	0·08 per cent.	0·55 per cent.
Women	6·6 "	0·75 "	0·34 "	1·09 "

These findings are complementary to those published by Russell Fraser[8], in which he described the neurotic disturbances in people whom he followed up ten months after they had been admitted to a First-Aid Post during a period of heavy bombing. Two-thirds of those who had been buried for more than one hour developed neurotic symptoms which in the majority of cases caused them to be absent from work, the periods of incapacity lasting as long as six or seven months. Dr. Fraser is at present carrying out for the Industrial Health Research Board a detailed investigation into the incidence of neurosis among industrial workers: it is not possible as yet to give any results from it.

The Services

So far I have been giving you a pastiche of the evidence bearing on how war has influenced the amount of mental illness in our population. But I have said little about the amount of mental illness in the Services, and nothing about the measures taken to keep the Service population mentally healthy. In the Services, doctors and administrators have had no choice; they must primarily consider public health, not private disease, aim to keep people well, rather than to wait until they come along complaining of something which must be treated. Also they must put people into jobs which suit their capabilities so that they will not break down. Consequently there has been a great development of psychiatric and psychological work in the Services. It has exposed some defects in our civilian psychiatric arrangements. The regrettable gap between the psychiatry of the mental hospital on the one hand, and ordinary medicine and out-patient or consulting-room psychiatry on the other, had not been narrowed or bridged sufficiently to ensure that the majority of psychiatrists would in general be prepared, in outlook and clinical experience, forthwith to undertake without qualms or over-confidence the preventive work now falling in increasing measure on their shoulders.

The Future

In a follow-up survey[8a] which I made of men discharged from the Army because of neurosis it appeared that in many cases these men remain ill and unproductive, and that there is room for more adequate provision for them. Such provision is not wholly a question of direct medical treatment, though it should be under continuous medical direction. In psychiatry the doctor can often do less good by his individual attentions, even including psychotherapy, than by readjustment of the conditions under which the patient has been living; consequently the psychiatric social worker is an indispensable member of the staff of an out-patient psychiatric clinic, and co-operation with the Ministry of Labour and other social organisations is essential to good work. I believe that there are two principles to be

needed. The first is that the organisation of health services cannot be done in specialist compartments. Psychiatry should be part of a well-integrated social and medical service—the antithesis of what, in many quarters, psychiatry has been in the past. The second principle is that progress can be ensured only through surveys of the existing situation. An investigation into the number of neurotics in a group of the population, or into the success of psychotherapy, is not research in the proper sense of the term, but is an indispensable part of the machinery of progressive administration. Only by such surveys can we avoid stagnation or spasmodic lurches forward, sometimes in the wrong direction.

I do not think we shall need cohorts of psychiatrists. Much that is now done by psychiatrists should be handled by the properly trained general practitioner, alive to the social and psychiatric aspects of his work. Specialists in diseases of the chest are not called in to deal with every respiratory disorder, nor surgeons with every abscess and fracture; ante-natal care is competently provided by doctors who do not specialise in obstetrics; and I hope psychological medicine will never be the exclusive province and mystery of psychiatric shamans. I do not know what troubles the difficulties of war and post-war society will bring on this branch of medicine, and I am conscious of the gaps, or rather canyons, in our knowledge, but I am sure that adequate attention to psychiatric problems is imperative in any good medical service.

I am indebted to the Ministry of Home Security, the Board of Control, the Emergency Medical Service, the General Register Office, the London County Council, Dr. H. E. Collier and Dr. T. M. Ling for information kindly supplied.

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A TREATMENT FOR PEDICULOSIS CAPITIS

By ERIC BLACKSTOCK, M.D., B.SC., D.P.H.,
Venereal Diseases Officer, Birkenhead C.B.

Coincident infestation of the skin of the body by *Sarcoptes scabiei* and of the skin of the head by *Pediculus humanus capitis* is far from uncommon. It is unfortunate that scabies seldom, if ever, affects the scalp; otherwise it would not have been left to the writer to draw the attention of the profession to the clinical finding that an emulsion of benzyl benzoate is a most useful agent in the treatment of pediculosis capitis. Preparations of lethane are very effective in the destruction of lice, but they do not with the same ease dispose of the eggs cemented to the hairs. It is in its solvent action on the cement that benzyl benzoate emulsion excels, and after its application the nits can very easily be washed off. I have tried on detached hairs the effect on the cement of benzyl benzoate alone and of the emulsifying agent alone; and I am satisfied that the action is due to the combined action of benzyl benzoate and the emulsifying agent. It is important, however, to have an emulsifying agent that is sufficiently non-irritant to allow of repeated application.

Coccal infection of the scalp is common in lousy heads, and it is found that the impetiginous lesions clear up very quickly when the head is treated daily with this emulsion. Some preparations of benzyl benzoate cause irritation on repeated application, but the latest formula of "ascabiol" can safely be used daily for three or four days.

The wide prevalence throughout the country of scabies and lice apparently caused much scratching of heads at Whitehall, and the result has been the issue of official memoranda more numerous than helpful; and the ravages of the *Sarcoptes* and the *Pediculus* show little signs of abating. Clinical colleagues can be assured, however, that if they will adopt the use of a non-irritant benzyl benzoate emulsion in the treatment of pediculosis capitis an early result will be that their patients will cease head-scratching; and perhaps, when the efficacy of this method is widely recognised, a late result may be less pen and head-scratching in official circles also.

MATERNITY AND CHILD WELFARE OF THE FUTURE

REPORT BY THE M. & C.W. GROUP

The following interim report was submitted by the M. & C.W. Group to the Medical Planning Committee of the Society in May, 1942. It was not intended to put forward a complete scheme but rather to indicate the trend of thought which became apparent during the discussions of the Group Committee on medical planning.

It is envisaged that in the health centres of the future the population in the area of a centre should be served by a group of doctors among whom there should be some men or women whose interest, training and experience qualified them to be charged with the preventive and curative services for children. The health centre operated on such lines could not only be in accordance with the principle already accepted, to many doctors working group practices but could also assist with the development of public opinion among the great mass of the community at present served by the clinics for children. It was thought probable that maternity work could and should tend to develop as a separate service from child health, but that the latter should be closely linked or associated with the school medical service.

This report does not necessarily represent the views of the Society.

The M. & C.W. Group put forward the following observations as a suggested basis for the future reconstruction of the maternity and child welfare services:—

General

1. The maternity and child welfare service should rank high in any constructive medical scheme for the future, as the ultimate health of a community depends on that of the children and child-bearing women.

2. Whilst the preventive and curative medical services for women and children are of great importance, health is also dependent on factors outside medicine. Maternity and child welfare must therefore be considered in its widest sense, and the adequacy of such services as the provision of food, housing and financial assistance are essential to a satisfactory scheme.

(A list of medical and other health requirements which should be available for all women and children in order that they may reach and maintain optimum health is attached as an appendix, and it is thought desirable that medical plans for the future should include all such facilities.)

Education

3. Early education in the laws of health is an important branch of preventive medicine. This should include organised teaching of parentcraft in schools and elsewhere throughout adolescence. An extension of such teaching would soon justify itself by a reduction in infant mortality and in improvement in the level of child health.

Administration

4. A complete maternity and child welfare service with ancillary services should be available for all. This should be part of a national salaried general medical service, organised in some form of comprehensive scheme with the "Health Centre" as the local unit.

5. It is important that during any period of transition in the organisation of the medical services there should be no interruption in the progress in maternity and child welfare which has already been accomplished. The preventive services must be continued and the principle of regular and adequate medical supervision of the child up to school-leaving age maintained. Pending the establishment of a national service, the present preventive services should maintain their identity and continue their development.

Medical Care and Supervision of Children

6. The prevention and the skilled treatment of illness in children is of such importance that the service should be in the hands of doctors with additional post-graduate experience of their subject.

7. These doctors should be responsible for both preventive and curative medical services.

8. The division in the present administration of medical services when the child reaches the age of five years is artificial, and the present maternity and child welfare and school medical services should be amalgamated so that one service covers the child from birth to school-leaving age. (*Note.*—The above observations do not relate to the hospital treatment of children.)

Maternity

9. Attention should be drawn to the increasing hospitalisation of maternity cases, and sufficient hospital accommodation should be provided for all women who require or who desire hospital confinement. Maternity hospitals should be separate units but attached to general hospitals.

10. The obstetric care and confinement of the mother, as apart from her general supervision, should in all cases be carried out by a specialist obstetric service based on the maternity hospital.

11. There are at present an insufficient number of hospital beds for the admission of women during pregnancy, and a minimum of ten hospital beds for ante-natal purposes per thousand births in an area are required. This is in addition to hostel accommodation for expectant mothers, which should also be attached to maternity hospitals, especially when such hospitals serve rural areas.

12. Increased facilities such as hostels and short-period residential nurseries are needed for the care of children during the mother's incapacity.

Requirements for Maternity and Child Welfare Scheme

1. FOOD

(*a*) An adequate supply of suitable clean food including milk and necessary food factors at a reasonable cost or free in necessitous cases. (*b*) Adequate inspection and control of imports, manufacture, storage, quality, cleanliness and distribution, etc., of all foodstuffs. (*c*) Adequate supply of pure drinking water.

2. ENVIRONMENT AND HOUSING

(*a*) A universally high standard of housing. Houses should be well ventilated, dry, fitted with suitable sanitation and ample wash basins, and reasonably sound-proof. Baths and facilities for washing clothes and means of obtaining plenty of hot water for such purposes should be available; also, cooking facilities and refrigerators. Sufficient garden and play spaces, roof gardens if necessary. Accommodation for perambulators. Communal nurseries. Hostels where necessary. (*b*) Continued progress in the supervision, inspection, control and rebuilding of working-class houses and flats. (*c*) Cleansing stations.

3. PREVENTIVE MEDICINE

A.—Educational. There should be an expansion of education with increased emphasis on training in the laws of health, including: (*a*) The principles of feeding and simple cooking. (*b*) The teaching of parentcraft, particularly of mothercraft, in schools and to older girls before marriage. (*c*) Instruction in the value of special procedures—*e.g.*, diphtheria immunisation, etc. (*d*) Increased facilities for physical recreation during school and working years.

B.—Regular Medical Inspection and Special Health Advice. Including: (*a*) Ante-natal and post-natal examinations. (*b*) Infant welfare, toddler and school inspections. (*c*) Regular medical inspection of adolescents and adults. (*d*) Regular dental inspections. (*e*) Health visiting. (*f*) Arrangements for immunisation, vaccination, etc.

4. TREATMENT SERVICES

A. Domiciliary and "Out-Patient."—Facilities should be available for: (*a*) Consultations with a doctor in a "surgery" within reach of a patient's home in cases of deviation from health, including infantile ailments. (*b*) Domiciliary medical visits; including cases of illness of mothers and children; also attendance at confinements. (*c*) Consultations with specialists at hospital or elsewhere, within reasonable distance of patient's home, including gynaecologists; obstetricians; paediatricians; physiotherapists; oculists; orthopaedic, ear, nose and throat, and general surgeons; physicians; experts in infectious diseases and in tuberculosis; psychiatrists; child guidance experts. (*d*) Adequate laboratory, radiological, etc., aids to diagnosis. (*e*) Treatment of minor ailments—*e.g.* for school children, toddlers—also first aid for factory accidents, etc. (*f*) Gynaecological clinics. Arrangements for diagnosis and treatment of venereal disease, tuberculosis, cancer, and mental disease. (*g*) Facilities for special forms of treatment—*e.g.*, radium, x-ray, physiotherapy, dental including orthodontic, ophthalmic including orthoptic. (*h*) Arrangements for supply of drugs, dressings, surgical appliances, spectacles, dentures. (*i*) Domiciliary nursing, including adequate supply of midwives, maternity outfits, home helps, home nursing, etc.

B.—Institutional.—(*a*) Adequate provision of hospital beds for medical, surgical, acute and chronic cases. (*b*) An adequate number of ante-natal and obstetric beds and provision for gynaecological and infant cases. (*c*) Beds for special conditions including infectious disease. (*d*) Beds for cases requiring investigation. (*e*) Adequate institutional provision for care of senile, mental, blind, deaf and dumb, mental defectives, etc., to relieve the young mother of added domestic burdens. (*f*) Sanatoria.

5.—AMBULANCE AND TRANSPORT SERVICES

For obstetric cases and for conveying mothers and children to hospitals, clinics, schools, etc.

6.—CONVALESCENCE

Adequate provision of beds including those for post-natal cases, nursing mothers and young children.

7.—CARE OF CHILDREN APART FROM MOTHER

(*a*) Foster-mothers, adequate supply, inspection and remuneration. (*b*) In industrial areas, adequate provision and supervision of daily minders, day nurseries, nursery schools, residential nurseries. (*c*) Arrangements for boarding out tuberculosis-contact children; possible legal powers, etc. (*d*) Arrangements for care of children during illness or during confinement of mothers.

8.—FINANCIAL ASSISTANCE, EUGENICS AND RESEARCH

(*a*) Educational. (*b*) Family allowances. (*c*) Better organisation and facilities for assistance of unmarried mothers and illegitimate babies. (*d*) Clinics for purposes such as pre-marital advice, marriage guidance, birth control, abortion, sterility, etc.

9.—INDUSTRIAL LEGISLATION

Regulations controlling employment of expectant and nursing mothers, including financial assistance and care of children.

DISCUSSION ON DIPHTHERIA*

The CHAIRMAN, Dr. A. TOPPING, said: Dr. Scott has made a plea, with which I agree, for earlier admission of cases to hospital. He has shown us how the death-rate varies directly with the time of onset of the disease and the administration of an adequate dose of antitoxin. He admits that there are difficulties about getting doubtful cases into hospital. Dr. Scott has drawn attention to this absolute farce of the Registrar-General's returns of diphtheria, and he points out quite rightly that the face of the practitioner has got to be preserved, and that it is hard on him when a case which he has told the parents is diphtheria turns out actually not to be diphtheria. The practitioner is asked and says to the parent: "Your child is ill; there is something wrong with the throat; I can't tell you whether it is diphtheria or not. The child will be far better in hospital, where he can get expert investigation quickly and no-one will be more pleased than I if they can say after a day or two that it is not diphtheria." I am sure it is only a question of time before the people of this country will appreciate that.

Dr. Begg pointed out the advantages of a consultant service. I look forward to the time when we shall have experts from the fever hospitals available to give their knowledge to the practitioners of the town and not keep themselves immured behind high walls. I think it is ridiculous that people with their knowledge and experience should not be able to come out and give their advice and experience to the Medical Officer of Health.

Dr. Cruickshank made the plea for extension of the use of antitoxin in the home. I have had some experience of that myself and, as Dr. Scott pointed out earlier, it doesn't work at the moment. All fever people agree that the man dealing with the case must be an expert at assessing quickly the seriousness of the condition and should be able to make a more or less scientific estimate of the amount of antitoxin required in any one case; and with the present inadequate training of practitioners in fever work, which we hope will be improved in future, it is impossible to suggest that the practitioner is going to be able to judge which case requires a very massive dose and which a small one.

I think, Dr. Topping concluded, the clinician favours Dr. Scott's suggestion that cases should be admitted on suspicion of diphtheria; that we should aim at having far more cubicle beds; and that our fever hospital people should be available to help in epidemiological work.

Dr. V. FREEMAN (Islington) said: I should just like to make one or two very brief observations arising out of my personal experience. By a simple arithmetical calculation one can show that the performance of an ante-Schick test where one expects a third or over of the children to be naturally immune actually saves on injections, and from the ante-Schick testing which I have done it appears—and this

* Discussion on papers read before the Fever Hospital Medical Services Group. See PUBLIC HEALTH, Nov., 1943, pp. 14, 15, 17.

s subject to very considerable local variation—that in my area a third of the children become Schick negative by the time they are nine years old; so that I don't do an ante-Schick test up to that age, but over that age I do an ante-Schick test, on all over nine years. And that saves further injections; it saves work on balance and also saves material.

Over the past eighteen months there have been 66 diphtheria notifications in children with a history of immunisation which have been confirmed in only 24 cases, giving a correct or confirmatory rate of 36%. Some of these cases have only been partially immunised, if at all. I have taken into account cases which have been said to have been immunised in the reception areas, and, as one knows, the history there is very often incomplete, where it can be obtained at all. But taking the cases that I know have been immunised, which I have immunised myself, or for which I have been able to obtain a very full history, only six cases have been confirmed diphtheria, and that number is out of approximately 12,000 children. Of these six, only one had a severe attack. Four were of the *gravis* strain, one *mitis*, and one *intermedius*, which corresponds very roughly to the normal distribution. Of those children where there was no history, or where I could not get a history, of immunisation, there were two deaths, but I could not obtain any further particulars. I may add one point—I looked up the immunising material in these cases that got diphtheria, and it is interesting that four of them were immunised about the same time with two batches both of which turned out to show an exceptionally high degree of Schick-positive rates.

Dr. Guy Bousfield: I was very much interested in Dr. Begg's history of his one death in hospital, in the case which was presumed to have been immunised. In 14 years' work, taking care to follow up every reported case of diphtheria that occurred in any of the Boroughs I was working for, I am unable to record a single fatality in any child. That embraces a number of cases which runs into thousands. I am very doubtful whether I can recall even a severe case of paralysis. The point that must be made is this—that in all our post-Schick testing every toxin that has been used has always been controlled on primary cases, so that if there has ever been any trouble with the toxin, if we have ever struck a batch of toxin that had gone down, we have been able to identify it, chase those children, and dose them again. The net result is that every child we have passed out we believe to have been genuinely Schick negative. I think some of the so-called failures in immunisation have occurred either from faulty post-Schick testing or testing with weak material. It does occur periodically. Schick toxin is funny stuff, a very delicate substance, and it isn't enough just to take a bottle and test with it and say that child is Schick negative unless you are perfectly certain that you are getting good positive readings on primary cases at the same time.

Dr. Begg: In this particular case the parents had some vague idea that immunisation had been carried out when the child was evacuated. The details I did get were, first of all, that on proper standards the child was not immunised because it had no post-Schick test. But the most disturbing feature was the answer that it had either had 0·1 and 0·3 c.cm. of A.P.T. at an interval of four weeks or 0·3 and 0·5 c.cm. And as I say, the impression one gets is that if the immunisation was done in the same way as the records were kept it might not have been very reliable.

As far as diphtheria in immunised people is concerned, 66 cases really doesn't represent a big experience. The ones that we have seen have mostly been very mild, mild from the start, but even in those cases in which the prognosis would normally not be good so far as complications and paralysis are concerned, I have been struck by the absence of complications. I think these immunised cases do better than one would expect them to do from their initial clinical severity.

Dr. E. C. Benn (Leeds): In the town in which I work I see some 30 to 60 cases of diphtheria in inoculated children each year. I have seen three deaths in patients who were proved to be immunised. The records were available. They had been done by the municipal staff. In one of these a post-Schick test had been done and it was positive. The child was therefore known to be susceptible in spite of the immunising injections.

Then at the other end of the scale we frequently see patients who have had a history of sore throat. The throat has been mildly sore, the doctor has not been able to diagnose diphtheria definitely, clinically; he has taken a swab, the child is admitted to hospital a day or two later, and on admission to hospital there has been practically nothing to see. The child was relatively well. Now these patients are a clinical problem. On admission to hospital the throat is clean, there is nothing to see, the child is not toxic, no sign of toxaemia at all, but in my opinion they had very mild diphtheria—mild diphtheria in patients who were immune. I would like to ask Dr. Begg if, in his opinion, these cases should be classified as true diphtheritic infection. In my opinion, in order to be perfectly honest, they should. I should also like to ask Dr. Cruickshank if the return case rate in diphtheria has fallen since the introduction of tellurite medium for discharge cultures.

Dr. Begg: It is much better to arrive at a diagnosis of active diphtheria even in the mildest cases than to stand the risk at a later date of having your diagnosis questioned. The level between diphtheria and not diphtheria is sometimes so ill defined that from a clinical point of view it may be impossible to decide. But from the point of view of avoiding any subsequent criticism that we are boosting the immunisation scheme unwisely I think it much better that we should arrive at a diagnosis of mild diphtheria. The important thing really is that these cases do well.

Dr. Cruickshank: I really thought Dr. Benn and his colleagues ceased to have any faith in case return rates. Surely the return rate is an entirely fallacious thing. It is quite impossible in a city like London to place any reliance on it. We have tried with our scarlet fever cases by typing them to see whether cases that would be classified as return cases, cases occurring in intimate contact with the child within a month of discharge, are due to the same serological type as the child went out with, and more often than not we find that that child is admitted with an entirely different type of streptococcus. The same sort of thing applies with diphtheria as there are so many possible sources of infection.

We have been trying to keep records of diphtheria in children who have been immunised or in cases with known Schick-negative reactions before infection. In about a dozen of these in which the Schick test has been negative there is no doubt that these children have had a diphtheritic infection. I want to call it diphtheritic tonsillitis. In two cases in our Schick negatives we have had local glandular involvement as well. What interests me particularly is that in these dozen cases the infecting strain has always been either *gravis* or *intermedius*. We have not seen any clinical infection in these children due to *mitis*. That fits in with what we know of these strains; *mitis* has very little power to invade tissues, and either *gravis* or *intermedius* will produce local infection in a child. But, as Dr. Begg says, the infection will be more or less localised and the risk of any secondary complications with paralysis is practically nil.

Dr. H. M. Leete (Hull): I have had an opportunity of watching diphtheria in what I believe to be high immunes. I have worked now for a little over 12 or 14 years in Hull, where we have had two or three waves of diphtheria due chiefly to the *gravis* type, and we have typed all our cases during the last five years. When you have a heavy invasion of *gravis* in the district any immune will go down to some extent with diphtheria, and I think we must face the fact that diphtheria can occur in immunes. To attempt to explain away every case is wrong and does not correspond to the facts. But when diphtheria occurs in high immunes it is certainly a very highly modified disease. Of that there can be no question. Let's find out what happens to these cases. I have seen about 30 of them. I didn't give them any antitoxin provided that the throat showed no lesion beyond the tonsils, but I took their blood and, thanks to Dr. O'Brien and his co-workers, I was able to get their blood antitoxin measured at the onset of the attack (at the same time as the Schick re-test was done) and about ten days later; and then we were able to see what the rise of antitoxin was and the figures varied a good deal. I was surprised to find Schick negatives sometimes were returned with 1/100th or less than 1/100th of a unit of antitoxin per c.cm. But at ten days we used to get quite high figures—2, 5, 10, and my very best was 13 units.

With regard to this question of final Schick testing, I would like to put in a plea: is it really necessary now? When you get an antigen of undoubted reliability, as I think I may say we have now, is it necessary to do a post-Schick test to explain some of the things which may occur after.

Dr. A. L. K. Rankin (Twickenham): In my 17 years' experience, up till 18 months ago, I was always glad to be able to say that I had never seen a death in an immunised child. Unfortunately, a year ago, I saw a case of diphtheria which in an immunised child ended fatally: a girl of six who had had three 1 c.cm. injections of T.A.M.; posterior Schick had been carried out and had been entered as negative; the case was simply overwhelmed by toxaemia and died within about six hours of admission. That is the only case I have seen.

Dr. Ian Taylor (London County Council): We have been doing a survey of the bacteriology in the throat and nose of some thousands of schoolchildren recently and took an opportunity at that time to discover whether they had been immunised or not. It is interesting to note that in September last, when this was first done, about 55% of the children selected had been immunised and when it was repeated recently the figure had gone up to 63%. The 63% is getting very near to the stage when we might begin to feel that it is becoming effective, and yet in spite of that Dr. Cruickshank said the carrier rate was well under 1% in both cases.

Dr. A. Topping: There was one point in my rather inadequate summing up of the papers—the extremely important question of laboratory facilities being available for the public in the boroughs and in the cities. It always seems to me lamentable that the practitioner in Hampstead has no entry to the first-class laboratory run by Dr. Cruickshank at the North-Western Hospital. Similarly, the same applies all through London. It may need some local changes, but I think we should aim at having the laboratory facilities open to the practitioner to use if he so desires.

Dr. R. A. O'Brien (Beckenham): I have wondered for many years what happened in the days before antitoxin. How did a person ever cure himself of diphtheria? So far as I can see, the obvious answer is that he produced a lot of antitoxin himself. The question can never now be solved, because if people think their child is suffering from diphtheria they don't dare leave it without antitoxin. I have always regretted that, owing to the death of my colleague, we never published a work that we did at Cainbridge Hospital some years ago. We were rather baffled because many of the children who recovered from diphtheria were Schick positive. We thought they ought to be Schick negative. But we had, fortunately, a small group like the ones mentioned by Dr. Leete. They used not to give antitoxin to very mild cases and some of these mild cases were undoubtedly true diphtheria. Speaking from memory, I think in every case of that kind not treated with antitoxin, where we had the opportunity of getting estimations at a later date, we found that the curve shot away up. So, presumably, they did the obvious thing and made a quantity of antitoxin themselves.

So that in this doubtful field of immunised children getting diphtheria, if we dared to leave these children without antitoxin we would get the answer to the question, but of course there is the obvious risk in doing it and we dare not do it.

BOOK REVIEW

Revelation of Childbirth: the Principles and Practice of Natural Childbirth. By Grantly Dick Read. London: Heinemann. 1942. 262 pp. Price 21s. net.

Nearly ten years after his book on *Natural Childbirth*, Dr. Dick Read has elaborated his teaching in this present volume, which should be read by all concerned in the conduct of obstetrics. The thesis put forward is that uncomplicated childbirth is a normal and physiological process and hence should not cause pain. The neuro-muscular mechanism by which the uterus expels its contents is similar in essentials to that of other hollow viscera, and Dr. Dick Read claims that childbirth should fall into line with the rest and become a painless function. He is further convinced on clinical evidence that the normal sense of relief and increased physical well-being after any excretory act is heightened in the case of the uterus into ecstasy.

It is a difficult task to overcome the inhibitions and taboos which have become established during the course of some two hundred thousand years. Pain and labour have been regarded as synonymous in childbirth, and labour in any sense has had a tendency to be considered as necessarily unpleasant. Only recently has it been realised that, just as it is possible for work to become one of the greatest pleasures in life, so childbirth may become the culmination of pleasurable physical and emotional experience. At the onset of Dr. Dick Read's campaign few doctors were on his side, which perhaps accounts for a certain over-emphasis on his part. His patients, however, are enthusiastic in their support, and the case records given in this book make interesting reading. It is now well known that the fundamental principle in the author's teaching is to reassure the expectant mother and to teach her to relax during pregnancy in order that she may relax during labour. With absence of tension there should be no uterine colic or cramp and the contractions should be painless. Dr. Dick Read is convinced that it is usually the impulse of uncontrollable fear which makes a woman cry for help—from the fear of the imminence of pain rather than from actual pain, and from her doubts and ignorance as to what is happening to her as she feels herself at the mercy of forces over which she has no control. One must confess that the surroundings of a hospital confinement are not conducive to the elation and contentment of mind with which the young mother should set forth on the great experience of childbirth. Books such as this are most valuable in leading her to the right outlook, which is to regard childbirth as the normal sequence of marriage, and to be regarded in the same light. It should be mentioned that Dr. Dick Read has no objection to the use of analgesics, should labour be painful: he merely points out that it is better still when it is painless. This seems sound preventive medicine.

OBITUARY

Edward Henry Allon Pask, M.D.

We regret to record that Dr. E. H. Allon Pask, medical superintendent of the Wrightington Hospital and a consultant tuberculosis officer of the Lancashire County Council, died on October 4th, at his residence on the hospital estate.

Edward Henry Allon Pask was born at Worksop in 1884. He qualified M.B., Ch.B., Sheffield University in 1908, and took his M.D. and B.S., London, in 1912. After 15 months of house appointments at the Sheffield Royal Infirmary he undertook some private practice and entered the Colonial Service, being posted to Nyassaland, where medicine was tempered with big game shooting. He returned to the Sheffield Royal Infirmary and became senior house-physician and resident surgical officer. After acting as assistant medical superintendent of North St. Pancras Infirmary, he entered the tuberculosis service as assistant to the late Dr. Dixon at the Birmingham Tuberculosis Dispensary and Yardley Road Sanatorium. This was the period of "mass" inoculation of tuberculin, just when, or before, the National Health Insurance Act came into force. Later he became medical superintendent of the Salterley Grange Sanatorium, near Cheltenham, where his Chairman was Neville Chamberlain. In 1913 he joined the Lancashire C.C. and undertook dispensary work till the outbreak of the war, when he joined the Forces; returning in 1916 to become the first medical superintendent of the newly built High Carley Sanatorium, near Ulverston. In 1931 he was promoted to the newly built Wrightington Hospital for non-pulmonary tuberculosis (226 beds), and his responsibilities here were much increased during the present war. He was also responsible for the dispensary work in the surrounding Wigan County Area. In 1930 he went to Canada and the United States with a party of British tuberculosis officers. He also undertook, at the request of the Ministry of Health, an investigation in Germany into the merits of Gerson's salt-free diet. He was an outstanding example of the first-rate administrator combined with first-rate clinical ability. Urbane, thorough, and most competent, he earned the confidence, respect, and affection of his medical colleagues. He enjoyed golf and gardening. He leaves a widow. Cremation took place at Anfield, Liverpool, on October 7th, 1943, when as many of his medical colleagues as war-time conditions permitted paid their last respects.

W. Burton Wood, M.D., F.R.C.P., D.P.H.

We regret to announce that Dr. W. Burton Wood died on November 2nd at Shalford, near Braintree.

Wilfrid Burton Wood was the son of a Manchester merchant. He attended the Leys School and later Jesus College, Cambridge. He qualified M.R.C.S., L.R.C.P. in 1908, took the B.Ch. in 1910 and the M.B. in 1912, and proceeded to the M.D. in 1913. He qualified M.R.C.P. in 1923 and was elected a Fellow in 1940. After service in the Middle East during the last war, Dr. Wood began his public health career in the Tilbury Dock area as Tuberculosis Officer. He quickly showed his great interest in the subject of tuberculosis, and was untiring in helping his patients. When the part-time Medical Officer of Health retired he was asked to undertake the duties of M.O.H. He spent most of his spare time at week-ends and holidays in doing voluntary work at the London Chest Hospital. When he took his M.R.C.P. he was put on the honorary staff there.

In 1926 he entered private practice as a consultant in London. He was also appointed Senior Clinical Tuberculosis Officer to the Essex C.C.

Dr. Wood wrote many articles on various aspects of chest disease, particularly in children and adolescents, and his profound knowledge of radiographic pictures of the lungs often provoked much valuable discussion. He has undoubtedly been the spearhead of the anti-tuberculosis campaign in Essex during the last twenty years, and his passing will leave a gap extremely difficult to fill.

Burton Wood had a remarkable command of the English language. He was a great bookworm, and as a lecturer he was outstanding. He had a pretty turn of sarcasm and did not suffer fools gladly. In particular he had a horror and contempt of humbug, and never feared to express his own opinions, usually in a forthright manner and always to the benefit of those with whom he came in contact. He was a most delightful colleague.

In 1929 he married Miss Boston, of Southport, by whom he had a son and two daughters. Our deepest sympathy goes out to them in their loss.

George Hamer Leigh, M.D., D.P.H.

We regret to record that Dr. G. H. Leigh, ex-consultant tuberculosis officer of the Lancashire County Council, died on Nov. 12th in Lancaster.

Dr. George Hamer Leigh was born in 1876, qualified M.B., Ch.B., Manchester University, in 1911, and later took his M.D. and D.P.H. After several house appointments he undertook private

practice for three years, and, before joining the County Council as assistant tuberculosis officer in 1914, he was senior medical officer at the Westmorland Sanatorium, Grange-over-Sands. In 1934 he was promoted consultant tuberculosis officer, and became responsible for the dispensary work in a large area extending from Lancaster to Chorley, containing a population of 277,000. In addition he was visiting physician of the Lancaster Pulmonary Hospital. He retired from the County Council service in 1940 on attaining superannuable age, but continued to devote his time and energies to the interests of his profession, being the Chairman of the North-Western Tuberculosis Society in 1942. Loyal and most conscientious, he earned the confidence, respect and affection of his colleagues. Cremation took place at the Carleton Cemetery, Blackpool, on Nov. 18th, 1943, and the ashes were interred at the Parish Church, St. Annes-on-Sea, when as many of his colleages as war-time conditions permitted paid their last respects.

ARCHIBALD OLIVER, M.D., D.P.H.

We regret to announce that Dr. A Oliver, of Thetford, Norfolk, died in London on Oct. 4th, at the age of 62.

Archibald Oliver was the third son of the late Archibald Oliver, of Edinburgh. He studied medicine at Edinburgh University, graduating M.B., Ch.B., in 1904, and taking the M.D. and the D.P.H. in 1908. In 1912 he settled in Thetford and became M.O.H. to the Urban District Council. He inaugurated the Thetford maternity and child welfare centre, and was also president of the local branch of the British Legion, a justice of the peace, and a governor of the Thetford Grammar Schools. During the war of 1914-1918 he served in the R.A.M.C., holding the rank of Major. He was D.A.D.M.S. at Salonika, and received the Greek Order of St. Saviour and the Médaille des Epidémies in recognition of his work on malaria in Greece.

Dr. Oliver will be greatly missed in the Thetford district, where he was known to many not only for his great interest in public health work, but also as a keen golfer and angler.

Egham Centre has been opened by the Ministry of Labour and National Service for the purpose of assisting the return to work of men who, after a period of hospital or other medical treatment on account of serious injury or illness, are not immediately fit to take up employment. The Centre has workshops fitted with machine, bench, and other equipment which can be used to test suitability for various occupations in the building and engineering trades. Other occupations are in gardening and as handymen. These provisions will be extended in the light of experience. There is a medical officer who supervises the course for each applicant and the progress made. Gymnasium, sports fields, recreation hall and other facilities are provided. The course is residential and is intended for men between the ages of 18 and 50, but other men may be admitted exceptionally. At present the Centre can take 100 men, but accommodation is being extended to take 250. The period of the course is from 6 to 8 weeks. It is of an active character and is therefore not suitable for men who are still in the convalescent stage. The Centre does not provide medical treatment or nursing. Cases of infectious disease and certain disabilities cannot be accepted. Admission is limited to men who will be able to go immediately to employment or to take up a full-time course of vocational training. Men can be admitted to the Egham Centre either direct from hospital or through a local office of the Ministry of Labour and National Service. They will receive free board and lodging, and allowances. Further information about the Centre may be obtained at any local office of the Ministry of Labour and National Service.

A refresher course in tuberculosis for general practitioners will be held on Thursday afternoon, Dec. 16th, and all day Sunday, Dec. 19th, at the Medical Society of London, 11, Chandos Street, London, W.1. The course has been arranged by the Joint Tuberculosis Council and N.A.P.T. Joint Committee on Education, in collaboration with the Local Medical and Panel Committee for the County of London and the London Public Medical Service. The fee for the course is £1 11s. 6d. An applicant who is a member of the London Public Medical Service may have the fee remitted by that body and deducted from his account. Early application should be made to Dr. Harley Williams, Tavistock House North, London, W.C.1.

Dr. Joseph Smart will lecture on modern methods of diagnosis; Dr. James Maxwell on home management; Mr. T. Holmes Sellors on collapse therapy; Dr. P. Kerley on diagnosis of *x*-rays; Dr. C. H. C. Toussaint on facilities offered by local authorities for the prevention, diagnosis and treatment of tuberculosis; Dr. W. P. H. Sheldon on tuberculosis in children, and Dr. Andrew Morland on the peculiarities of tuberculosis.

The index and title page of PUBLIC HEALTH, Vol. LVI (October, 1942-September, 1943) is now ready for distribution, but in order to avoid wasting paper copies will be forwarded on application only to members and subscribers who bind their volumes.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

DENTAL OFFICERS GROUP

President: Capt. A. Quentin Davies, L.D.S. (ENG.) (Army Dental Corps).
Hon. Sec.: A. Gordon Taylor, L.D.S. (ENG.) (Dental Surgeon, L.C.C.).

The Annual General Meeting of the Dental Officers' Group was held on May 29th, 1943, in the Central Room of Tavistock House. In the absence of the President, Mr. J. F. Pilbeam, immediate past president, took the chair. He was supported by eleven members. The minutes of the previous Annual General Meeting were read, confirmed, and signed.

The Hon. Secretary then presented his report on the work of the Council of the Group during the past two years. These had been years of difficulty, as Mr. F. Jones, Hon. Assistant Secretary had been called up and Mr. R. Chase, Hon. Treasurer, had taken an appointment in Yorkshire. Mr. S. K. Donaldson had been appointed Hon. Treasurer *vice* Mr. Chase and was assisted by a finance committee which would be entirely responsible for the finances of the Group.

The Yorkshire and Welsh Sub-Groups had experienced great difficulty in holding meetings owing to restrictions on travel.

The interchange of observers with the committee of the Public Dental Officers' Group of the British Dental Association had proved a success.

In 1941 a film committee had been set up to prepare a script for an educational film on oral hygiene. Sir Frank Pearce, Mrs. Baker, and Mr. Samson were called in to assist, and Mr. B. R. Townend had generously supplied material. The Committee was successful in its aim, but financial difficulties still stand in the way of the production of the film. It is hoped that the Central Council for Health Education may be able to produce the film.

Early this year the Society brought out its Report on a National Health Service. The Group Council did not find themselves in complete agreement on the paragraph dealing with the dental services, and drafted certain amendments. It is regretted that these amendments were not adopted in the final report.

In 1942 Mr. R. H. Cumine and Mr. F. R. Hutan, both founder members of the School Dentists' Society, were elected fully paid up members of the Society.

Officers, Councillors, and Representatives for the year 1943-4 were elected. (See p. 12, PUBLIC HEALTH, October 1943.)

METROPOLITAN AND HOME COUNTIES SUB-GROUP

President: Miss M. S. MacKinnon (S.D.O., Reading C.B.).
Hon. Secretary: Miss W. M. Hunt.

A meeting of this sub-group was held in the rooms of the Society on July 3rd. The President was in the chair. A paper entitled "A Review of Dental Caries" was read by Mr. George Thomson, L.D.S. (ENG.). A lively discussion ensued in which all those present took part. The meeting paid special tribute to the work of Dr. J. Sim Wallace. A hearty vote of thanks to Mr. Thomson for his interesting paper was proposed from the chair and carried by acclamation.

EAST MIDLAND BRANCH

President: Dr. W. G. Booth (M.O., Holland C.C.)
Hon. Secretary: Dr. J. A. Stirling (M.O.H., Chesterfield).

The annual meeting of the East Midland Branch was held in Nottingham on July 8th. The President was in the chair, and 14 members were present.

Office bearers for the Branch were elected for the Session 1943-4 (see PUBLIC HEALTH, October, 1943, p. 12).

Short papers were then given: (1) by Dr. Martin on social evolution and the national health services, and (2) by Dr. Cullum on postural defects in school children. An interesting discussion followed.

A special meeting of the Branch was held in Nottingham on August 19th. The President was in the chair, and 22 members and 26 guests - mainly Chief Sanitary Inspectors - were present.

Dr. Lethem explained the proposals contained in the Government's White Paper on Milk Policy. Dr. Lethem was accompanied by Major Douglas, Deputy Chief Veterinary Officer, Ministry of Agriculture, and Mr. Harper, Director of Milk, Ministry of Food. Dr. Lethem dealt fully with the subject from the medical point of view and Major Douglas and Mr. Harper from their particular standpoints. That the subject aroused the keenest interest in those present was evinced by the numerous questions and the discussion which followed. The speakers were warmly thanked at the close of the discussion.

At a meeting on September 9th, with the President in the chair and 14 members present, a letter was read from Dr. M. L. Bery, conveying his thanks to the members of the Branch for his election as President-Elect.

The retiring President, Dr. Booth, installed Dr. Graham as President of the Branch for the coming session, and Dr. Graham suitably replied. A vote of thanks to the retiring President was heartily accorded.

Dr. Graham then delivered his presidential address, entitled "Subject for Discussion," touching on the changes which were likely to take place in the duties of M.O.s.H. and their staffs in the future, and including comments on many topics of the moment. Dr. Graham was given a warm vote of thanks.

President: Dr. J. R. Graham (M.O.H., Chesterfield R.D.C.).
Hon. Secretary: Dr. L. A. Stirling (M.O.H., Chesterfield).

A meeting of the Branch was held at Nottingham on October 14th. The President was in the chair, and 29 members were present.

Before the general business of the meeting the President referred to the sad loss Dr. Banks had sustained in the death of Mrs. Banks. He referred to Mrs. Banks's great interest in the work of the Society in general and the East Midland Branch in particular. The members then stood for a minute in memory of Mrs. Banks.

Dr. Maronkovitch, Director of the V.D. services of Nottingham City, then read a paper entitled, "The V.D. Scourge." He dealt with his subject in a very able manner, and a full discussion ensued. After tea the members visited the Nottingham City new V.D. Clinic, and afterwards a vote of thanks was accorded to Dr. Maronkovitch on the proposition of Dr. Booth, seconded by Dr. Holderness.

A discussion took place on the Ministry's circular on the care of illegitimate children, and the Hon. Secretary was instructed to forward an appropriate resolution on the general question of the boarding-out of children for the consideration of the Council of the Society.

MIDLAND BRANCH

President: Dr. H. P. Newsholme (M.O.H., Birmingham).
Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton).

The annual meeting was held at Birmingham on July 22nd. The President and 26 members were present. Officers were elected for the session 1943-44. (See PUBLIC HEALTH, Oct., 1943, p. 12.)

A vote of thanks to Dr. R. H. H. Jolly for his services as Secretary of the Midland Branch for a period of twenty years was proposed by Dr. Paul, seconded by the President, and passed by acclamation.

Before the meeting a visit was paid to the Soho and Vesta Glass Works, where members had an opportunity of seeing the results that can be achieved by a determined effort to modernise a very old works and to install up-to-date machinery and plant. After the meeting the President and Mrs. Newsholme entertained members and their friends to tea. Dr. Griffin moved, and Dr. Jolly seconded, a hearty vote of thanks to the President for his hospitality. When the President had replied, a visit was made to the Child Welfare centre and War-time Nursery in the Carnegie Institute.

YORKSHIRE BRANCH

President: Dr. R. Watson (M.O.H., Doncaster C.B.).
Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

A meeting of the Branch was held in Leeds on July 30th, and 30 members were present.

Information was received that Dr. Bethia M. Newlands, Acting M.O.H., Brighouse, and Mr. H. Rawnsley, L.D.S., Temporary Dental Officer, Batley, had been accepted as members of the Society, and would be attached to the Yorkshire Branch.

DISCUSSION ON MILK

After other Branch business, Dr. W. C. Lethem gave his address on the Government's policy on milk, in which he described the main provision outlined in the White Paper. He anticipated that the main criticism of the members present would be of the decision to transfer supervision of production from local authorities to the Ministry of Agriculture; he gave the reasons for this decision. Most of the milk was at present produced in rural areas, and it was in these that inspection had been so unsatisfactory. Many areas with from 200 to 1,000 farms were under the supervision of from one to two sanitary inspectors, who had many other duties to perform besides farm inspections. Approximately half the farms in the country were scarcely ever visited by an inspector. Some farmers had reported that, although they had been producing milk for over twenty years, their farms had never been inspected. With such conditions the Government felt that a change of some kind was necessary.

The term "heated" milk would include both pasteurised and sterilised, although, as Dr. Lethem explained, both these words could still be retained where the producer was prepared to conform to the requirements. Reliance would have to be placed upon the phosphatase test, and he hoped that much more sampling would be carried out to ensure that the milk in general use reached the required standard.

Dr. R. Watson referred to the unreliability of the phosphatase test. In his own area he had on several occasions found that some milk had been regarded as satisfactory from one laboratory and unsatisfactory from another. Dr. J. J. Buchan doubted whether the new proposals would bring any improvement. Since the Ministry of Agriculture and the Ministry of Food had taken a more lively interest in milk production conditions had become worse and not better. In his own area milk was often four days old when delivered. Improvements in the past had come not from the centre but from the periphery, and the present proposals were taking from local authorities the powers which they had used in the past to improve the milk supply. He was afraid that under the new Order it would still be necessary for local authorities to force both the Ministry of Agriculture and the Ministry of Food to take action. Dr. J. J. Jervis saw in the new proposals a division of control between three different authorities, which would be unsatisfactory. The Ministry of Agriculture, which under the new proposals was accepting more responsibility, had never carried out the inspection of cattle as it should be done. The appointment of a "Safe Milk Officer," suggested in the White Paper, seemed to him to complicate the whole position. Dr. E. D. Irvine said that as M.O.s.H. they should urge that the supervision of the actual production of milk as a food should remain the duty of local authorities, and that the Ministry of Health should take the necessary steps to ensure that this duty was properly carried out. He was of the opinion that only the heat-treated tuberculin-tested milk, as defined by the Ministry of Health, should be sold. A quarterly inspection of all dairy cattle should be brought into operation. A revision of the Milk and Dairies Order should be effected without delay. Dr. J. C. Pickup expressed surprise at the delay in distribution referred to by Dr. Buchan. In his own area 70% of the milk supplied was tuberculin-tested and a further 20% was from accredited producers. He referred to two statements which had appeared recently in the medical press where the authors suggested that tuberculosis did not result from drinking infected milk. As a Society he thought they should have some method of contradicting such statements, which were most misleading and gave the public an entirely wrong impression.

A vote of thanks was accorded to Dr. Lethem.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles).
Hon. Secretary: Dr. W. C. V. Brothwood (Chief. Asst. Lancs. C.C.).

A meeting of the Branch was held in Manchester on September 10th. The President was in the chair, and 53 members and friends were present.

The President welcomed Dr. McIntosh and Mr. Rock Carling, who were engaged on a survey of the hospital accommodation of the area on behalf of the Ministry of Health. Dr. McIntosh invited the opinions of members on the adequacy of existing hospital provision in the region, and suggestions for any reorganisation they might consider necessary.

Hospital Problems

Dr. Fraser said that the fabric of hospitals generally was poor, little progress having been made in construction during the last 25 years. He wanted more specialists and a wider distribution of them. Dr. Metcalfe Brown thought that large general hospitals should be built outside the towns, and that the addition of suitable blocks to general hospitals would solve the problem of maternity accommodation. He felt that the consultant training system ought to be developed and the younger men given the opportunity of bringing a better service to a wider area. Dr. Galloway thought the present method of providing infectious diseases beds in Lancashire was instructive. There were 38 hospitals, most of them very small, and in most the doctors were employed on a part-time basis. He suggested infectious diseases hospitals of 250 beds, employing specialists and serving a large area. Dr. Thierens developed the idea in relation to tuberculosis.

Dr. Stallybrass contended that bad doctors were worse than bad buildings, and wanted a system for the continued training of medical and nursing staffs. He thought the fullest use should be made of existing specialist advisers, as had been done in the E.M.S. organisation. Dr. Kershaw underlined the need for decentralisation of specialists. Dr. Cox thought one million to be the optimum population for a complete TB. scheme. Dr. Crosbie advocated that children's hospitals should form part of the Child Welfare Service, and that specialists should be trained to treat children from both the physical and mental outlook.

Other speakers included Drs. Keddie, Milligan, Roberts, Lobban and McWilliam.

Mr. Rock Carling agreed that the fabric of hospitals in this country was bad, and he compared the position with that of other countries. Consideration, he said, should be given to equitable distribution of

staffs at existing hospitals, which would produce a higher quality of service. He contended that, generally speaking, large areas were necessary or a comprehensive hospital unit, and this would entail the combination of local authorities. With goodwill this offered no insurmountable problem. He did not, however, think the "user basis" system was a success.

EASTERN BRANCH

President: Dr. H. Roger (County M.O., West Suffolk).
Hon. Secretary: Dr. J. W. Hunter (M.O.H. & S.M.O., Ipswich C.B.).

A meeting of the Branch was held at Scole on September 18th. The President and 26 others, including two visitors, were present. The minutes of the last meeting were read, confirmed, and signed by the President.

Officers were then unanimously elected for the ensuing year (see PUBLIC HEALTH, October, 1943, p. 12).

Dr. Lethem, of the Ministry of Health, opened the meeting with a summary of the White Paper on the Government Milk Policy.

METROPOLITAN BRANCH

President: Dr. Vynne Borland (M.O.H., Bethnal Green).
Hon. Secretary: Dr. H. L. Oldershaw (M.O.H., Hampstead).

The first meeting of the session was held on September 24th. An invitation had been extended to the members of the Home Counties Branch, and 52 members were present. Dr. Vynne Borland was installed as President of the Branch, and a vote of thanks was accorded to Dr. Daley for his services as President during the previous session. It was reported that Dr. Oldershaw, the Hon. Secretary, would shortly be undertaking duties in H.M. Forces and the meeting resolved that their thanks and appreciation of his services as Hon. Secretary be recorded on the minutes.

Dr. Lethem, of the Ministry of Health, opened a discussion on the Government White Paper on milk.

The Anglo-Czechoslovak Founders' Committee and its Honorary Advisory Council (including Brigadier Gen. Crew, F.R.S., Prof. Le Gros Clark, F.R.S., Prof. Lancelot Hogben, F.R.S., Sir William Beveridge, Mr. Jan Masaryk, O.B.E., Prof. J. Ryle, Sir John Boyd Orr, F.R.S., Prof. S. Zuckerman, F.R.S., and other distinguished supporters) are prepared to extend the final entry for the "Inter-allied Health Charter" Competition until Dec. 31st, 1943. They have also decided that competitors will be free to deal singly or jointly with the two main issues relevant to the theme proposed, *viz.*: (1) a survey of post-war relief schemes and other measures for health planning; (2) the draft of a project to implement Article 6 of the Atlantic Charter with reference to health. Prizes are from £30 upwards. In collaboration with the Founders' Committee, the Council for Education in World Citizenship is to institute a parallel competition in British and Allied Schools in Great Britain. A similar campaign will start shortly in the U.S.A. The Founders' Committee repeat their invitation to co-workers and voluntary contributors of the Health Charter Study Group and ask them to forward replies as early as possible to the Health Charter Study Group, c/o 18, Grosvenor Place, London, S.W.1.

Dr. R. L. Thornley, after nearly four years' extension of service, has recently retired from the post of M.O.H. to the East Riding County Council. District M.Os.H. clubbed together to present him on this occasion with a token of their appreciation. Dr. Thornley also received gifts from the members of the County Council and from the County Hall staff.

In Table II in Dr. Cruickshank's article in the November issue (page 18), the first figure under "Cases %" should be 21 and the per cent. figure 59.

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PUBLIC HEALTH

SOCIETY OF MEDICAL OFFICERS OF HEALTH

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EDITORIAL

The Influenza Epidemic

History is always instructive, though only sometimes reassuring. In view of the present—or perhaps by the time these words are read, the recent—influenza epidemic, it is well to be reminded of what occurred in the great pandemic at the end of the last war. That pandemic came in three waves, starting in the early summer of 1918, at the end of September of that year, and at the beginning of February, 1919. The first wave passed rapidly, the whole episode lasting only a few weeks, and the death rate was not considerable. The second wave, starting about five months later, was much more severe than the first, with a marked tendency to pulmonary complications and a high death rate. Whether this sequence has any significance in relation to the outbreak which made its appearance in November, 1943, and whether that outbreak will be followed by a more virulent second wave, no one can predict, but it is well to bear the history in mind. Throughout the history of influenza, epidemics have occurred almost uniformly in the first quarter of the year. 1918-19 was unusual in its season and so has been 1943. On the other hand the age of mortality—the prime of life—was unique in 1918 and to a certain extent in 1919. This has not yet been repeated in 1943-44.

The Ministry of Health is to be commended for the action it has taken in securing the temporary deferment of calling up of doctors for the Services and the provision of Army medical assistance for civilian practitioners. Medical officers in the Army are to be allowed, as far as their military duties permit, to help practitioners in dealing with civil cases. Probably our readers are already familiar with the procedure which the Chief Medical Officer of the Ministry suggests—namely, that there should first be a meeting of the county or county borough M.O.H. (who should take the initiative in summoning it), the secretary of the Local Medical War Committee, and the appropriate A.D.M.S. to decide the arrangements most suitable to the area. General practitioners and factory doctors should apply to the secretary of the Local Medical War Committee if such help is wanted, and the secretary, if satisfied with the application, will pass it on, either through the medical officer of health or directly (if that is the decision of the joint meeting), to the military unit of the area.

The advice given by the Ministry is equally excellent, but, it may be feared, less practicable. It suggests the possibility of obtaining help in the home through the powers given to maternity and child welfare authorities. But at a time when doctors themselves are hard put to it to obtain very necessary domestic assistance it does not seem likely that much relief may be forthcoming for the harassed family one or more or all of whose members may be down with the sickness. Of the willingness of the Women's Voluntary Services, the British Red Cross Society, and the St. John Ambulance Brigade, there can be no question at all, but we cannot believe that such help as they can spare after discharging their existing obligations can do much to help a situation in which the requirement is so widely spread. That the Ministry itself has not much faith in its recommendations is suggested by the postscript that these recommendations are not intended to be exclusive, but that the local authorities, who know their own organisations and resources, will be able to make additional arrangements. Local authorities, after all, are not superhuman, and they are wrestling already with labours which would have appeared incredible even to the greatest believer in local government institutions a few years ago.

Then there is the equally excellent advice to infected persons to stay indoors, and to the healthy to avoid unnecessary exposure in public places. This is easily given, but less easily followed, even in ordinary times, especially when the infection is in a mild form and duty clamours to be done. It is more difficult still when people are living together as they never lived before, in hostels and billets, camps and barracks, away from home resources and privacies.

It is natural, with the great war pandemics in mind, to take a serious view of the possibilities, even though up to the present the type of disease is not one which exacts a heavy toll of life. On the other side there are some cheerful things to be said. As compared with 25 years ago there is now a much greater awareness of public health, a far better understanding of the rules of healthy living and of preventive medicine, and, one likes to think, as the result of a generation of health education, a greater feeling of communal responsibility in this matter as in others. Methods of ventilation, heating, and general construction of public buildings, workplaces, and houses have improved. A whole apparatus of public health services has come into being. Nutrition has made its appearance on the map, and in war-time is receiving special attention. As for treatment, there have been great advances in the shape of chemotherapy, not indeed in treating upper respiratory virus infections themselves, but in treating their secondary bacterial complications, which are the main causes of death. Therefore it may be hoped, without undue optimism, that history, which has so often nearly, but never exactly, repeated itself, will fail to repeat itself on this occasion, and that a more deadly second wave will not follow the milder first.

Salaries of Public Health Nurses

The Rushcliffe Committee has issued another report dealing with the salaries of various groups of nurses, apart from female hospital nurses who were considered in its earlier reports of February and June, 1943. The present report (Cmd. 6487) covers nurses employed in public health services, district nurses, State-registered nurses in nurseries, and male nurses employed in hospital or public assistance institutions. The only class remaining to be considered is nurses in mental hospitals, on which subject a special subcommittee has been set up comprising panels of employers and employed with a view to drawing up agreed scales.

The "public health nurse," so called, embraces the health visitor, the tuberculosis visitor, and the school and V.D. clinic nurse. Most of these women are employed by local authorities, but some by voluntary associations acting on behalf of or in conjunction with local authorities. Their work is very largely preventive rather than curative, and thus is less spectacular than the nursing of the sick and injured. But as the Committee points out, it is of equal or even greater importance in maintaining health standards, and in framing its recommendations the Committee has had regard to the importance of inducing suitable trained staff in adequate numbers to undertake and continue in such work.

For a superintendent health visitor and for a superintendent school nurse (if she is required by the local authority to possess a health visitor's certificate or diploma) a scale of salaries is laid down varying with the number of staff under her supervision. If the staff is 100 or over the recommended annual salary is £450, rising by annual increments of £25 to £550; or if, to take the lowest figure, the staff numbers only 10 to 24, the salary is £360, rising to £430. For the ordinary health visitor the recommended salary is £270, rising by annual increments of £10 to £360. The same salary holds for the tuberculosis visitor, the child protection visitor, and, plus an allowance of £20, for the senior school nurse who holds a health visitor's certificate. The senior health visitor, who is defined as a health visitor employed whole-time by the local authority, primarily for the purpose of supervising training, is in the same salary scale as the health visitor, but also receives the additional allowance of £20. All these scales are subject to a further allowance of £30 a year in the administrative county of London and one of £15 elsewhere in the Metropolitan police district. One member of the Committee, Mr. Arthur Moyle, makes a reservation on this point, holding that the London area should be dealt with as a whole and not made the subject of this arbitrary division.

It is also recommended that nurses employed in the public health service (apart from school nurses, who normally have longer holidays) should have three weeks' annual leave with pay, and special paid leave at intervals of not greater than five years for the purpose of attending refresher courses; also that during sickness all grades of nurses should receive sick pay for certain minimum periods varying in length with their years of service. It is considered unsatisfactory that three months' experience in tuberculosis nursing should be regarded as a sufficient qualification for a tuberculosis visitor. A sheaf of recommendations is made with regard to district nurses. The recommended annual salary for a State-registered district nurse provided with full emoluments in a district nurses' home is £110 rising to £170, the emoluments being reckoned at an annual value for superannuation purposes of £100. If the nurse has completed an approved course of district training she should receive an addition of £10 to the basic salary. Other recommendations concern hours of duty (though no rigid working rule can be prescribed for district nurses), holidays, sick pay, and post-certificate leave.

For male nurses in hospitals and public assistance institutions (apart from mental hospitals) a weekly salary scale of 116s. is recommended in the case of the superintendent nurse, rising by annual increments of 5s. to 136s.; the scale of the staff nurse rises from 91s. to 106s., and that of the student nurse in the first year is 66s., with suitable increases in subsequent years. All these figures, again, are subject to certain additions for the London area. It is also considered that employing authorities should provide male nurses with uniforms laundered free of charge, and that an additional £5 a year should be paid to such nurses as possess a diploma in nursing. It will be seen that the Committee recognises the principle that the male nurse, who is often a married man with family responsibilities, should be paid a somewhat higher salary than a female nurse of similar grade, though under the higher-paid grades the difference between the salaries for male and female nurses is less than the difference between the respective salaries in the lower-paid grades. It is evident from a reference to this subject in the report that many members of the Committee have some misgivings on this differentiation, but they subscribe to the recommendations in view of present conditions and difficulties.

War-time Appointments

Medical officers who are deferred for civilian duties should note that normally the Minister of Health grants "permission to apply" for other public health posts, as required by Circulars 2818 and 2881, only where the circumstances are exceptional. The Minister must therefore have reasonable time to examine the circumstances and consider the request. Intending candidates who leave the request for the Minister's permission until the last moment are liable to be disappointed if they expect an answer post haste. It is important, therefore, that they should put in their requests as early as possible before the closing date for applications for the post desired.

It is inevitable that, as in the period 1914–18, the careers of many members of the Public Health Service must suffer as the result of war conditions. This applies both to the men who must "stay put" when they are nearing the age-limit for promotion, and to younger men who are required by the Services at the time when they would normally be establishing themselves in public health duties. It is only fair, therefore, that the Minister should so far as possible discourage permanent appointments at this time, when so many eligible candidates are prevented from applying by absence on war service. As regards transfers, the only consideration that can really weigh with the Minister in giving "permission to apply" is that the applicant is likely to make a greater contribution to the national effort in the post desired than in that held.

Education Bill

We print below the four paragraphs on "Medical Inspection and Treatment of Pupils" of Section 46 of the Education Bill. We hope to comment on this in our next issue.

(1) It shall be the duty of every local education authority to provide for the medical inspection, at appropriate intervals, of pupils in attendance at any school or young people's college maintained by them.

(2) For the purpose of securing the proper medical inspection of the pupils in attendance at any such school or college, any officer of a local education authority authorised in that behalf by the authority may require the parent of any pupil in attendance at any such school to submit the pupil for medical inspection in accordance with arrangements made by the authority, and may require any pupil in attendance at a young people's college to submit to such medical inspection; and any person who fails without reasonable excuse to comply with any such requirement shall be liable on summary conviction to a fine not exceeding five pounds.

(3) It shall be the duty of every local education authority to make such arrangements for securing the provision of free medical treatment for pupils in attendance at any school or young people's college maintained by them as are necessary for securing that comprehensive facilities for free medical treatment are available to them either under this Act or otherwise and to make arrangements for encouraging and assisting pupils to take advantage of such facilities.

(4) A local education authority may give directions to the managers or governors of any auxiliary school requiring them to provide such reasonable facilities as may be specified in the directions for the purpose of enabling the authority to carry out their functions under this section so, however, that the managers or governors of an auxiliary school shall not be required by any such directions to incur expenditure.

THE PUBLIC HEALTH SERVICE AFTER THE WAR*

By R. H. H. Jolly, M.D., B.S., D.P.H.

The members of the Society of Medical Officers of Health belong to a profession which possesses peculiar rights and privileges in the exercise of its own arts. In virtue of our special knowledge and qualifications we gain our livelihood. Without the privileges which have been conferred upon us by Act of Parliament, and without this special knowledge, we might be tradesmen or general labourers. Therefore we have a vested interest in medicine. Our colleagues in other branches of the profession, the specialists and the general practitioners, have this vested interest also. In the brave new world which we hope to see created after the war, the interests of the community as a whole must be placed before those of any one section of it. The prevention and cure of disease and the restoration of function must take precedence over self interest and self aggrandisement. Emphasis is being laid on the great importance of prevention in the comprehensive medical services of the future. If it is accepted that prevention is better than cure, as the proverb would have us believe, and if it is agreed that we shall need first-class curative medical services, surely we can also claim that a first-class public health service is just as necessary. At the present time the tendency is for our colleagues who practise curative medicine to consider our branch of the profession as inferior or second-rate. How else can one account for the frequency with which medical students when asked what branch of medicine they intend to follow, reply "Anything but Public Health." They can have had no experience of our work and are merely echoing the ideas put into their heads during their training. Although our fight against disease and ill-health is every bit as real and as important as that of the physician or surgeon, we cannot, like them, point to our individual triumphs and claim credit for them. The advice of infant welfare doctors has undoubtedly prevented thousands of deaths from malnutrition, and the efforts of the Medical Officer of Health have cut short many grave epidemics and saved countless lives, but these exhibits cannot be produced in court as evidence. We have to go about hiding our light under a bushel and the health services suffer accordingly.

Why Public Health?

With the scales weighted against our branch of the profession I have been trying to discover why any doctors decided to join the Public Health Service. Certainly it has not been for the pecuniary rewards offered, as these have always compared unfavourably with those of the other branches of the profession, and are getting relatively worse. In this connection I would like to refer you to one paragraph of the memorandum of evidence submitted by our Society to the Royal Commission on Local Government in February, 1929.

> "*Paragraph* 37.—From an academic point of view the standard of the medical men entering the service in pre-war days could not have been improved; and it may be said that the highest officers in the Public Health Service to-day possess the same mental calibre, ability and high devotion to duty as is possessed by the leading consulting physicians and surgeons in the country. There is, however, an enormous difference in their respective remunerations, and the probable explanation of the attractiveness of the Public Health Service in the past lies in (*a*) the certainty of income, even though low, (*b*) the great interest found in the work, and (*c*) the security of tenure. Unfortunately, there has been since the war a growth of evidence that unless the service is made more attractive from the point of view of remuneration, the type of medical man entering will fall below that of pre-war years. The comparatively small and diminishing number of men who now apply for advertised posts supports this view."

Some 60 of my colleagues in the Midland Branch were good enough to reply to a questionnaire I sent them for the purpose of finding out their reasons for joining the medical service of local authorities. As might be expected, nearly all of them possess a degree or a diploma in public health, but in addition 47% hold advanced degrees in medicine or surgery and have not been satisfied with a qualification which entitled them to practise. Contrasting this with the medical lists of some half a dozen County Boroughs in the Midlands and omitting all those not in private practice, I find that the comparable figure is 27%, and this includes all the specialists as well as the general practitioners. For what it is worth the members of the Public Health Service in the Midland area are better qualified than their colleagues in general practice, with all the specialists included. As was only to be expected, a considerable number had joined the health services because they were particularly interested in some branch of medicine which was almost entirely administered by local authorities—*e.g.*, venereal diseases, infectious diseases, tuberculosis, or paediatrics. There were 44% of my replies which came under this heading. Another question was whether they had been attracted by regular hours and a fixed salary. To this there were 47% who replied in the affirmative, of which one-quarter were from women doctors who had families to look after or aged parents to support. Problems of finance or the prospect of a pension did not bulk very large in my replies. Less than 25% of those who answered admitted that their choice was affected by these considerations.

What really surprised me was the number of medical officers who had joined the Public Health Service because of a dislike of private practice, acquired as a result of actual experience of it. There were 19% of my correspondents who gave this specific reason for joining our service. Some said that they had experienced a sense of frustration at the limitations of private practice or that they had found it impossible to give adequate and sufficient treatment to the poor in their own homes; others averred that their patients' lack of money and their own lack of up-to-date equipment made proper care and treatment impossible. Others, again, held the view that the care and attention given to a patient should depend on the gravity of his illness rather than the length of his purse. A considerable number of those who replied to my questionnaire —the exact figure was 43%—gave as their reason for joining the Public Health Service the belief that they could best serve the community in this way. Rather more than one-third of these were influenced in their choice by the prospect of a great development in preventive medicine in the future.

Those of us who are concerned with the general public health services cannot but be aware of the close relationship between poverty, squalor, bad housing and disease. We realise that freedom from want and a satisfactory standard of housing are two of the primary requirements for health, but the cure of want and the provision of good houses for everybody will not remove disease from our midst. There must be a simultaneous improvement in the organisation for the prevention of disease and for the cure of disease. We shall need more doctors and better doctors in all branches of the profession, including the Health Services.

Selection of Students

At the present time medical education is a costly and lengthy business which in itself restricts entrants to the profession. Provision should be made for giving any boy or girl the opportunity of taking up medicine if that was their inclination and they were judged suitable, but tests should be imposed and some filtering mechanism applied to weed out the unsuitable before they reached the medical school.

Apart from the mere ability to pass examinations, further tests should be interposed at intervals during the medical curriculum. Although a special interest in a particular branch of medicine is very important, students should not be allowed to choose blindly whether they were intending to specialise as surgeons, bacteriologists, paediatricians, research workers, tuberculosis officers or general practitioners, but should be given guidance by their teachers or professors as to the type of work for which they were particularly suited. If necessary, they should receive financial assistance towards the particular specialty for which they were deemed to be best equipped. Students should have the attractions of the various branches of medicine explained to them at school and before they burn their boats by going on to the classical side or the history side. At some schools mathematics, chemistry, and physics are discontinued after the School Certificate is passed, unless a boy

* Presidential Address to the Society of Medical Officers of Health on Friday, November 26th, 1943.

elects to remain on the modern side. A sound classical education is a fine groundwork for many careers, but one cannot pursue this branch of learning if one wishes to become an architect, a doctor, or an engineer. Strangely enough the masters at many public schools seem to live an ostrich-like existence, and consider the teaching profession or the Church as the only possible alternatives for a boy with a capacity for doing well in the classics. Lord Moran, in the House of Lords on August 4th, 1943, during a debate on education, was reported in the *British Medical Journal* of Aug. 21st, 1943, to have stated as follows :

> " For 25 years he was Dean of a London School of Medicine to which every year came 60 or 70 new students who for the next five, six or seven years applied the education they had already been given to the new task of becoming doctors. The results on the whole were disconcerting, many of these boys lacked reasoning power and many were without curiosity. A student without curiosity was not a student at all. He (Lord Moran) would not debate how far these defects were due to early specialisation and how far to the examination system. In the education of the medical student they kept adding to the curriculum, they never took away. They asked him to memorise a mass of facts instead of teaching him how to handle them. Before they sent him away they contrived so to educate him that he could not educate himself. He had no power of growth. He himself had come to enquire not how much a man knew when he qualified but whether he wanted to learn and if he knew how to learn."

Before students enter a medical school they should be given tests to determine their suitability for medicine as a career. Critical faculty, power of judgment, full use of auditory and tactile senses should come under review, and certainly some estimate should be attempted of their human outlook. Are they imbued solely with the idea of making money or do they appear to have the welfare of their fellows at heart ? Are they brusque and offhand, or are they tactful and sympathetic ? On these last points the headmasters or form-masters and mistresses should be able to help (but I would not advise the acceptance of a certificate from parents). To obtain the ideal type of doctor the right kind of student for medicine must be selected, and lack of financial resources should be no bar. Subsidies or scholarships should be far more readily available. At the present time anyone who passes the entrance examination can become a medical student, and, if he likes, he can spend many years of his life and of his allowance in this blissful state, with the odds of ten to one in favour of qualifying sometime. I would ask every member of my audience to try to remember the name of any student in his year who did not eventually qualify. One may elect to go into the Civil Service, the Navy or the Army, and one has a limited number of attempts in a competitive examination. In medicine a student may get his " licence to kill " after five years at a medical school or he may take ten or twelve years.

In addition to the application of some filtering and selective machinery during the medical curriculum, the student should be brought in contact with the realities of medical practice before the die is finally cast. Instead of restricting his training to personally conducted tours of acute cases, curative operations and selected out-patients, he should also be brought into contact with the chronic sick, the tired hearts, the rheumatoid arthritis, the winter bronchitis, and he should go into their homes and get a picture of their background and their environment. If he is still enthusiastic after all this then he should make a good doctor in whichever branch of the work he may take up.

Hospital Practice

Many of those taking up whole-time clinical work under a local authority have developed at least one bad habit as a result of their hospital training.

The medical schools in this country are attached to voluntary hospitals. Many of these hospitals have a fine record of service extending over hundreds of years, and their names are honoured throughout the land. The poorer class look upon them with respect and awe, and have a wonderful faith in the treatment supplied by them. How else can one explain the patient way in which they sit for hours and for days in the out-patient waiting hall until it is their turn to have a brief interview with the hospital doctor. If a general practitioner performs some minor operation which is not too successful and which leaves an unsightly scar, he is held blameworthy, but if the operation is done in the casualty or out-patient department of the hospital, no matter who the operator or what the result, all is well. It has always been the tradition of voluntary hospitals that the skilled services of their consulting staffs should be given free in return for the valuable experience they obtain. For the same reason the junior resident staff are given little more than board and residence. Hospital appeals for subscriptions and donations are largely based on the numbers of in-patients and out-patients treated, the growing volume of the work, and the need for providing the most modern and up-to-date appliances and equipment.

It is generally admitted that a sick person who manages to reach the in-patient department of a voluntary hospital receives skilled care and attention equal to that given to a millionaire in the best nursing home (the only distinction being that the latter is not addressed as " daddy 16 " or " granny 10 "). It cannot be said that the out-patient gets the same consideration and undivided attention as he would receive if he saw a consultant in private. Any doctor will tell you that the out-patient departments he attended during his hospital days were rush affairs. Any hospital resident will admit the same thing. One has only to divide the attendances of out-patients, as printed in a hospital annual report, by the number of out-patient sessions, to confirm or disprove this statement in its application to any particular hospital. Whilst the sick in the wards have full histories taken and every kind of investigation carried out, there simply is not time to devote the meticulous care to the out-patient department. The consultant is working at high pressure the whole time, and backing his experience and knowledge to pick out the serious case for more detailed examination. This example is closely followed by the newly qualified resident if and when he is called upon to assist or deputise in the out-patient department. A friend of mine who was once attached to a children's hospital in the east end of London alleged that he had to get his diagnosis made and the prescription written out during such time as the mother was carrying the infant from the entrance doorway up to his desk, and this is not such an exaggerated statement as it sounds. The skilful, methodical teaching in the wards is completely undone by the slapdash methods that have grown up by force of circumstances in the out-patient department. Probably the worst picture is the hurried treatment given to old cases.

It is no wonder that the young assistant in general practice looks at his daily surgery as a miniature out-patient department and rushes through his patients at top speed. Even when things are slack he still continues to deal with the waiting list in this summary fashion because the habit has got too strong. May it not be that our notoriously illegible calligraphy is another result of this rush. One often finds the same thing happening at welfare centres, particularly with assistant medical officers who are new to the job and have previously been accustomed to hospital work or private practice. They will not take things quietly or devote adequate time to each infant, but try to see how quickly they can get done, the doctor and not the patient being their first consideration.

Teaching Reforms

I cannot omit from these observations some reference to the need for more collaboration between general practitioners and the doctors attached to a health department. A medical man in private practice regards his patient as an individual to be treated and cured, but rarely considers him in relation to the community or to his environment. As a student he has been given a smattering of heating, lighting, ventilation and nutrition, together with a tabloid version of industrial medicine and vital statistics, and he has had just enough epidemiology to know that he must notify smallpox and other grave infective disorders to the health department. In spite of many years' agitation for reforms in the medical curriculum, the student is not being taught to view cases from the preventive and social standpoint. In most teaching schools the public health course still consists of a series of lectures spread over a single term in the student's curriculum, usually in the final year. Whilst the subject matter

has increased enormously in scope and complexity during the past quarter of a century, the time devoted to it remains the same. No attempt is made to correlate preventive and social medicine with the other subjects which the student has to learn. Nor is he invited to study his patients in relation to their family, industrial or social background. This is not surprising when all his teachers, with the sole exception of the lecturer in public health, are trying to cure rather than to prevent. Before reforms can become effective a new generation of professors and clinical demonstrators will need to grow up, and the entire medical curriculum must be revised. Preventive medicine must be raised from its present lowly position and made to permeate all the curative branches of medical work.

Finance

If the prestige and status of our section of the profession is to be improved we must get a higher value placed on our work. Most people assess the worth of an article or a service by what they have to pay for it. If it is cheap it cannot be good. Although our Society has already succeeded in establishing agreed salary scales for public health medical officers, these scales—except for junior members of the staff—are only minima. Moreover, they are largely out of date. Before we can attract the best types of doctors to the Public Health Service, and before we can improve our professional standing in the eyes of our employers and in the eyes of other practitioners of medicine, our emoluments require considerable revision and improvement. If there can be national scales of salaries for midwives, for health visitors, for matrons, and for nurses, there should be national scales for doctors in local authority service. And these should be proper scales with fixed increments, and not merely minima and pious hopes. The setting up of such scales would do more than anything else to quell the recurring dissatisfaction of many of our members, would allow them to give their undivided attention to their appropriate duties, and should attract an increasing number of suitable candidates into the service. A national scale would also remove one of the greatest drawbacks to the Public Health Service as a career. I refer to the publicity which is given by many authorities to recommendations for increases in salary, and the debates which take place thereon. We are told that politicians need to be thick-skinned, but the professional officers of many local authorities—*and* their wives and families—need to have the hide of a rhinoceros when this sort of thing takes place.

Poverty, squalor, and bad housing are all aggravating factors in the production of ill-health, but their removal will not do away with the need for the prevention and cure of disease and restoration of fitness. For the comprehensive medical services of the future to be really effective they must be permeated with the idea of dealing with the patient in his environment, and taking full account of his heredity. Treatment and prevention must be closely linked together. Whatever the scheme of re-organisation which is finally settled, we shall undoubtedly be called upon to play our part in it, and it is likely to be a very important part. We must, therefore, set our own house in order to obtain the best possible service for the tasks in hand. In this materialistic world it is too much to hope that doctors by the thousand will choose a career in preventive medicine unless the rewards it offers and the prestige and status it confers are at any rate comparable with those in other branches of the service. A wider knowledge by the clinician of the work of the Public Health Service and a better understanding of its aims and of its limitations, and a better appreciation by the members of our service of the difficulties, the handicaps and the strains imposed on the general practitioner and the consultant should help to bring about a better appreciation of each for the other. This would go a long way to remove any suspicions, any impatience and any feelings of intolerance which at present exist. It would re-establish that brotherhood of medicine and would close up our ranks to a tireless and unceasing war against our common foe—disease.

Postscript

As a last word, I would like to say something about the medical charities of our profession. When I look through the lists of local subscriptions to the Royal Medical Benevolent Fund and to Epsom College I am at once struck by the fact that some towns, both large and small, have a fairly substantial number of doctors as subscribers, whilst other towns make a very poor show, or are absent altogether. My experience is that a keen and persevering local secretary can do wonders in building up and maintaining a respectable subscription list in his area. Both these medical charities are deserving of every support, and clearly the proper people to support them are those who may, through unforeseen circumstances, hope to benefit. The Medical Officer of Health is in touch with every doctor practising in his area (in fact he doles out his Council's money to most of them in fees of one kind or another). Unless the job is already in competent hands I would urge my colleagues to get in touch with the secretary of one or other, or both of these organisations and offer his services as local representative. The money comes in quite easily, clerical work is negligible, and one has the satisfaction of feeling that one is doing something which may help to cement a closer relationship between the preventive and curative branches of our profession.

DEHYDRATION IN INFANCY*

By J. Howard Simmons, M.D., M.R.C.P.,

Deputy Medical Superintendent and Senior Resident Physician, St. Charles' L.C.C. Hospital

Dehydration is the condition in which the water content of the body is diminished either from deficient water intake, from excessive loss of fluid and salts, or more commonly from a combination of these factors. For a full understanding of dehydration one must consider the whole question of water and salt metabolism.

It is essential in the management of a dehydrated infant to realise the differences in the renal mechanism in the adult and in the infant; a difference which is more exaggerated in the premature infant.

Adult Fluid Requirements

In the healthy adult the daily average fluid intake from all sources is between 2,000 and 3,000 c.c., or 25 c.c. per lb. of body weight. This fluid is disposed of in the constant invisible perspiration, the saturated expired air, the faeces, and the urine. The perspiration, expiration, and faeces have always first demands on all fluid available, and the kidneys have to make do with what is left. Approximately the extrarenal channels of perspiration, expiration, and faeces require 1,500 c.c. of fluid, while the kidney uses the remaining 1,500 c.c. to get rid of the waste products of the blood. In conditions in which the fluid demands of the extrarenal channels are increased—such as excessive sweating, increased temperature, or diarrhoea—the kidney has less fluid remaining for its functioning and therefore passes less urine. In adults, unless conditions are extreme, this does not matter, as the adult kidney is able to work efficiently on as little as 500 c.c. of fluid, when it passes a highly concentrated urine up to a specific gravity of 1,032 and still gets rid of all the waste products of the blood. If, however, the kidney is diseased so that it is unable to concentrate urine to this specific gravity—such as occurs in chronic interstitial nephritis—and at the same time the water supply is diminished, nitrogen and salt retention will occur. The same will apply if, even with the healthy kidney, the extrarenal demands are so heavy or the fluid intake is so diminished that the residual fluid available for the kidneys falls below 500 c.c.

Adult Salt Requirements

The normal sodium chloride requirement for an adult per diem is 2 grammes or, in conditions where fluid is lost excessively, up to 4 or 5 g. a day. The salt ingested is absorbed into the blood stream and from there into the tissue spaces, where it is held in tissue fluid which, if excessive, shows as oedema. All fluid in the body must be isotonic, and if for any reason there is an inability to excrete salt, fluid must be retained by the tissues in order to keep the salt in isotonic solution. Fluid is lost from the body as water only in the expired air and as a very dilute saline solution in the perspiration, so producing a

* An address delivered to the M. & C.W. Group of the Society of Medical Officers of Health on July 10th, 1943.

positive saline balance in the body, which is corrected by the kidney concentrating salt in the urine and excreting a hypertonic solution.

If in the treatment of dehydration the total fluid requirement for the day is given as normal saline the daily intake of salt will be increased from the normal 2 g., or at the most 5 g., up to 32 g. of sodium chloride. The excretion of this great excess of salt will cause a severe strain on the kidney; and, should the renal function not be perfect, a considerable excess will be retained by the body. It is retained by being held in isotonic solution in the tissue spaces as oedema fluid, and may mean water being removed from the blood to the tissue spaces for this purpose in such quantity that the blood becomes more concentrated, with a shortage of fluids for extrarenal requirements and anuria. This can be overcome by the giving of 5% glucose solution intravenously; this releases the sodium chloride and salt-bound water, by supplying an extra amount of water for the skin and respiration.

Hence the diuresis which occurs following the administration of intravenous glucose solution. The kidney is sensitive to alterations in the composition of tissue fluid, but quite tolerant of changes in volume (Jones and Morgan, 1939).

The other salts required by the body metabolism need not be considered in the assessment of mineral requirements in the management of dehydration, as they are formed by the body from available supplies. Also, the variation of the blood reaction can be corrected naturally if the blood receives sufficient sodium chloride, when it will select sodium or chloride ions as may be needed.

The Infant Kidney

The full-term baby contains 75 to 80% water against the adult's 60 to 65%, and 65% of its body fluid is extracellular against only 28% of an adult. So that a baby is a much more watery organism. Therefore the various conditions which may give rise to dehydration are a more serious matter in an infant than in an adult. The infant requires more fluid per lb. of body weight, 75 c.c. or 2½ oz. against the adult's 25 c.c. This is not because loss by skin and respiration is higher—on a comparison of surface area it is lower—but in infants the urine volume must be considerably higher in proportion (Young).

The kidney in early weeks is still in a developmental state, and an infant can maintain a healthy existence only if he has enough water available for urinary excretion. It is a relatively ineffective organ, being only able to concentrate urine up to a specific gravity of about 1,024 at normal urine flow; and should the filtration-rate drop owing to insufficient water intake the renal function deteriorates still further. This function is lower still in premature infants, but steadily improves with age, until at one year it has approached adult level. In infants, even when the plasma chloride is high or excessive quantities of saline are administered, the concentration of chlorides in the urine may still be very low. When the output of urine falls owing to increased extrarenal demands on water or diminished intake due to excessive vomiting, the concentration of solids in the urine does not increase as it would in adults, but in fact drops still lower; consequently an infant's urine is always a dilute urine. If an infant is short of water it will have renal failure with salt and urea retention; and artificially fed infants will get renal failure quicker than breast-fed infants, as cow's milk contains more salt and protein.

Should all an infant's fluid requirements be given as normal saline, they are receiving as much as 12 g. of salt a day—an amount equivalent to the total salt content of the body. The infant's kidney is quite unable to deal with such amounts, and therefore oedema occurs, with salt-bound water unavailable for the normal losses from skin and lungs. If this retention is excessive the condition known as water intoxication may develop, in which there are headache, nausea, asthenia, incoordination of movement, vomiting, convulsions, and coma, due to the oedema extending to the brain, with an increase of intracranial pressure. It can be corrected by the administration of intravenous glucose solution, which will cause a diuresis as mentioned above.

Since the urine output is only half the fluid intake if only normal saline is given for all fluid requirements, it is quite impossible for the body to get rid of the excess of chloride, because the concentration of chloride in the urine would have to be twice that of normal saline (1·8%), and even with the normal fluid output the maximum concentration of chloride in an infant's urine is only 1·4%. If there is oliguria, due either to deficient intake or to increased output by other channels, the infant's kidney cannot even concentrate up to this amount and the chloride retention will become even more marked (Aldridge).

In order to enable the body to regulate its salt composition enough water must be given to establish a free flow of urine. It may be possible in an infant who is not vomiting to give the entire fluid requirement by mouth, but even then his salt requirement must be assessed as carefully as if the fluid is being given parenterally.

This shows why an infant tolerates dehydration so badly and misguided treatment even worse. It is a very delicately adjusted organism and must be handled with extreme care. A few vomits or watery stools may send a baby's blood urea up to 100 mg. per 100 c.c., while a pint of normal saline may lead to oedema. It is possible that the urea retention may cause diarrhoea and vomiting as a uraemic manifestation, such as occurs in adults with renal failure, and that diarrhoea and vomiting may be the effect of dehydration rather than the cause. In infants with dehydration the kidney function becomes similar to the kidney of a chronic nephritis and the serum chemistry alters in the same way; but the kidney is functioning in a perfectly normal infantile manner. The pathological changes in serum chemistry are entirely due to the small quantity of water available for excretion (McCance and Young).

Some Causes of Dehydration

The conditions which give rise to dehydration may be classified as follows:

Withholding of Water.—This occurs in conditions such as shipwreck and desert travel.

Excessive Loss—by other than renal channels in the healthy person due to high external temperature, particularly when associated with exercise. In sweating up to two litres of saline fluid may be lost in an hour. If this is replaced by drinking water without the corresponding sodium chloride a state of salt deficiency is produced; this causes a continuation of the concentration of the blood as the excess fluid cannot be retained in the vascular system, and therefore the dehydration of the blood cannot be corrected by the simple imbibing of water. The continued blood concentration means that the filtration rate of the kidney remains low and the urine remains diminished in quantity. Therefore the excess fluid remains in hypotonic solution in the tissue spaces, causing muscle cramps (which may be very severe), breathlessness, and anginal pain on exercise.

Fever causes excessive sweating, and with increased respiration excessive loss of fluid in the expired air. If the loss is not made good by intake of fluid, dehydration will occur. In infants who have no control over the amount of fluid given this is particularly apt to occur, and extra fluid is indicated in all cases of fever.

In surgical operations the factors ruling in fever still apply; increased losses occur by skin and respiration under anaesthesia, the losses frequently still further increased by vomiting; and owing to the abdominal condition present, intake is probably restricted. Dehydration will still further be increased by stomach wash-outs and suction-drainage.

Acute abdominal conditions in children lead to dehydration. They take less by mouth, lose more by skin and lungs (particularly if febrile or operated on) and by vomiting and diarrhoea. Vomiting also leads to hydrochloric acid depletion and alkalosis. In pyloric stenosis the vomiting is marked and alkalosis a definite risk. The plasma chloride is always lowered. In intussusception and paralytic ileus large quantities of fluid accumulate in the distended bowel, increasing the dehydration without obvious external fluid loss. Dehydration will be further increased by repeated stomach wash-outs and suction-drainage. In gastro-enteritis the accent is usually on the diarrhoea so that the risks of alkalosis are not so marked; also, in sick infants other than those with pyloric stenosis the hydrochloric acid output of the stomach is usually diminished, so that there is less risk of hydrochloric acid loss. This is indicated by the fact that in gastro-enteritis the plasma chloride is variable, being raised, lowered, or normal.

Shock.—Many of the symptoms in shock are similar to those of dehydration. Although in pure shock there may be no external fluid loss, the generalised capillary dilatation and the increased capillary permeability cause a relative loss of fluid, so that there is insufficient for the needs of the increased volume of the vascular

system. The degree of shock is always increased if it is complicated by the loss of fluid such as occurs with haemorrhage or sweating.

Burns.—Here the condition is the more complicated by the excessive fluid loss from the denuded area.

Addison's disease.—In this there is a forced excretion of sodium chloride by the urine due to deficiency of adrenal cortical hormone. The salt deficiency means that fluid is unable to be retained in the tissues and a state of chronic dehydration arises.

Diabetes.—Dehydration may also occur in conditions in which there is a forced urinary output of fluid. In diabetes mellitus the diuretic reaction of the increased blood sugar leads to polyuria, which would cause dehydration if the diabetic was prevented from quenching his abnormal thirst. In diabetes insipidus there is a similar polyuria due to deficiency of the posterior pituitary hormone which controls the reabsorption of fluid from the renal tubules.

Signs of Dehydration

CLINICAL

There is a sunken and pinched appearance of the infant's face, particularly under the eyes, where the usual pigmentation is increased. The skin is dry and inelastic, and the normal firmness of the subcutaneous tissues and the muscles is diminished. The abdomen is sunken and the fontenelle is depressed. The tongue and mucous membranes are dry. The pulse and respiration rates are increased. There is a varying degree of pyrexia, thirst, and oliguria. The weight drops from 4 to 8% of the previous body weight. In the most marked type of dehydration, usually seen in severe gastro-enteritis, there is a peculiar ashen-grey colour of the skin, with coldness and cyanosis of the extremities, a subnormal temperature, and a restlessness which may give way to drowsiness, stupor, or even coma—a condition of shock. There may be difficulty in swallowing and anorexia. Anuria will develop.

HAEMATOLOGICAL

There is an increased viscosity of the blood with a diminished tendency to bleed from cut surfaces, an increased red-cell count, haemoglobin concentration, and haemocrit readings. These findings must be compared with the normal for the age, which varies considerably in the first six months. The haemoglobin concentration will be confused by a hypochromic anaemia which is so often present in ill infants.

CHEMICAL

Plasma Chloride.—There is no definite relation between the plasma chloride and the degree of dehydration in toxaemia. In pyloric stenosis and other cases with excessive vomiting there is a loss of chloride and a degree of alkalosis; while in diarrhoea there is a loss of sodium chloride with a risk of acidosis. In gastro-enteritis the loss from the bowel far outweighs the loss by vomiting. Also, in sick infants the gastric acidity is depressed, and therefore vomiting will not cause a loss of hydrochloric acid. In pyloric stenosis the plasma chloride is always lowered, while in gastro-enteritis it is very variable and may be normal.

The *plasma protein* and blood urea are increased in dehydration, but cannot be used as an accurate assessment, as there is no constant relation between them and the haematological variations or the clinical severity of the dehydration.

The most practical assessment of the degree of dehydration is the body weight, if the normal weight was known beforehand. In dehydration the body loses between 4 and 8% of its normal weight.

Treatment

The object of treatment is to restore the volume and composition of the body fluid. An infant needs extra water whenever the output by skin, lungs, and bowel is increased, because his urine volume must not be allowed to fall. In addition to water, sodium chloride must be given to cover his daily requirement and make up for any excess loss from vomiting or diarrhoea. Fluid lost by respiration and perspiration may both be considered as water, while fluid lost from the intestinal tract must be considered as isotonic saline. Water is given if the baby is feverish, and salt must be given as well if he has diarrhoea and vomiting.

The only salt required is sodium chloride, as the other salts can be made up by internal adjustment. Similarly, variations in H-ion concentration can be corrected by the infant, provided sufficient saline is given.

It may be possible in an infant who is not vomiting to give the entire daily requirement by mouth, but his salt requirement must be assessed as carefully as if the fluid is given parenterally. Isotonic saline solution is given to cover the fluid lost by vomiting and diarrhoea, while glucose solution provides for water lost from lungs and skin. Since the urine output is only half of the fluid intake if only normal saline is administered, it is impossible for the body to get rid of the excess chloride, as the kidney is unable to concentrate chloride up to twice the strength of normal saline.

It is necessary not only to relieve dehydration but also to give sufficient fluid to cover the daily normal requirement. Dehydration produces a loss of fluid equivalent to a loss of 4 to 8% of the body weight. An adult's normal fluid requirement is 3,000 c.c. or 25 c.c. per lb. of body weight and a sodium chloride intake up to 5 g. This amount dissolved in 3,000 c.c. of water makes a solution of 1/5 normal saline. To make this isotonic for intravenous injection one must add 4% glucose. Therefore, for the normal fluid requirement of an adult one uses a solution made up of one part isotonic saline and four parts 5% glucose solution. In an adult with dehydration one gives 3,000 c.c. of this solution to cover the normal daily intake plus fluid to correct the dehydration equivalent to 6% (average) of the body weight—*i.e.*, 3,500 c.c. for a man weighing 120 lb. If the dehydration is due to excessive respiration or perspiration only (an uncommon thing in an adult) the same solution is given; but if the dehydration is due to vomiting or diarrhoea this extra fluid is given as normal saline.

Of course, most patients can take a certain amount of fluid by mouth, in which case the amount so taken can be deducted from the amount to be given parenterally. Water given by mouth—that is domestic or tap water—may be considered as 1/5 normal saline for the purpose of calculation of full requirement. Some of the fluid may be given by rectum, in which case normal saline or tap water may be given. Glucose should not be given per rectum, as it is irritant to the rectal mucous membrane.

In infants the same proportions apply. The daily requirement of an infant is 75 c.c. per lb. of body weight, and this amount of fluid is given as 1/5 normal saline with 4% glucose. To correct dehydration, extra fluid is given equivalent to 6% of the body weight, either as 1/5 normal saline with 4% glucose if the dehydration is due to fever only, or as normal saline if due to vomiting or diarrhoea. To give an example: a dehydrated baby who in health weighs 10 lb. requires a daily intake of 750 c.c. 1/5 normal saline + 4% glucose solution to cover his normal requirements; and 6% of 10 lb. (= 9·6 oz. = 300 c.c.) to cover his dehydration; this is given either as the same solution if the dehydration is due to causes other than loss from the intestinal tract, or as normal saline if due to vomiting or diarrhoea.

Whole blood in the treatment of dehydration is not suitable, as in most cases the blood is already concentrated. When considering blood transfusion the red cell count and haemoglobin concentration should be estimated, and if raised, the case is unsuitable for transfusion. In these cases, if more drastic treatment appears called for than the infusion of crystalloid solutions, plasma should be used.

Route for Administration of Fluid

The routes by which fluid can be administered offer a wide choice, but each route has its drawbacks and usually a combination is the most satisfactory answer to treatment.

Oral Route.—It may be possible in an infant who is not vomiting to give the entire fluid requirement by mouth; but its salt requirements must be assessed as carefully as if the fluid was being given parenterally. In older children it is usually difficult to give enough sugar as glucose solution to prevent ketosis; barley sugar or boiled sweets are useful adjuvants to treatment. Of course, in the majority of cases some fluid can still be taken by mouth, when this amount must be measured and deducted from that to be given parenterally.

Rectal.—This route may be used if there is no diarrhoea, employing a continuous drip of tap water or isotonic saline. A single rectal injection is usually unsatisfactory, as it is frequently returned, merely acting as an enema. Glucose solutions are not well tolerated by rectum, as they are irritant to the mucosa.

Subcutaneous.—Only normal saline can be given by this route, and the amount given at one time is strictly limited. Therefore it can

only be used as a supplement. Glucose solutions must not be given subcutaneously, owing to the risk of abscess formation. Also, subcutaneous injection is painful and distressing to the infant.

Peritoneal Route.—This is ideal for the rapid partial relief of dehydration. One can give up to 200 c.c. of an isotonic glucose-saline solution rapidly with a two-way syringe and, provided the solution is of body heat, with very little distress to the patient. Should the solution be too hot or too cold, colic supervenes. The fluid is rapidly absorbed from the peritoneal cavity and the gut is apparently never punctured with a needle. In extremely debilitated children a sterile fibrinous peritonitis occasionally occurs. This is of no significance and does not give rise to clinical signs.

Intravenous Route.—This is theoretically the ideal, and frequently the only one by which fluid can be given sufficiently quickly in desperate cases. However, the technical difficulties are not easy to overcome, and in infants it invariably means cutting down on the vein and tying in a cannula, which is quite a tricky operation in a vessel only 2 mm. in diameter and means that the vein is lost for further infusions. By this route, particularly, it is easy to overdo the saline, and, unless the fluid requirement is accurately calculated, produce water retention with oedema and anuria.

Intramuscular Route is almost as satisfactory as the intravenous route, without its technical difficulties. It is carried out by the same method as an intravenous infusion, except that the needle is plunged into a muscle mass such as the thigh or deltoid. The apparatus can have two needles attached to a Y-tube, when the resultant intake will be more rapid. Glucose-saline solutions can be used by this method, but absorption is slow, usually at the rate of 20 drops a minute. Should the limb begin to swell from too rapid an input it is easy to stop the flow for ten minutes and then start again at a slower rate. Practically, it is the best route to use for maintenance after the immediate correction of dehydration.

Medullary Route.—This is gaining favour for introducing fluids. It is given like an intravenous infusion, but instead of introducing the needle into a vein a stout needle is used and driven through bone into the medulla. The most satisfactory site is the upper end of the tibia. When once in position, however restless the child, there is no possibility of the needle slipping out, and fluid can be run in at any desired speed. Isotonic saline, blood, or plasma can be given by this route.

Some Last Points

In the treatment of dehydration accurate charting of the total fluid intake, its composition, and the routes used is necessary, as well as a record of vomits, stools, and the frequency of passing urine. It is not, as a rule, possible to measure the quantities passed, although that is the ideal. Daily weighing of the infant should also be carried out and its fluid requirements calculated afresh each day. The serum chemistry and the blood count are not necessary, but are helpful as an additional check.

There is a very real danger of giving too much or too little salt. Too much salt will lead to water retention, with oedema and anuria; while dehydration which is due to loss of water and salt cannot be relieved if too little salt is given. If a large volume of glucose solution is administered intravenously diuresis will occur, leading to further dehydration.

If an infant can be kept correctly balanced for a few days the most seriously ill will recover; while if he is allowed to become dehydrated a second time the prognosis is invariably worse. An acute infection is more dangerous to a baby than to an adult, but if he recovers no permanent damage is done. Detailed medical and nursing care are necessary when he is sick in order to regulate his water metabolism, but he may pass from extreme dehydration to perfect health in the course of a few days.

I beg to state that the London County Council are not responsible for the views here expressed.

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JONES and MORGAN. (1939). *Lancet*, **2**, 611.
MCCANCE, R. A., and YOUNG, W. F. (1942). *Arch. Dis. Child.*, **17**, 65.
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The Harben Lectures will be delivered on January 24th, 25th and 26th, at 3 p.m., in the Lecture Hall of the Royal Institute of Public Health and Hygiene by Dr. Melville D. Mackenzie. The subject will be "A study of the potentialities of international collaboration in medicine in the post-war world."

BOOK REVIEWS

Civil Defence: A Basic Training Manual. By Lieut.-Commander P. A. M. EDEN, R.N. London. 1942. Jordan and Sons, Ltd. Pp. 88; illustrated. Price 2s.

This booklet is devoted for the most part to providing under one cover information on defence against war gases which all members of the Civil Defence Services should have. It presents in succinct form their characteristics and the factors governing their use and effects, and the first-aid treatment of them. The author describes the types of respirators, their fitting, cleaning, and disinfection. He deals adequately with the wearing of protective clothing, with the routine in a cleansing station, and with the decontamination of materials. As might be expected from such an experienced instructor, the information is set down in logical order and with a nice economy in the use of words. The style may be illustrated by the author's statement that preventive treatment in cases of mustard gas contamination "consists essentially in the speedy and complete removal of all contaminated clothing and in freeing the skin from the contaminant whether liquid or vapour." Methods for freeing the skin from liquid or vapour are then clearly described. Two chapters on elementary protection against high-explosive bombs and on incendiary bomb control conclude a practical and useful book.

Fractures and Dislocations. "Practitioner" handbook. Edited by Sir HUMPHREY ROLLESTON and ALAN MONCRIEFF. 1943. 104 pp. Price 7s. 6d. net.

This is the eighth of the *Practitioner* booklets, and it deals, in very brief form, with the common fractures and dislocations and with head injuries. It is a symposium by eight well-known authorities, each of whom has revised his original article and brought it up to date. It is somewhat surprising, therefore, to find that in the chapter dealing with fractures of the pelvis no reference is made to the treatment of the fracture, the author concerning himself entirely with the treatment of the comparatively rare visceral complications. Incidentally, his advocacy of perineal drainage of a ruptured urethra would not find favour nowadays. In the chapter on leg injuries there are repeated references to passive movement as a form of treatment. This again is almost universally condemned in modern writings. The section on head injuries suffers from lack of lucidity, while in the chapter on spinal injuries the quite erroneous statement is made that cord damage is inevitable in fracture dislocations. It is also stated in this article that approximately 50% of all spinal fractures suffer cord damage, a figure quite out of harmony with modern experience.

The Natural Development of the Child. By AGATHA BOWLEY, PH.D. Second edition. Edinburgh: E. & S. Livingstone. 1943. Pp. 184, with 84 photographic illustrations. Price 8s. 6d. net. Postage 5d.

In this little book the author follows the child from birth to adolescence, describing the special difficulties likely to be encountered at each stage of development and how these difficulties can best be handled. It is written primarily for the teacher, but is also intended for parents, and contains much that will be interesting and useful to all concerned with children. The reaction of children to the war is discussed, and case histories and illustrations add to the attraction of the book. The author takes the wise standpoint that the child's happiness is of more importance to his ultimate development than the level of his scholastic achievements. Dr. Bowley stresses the need for a close co-operation between doctor, educationist, and psychologist. Perhaps one might even go further, and, without any disparagement to this excellent treatise, claim that a medical training gives the perfect foundation for the child psychologist. The paediatrician of the future should possess an expert knowledge of the normal mental development of the child as well as of the physical growth; both are so interlinked that to omit normal psychology from the medical curriculum would hamper the advance of medicine.

Chest Examination. By R. R. TRAILL. London: J. & A. Churchill. 1943. Pp. 106 with 47 illustrations. Price 10s. 6d. net.

In this book the author has attempted to interpret for undergraduate and postgraduate students the anatomical, physiological, and pathological phenomena which combine to produce the commoner respiratory diseases, by correlating them with the clinical signs and radiological appearances which they produce. This truly modern method of approach to the subject is an excellent one, and if the attempt has not been entirely successful it is because the paper shortage has compelled the author to compress so much into so little space. One cannot help feeling, however, that better use might have been made of the same amount of space if more had been allowed for the chapter on the normal chest film and less for the last chapter, almost all the points of which have been mentioned in various places earlier in the text. Wing-Commander Traill's method of teaching chest examination merits a full-sized volume and it is to be hoped that when time and circumstances permit he will expand the present work into something more comprehensive.

OBITUARY

JOHN MACMILLAN, D.S.O., M.C., M.B., D.P.H.

We regret to record the recent death of Dr. John Macmillan, Medical Officer of Health for Woolwich and a past president of the Metropolitan Branch of the Society. The news of his passing, although after a long illness courageously endured it was not unexpected, leaves us with the sense of a great loss.

John Macmillan qualified M.B., Ch.B. from Glasgow in 1908, and took the D.P.H. of Cambridge in 1912. He had a distinguished career in the war of 1914-18, being awarded the D.S.O. and M.C., and retiring from the R.A.M.C. (T.) with the rank of Lieut.-Colonel. At the time of his death he was, in terms of service, the oldest London M.O.H. Previous to his long and unstinting service at Woolwich, he had been Assistant M.O.H. and School Medical Officer at Willesden. He had done valuable work for the Royal Sanitary Institute, and in 1942 was elected Chairman of the Council of the Institute. His interest in health education, the subject of an article by him in this journal in 1931, led to his election as Chairman of the Central Council for Health Education, a body in whose interests he worked untiringly.

But it was perhaps even more the personality than the professional distinction of John Macmillan which earned him the highest respect, regard and affection of his colleagues and staff. This "canny Scot," with his transparent honesty, innate kindliness, and cheerful manner, was regarded by all as a friend, and a large circle will mourn his loss. John Macmillan was of a happy disposition and never spoke unkindly of anyone. He was always ready to help, and his shrewd common sense and twinkling humour could be relied upon to straighten out any difficulty. His last illness may fairly be attributed to his exertions in the cause of civil defence in the early days of the war. He was a man who scorned to spare himself in his country's service. He was unmarried.

At the time of his death Dr. Macmillan was Hon. Treasurer of the Metropolitan Branch of the Society, and members of the Branch will sadly miss him.

We are indebted to Dr. CHARLES HILL, as Chairman of the Central Council for Health Education, for the following appreciation:—

"The salt of the earth" is the phrase which comes to one's mind when one thinks of John Macmillan. He was unassuming, friendly, and warmhearted. I knew him best as first Vice-Chairman and then Chairman of the Central Council. Through its most difficult days —and there were great difficulties in the years immediately before the war—he was a steadying influence, wise and calm, always optimistic, and sturdy as a rock. Indeed, he was somewhat surprised, and mildly tickled, when others were wildly enthusiastic or profoundly depressed. Never prolix, he waited his moment to make a sound suggestion, so obviously sound that others were somewhat humbled that it had not occurred to them.

He encouraged young men—a quality more often praised than encountered. It was typical of him that, prevented from presiding over the first meeting of the Central Council after the outbreak of war by his duties in Woolwich, he quietly arranged that there should be elected to the chair for this meeting, at which decisions of importance had to be reached, a young man without previous office who had been rebellious rather than constructive in the Council's work.

In health education he was sound and practical, neither expecting too much nor doing too little. But perhaps one's most lively recollection is of John Macmillan at the luncheon table—hearty, happy, and above all friendly. He knew and loved the joys of good fellowship. He will be sadly missed—and this is no routine obituary tribute.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

ANNUAL GENERAL MEETING

The Annual General Meeting of the Society was held at Tavistock House, Tavistock Square, London, W.C.1, at 2.30 p.m. on November 15th, 1943.

The minutes of the last Annual General Meeting held on November 20th, 1942, were approved and signed.

Dr. R. H. H. Jolly was installed as President of the Society for the session 1943-44, and was invested with the badge of office by the retiring President, Dr. Cyril Banks.

The meeting then adopted the Annual Reports of the Council and the Hon. Treasurer (together with Balance Sheet and Revenue Account) for the session 1942-43, as printed in PUBLIC HEALTH for November, 1943, p. 20, *et seq.*

Messrs. Deloitte, Plender & Griffiths & Co., were re-elected Auditors for 1943-44.

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

As *Fellows*: Bentley, Charles Albert, M.B., C.M. (EDIN.), D.P.H., D.T.M. & H.; Bodoano, Margaret Mary, M.B., CH.B. (MANCH.); Button, Phyllis Muriel, M.R.C.S., L.R.C.P.; Caley, I., B.CH. (CAMB.), D.P.H.; Campbell, Archibald James, M.B., CH.B. (EDIN.), D.P.H.; Campbell, Walter Collin, L.M.S.S.A.; Carter, Dorothy Leggo, M.B., B.S. (LOND.); Carter, George Bailey, M.D. (MANCH.), D.P.H., L.M.S.S.A.; Clegg, John Wood, M.R.C.S., L.R.C.P., D.C.P.; Cran, Margaret, M.A., M.B. (ABERD.), D.P.H.; Cross, Cochran, M.B., CH.B. (GLASG.), D.P.H.; Cunningham, Robert Campbell, M.B. (GLASG.), D.P.H.; Day, Marjorie Kirkpatrick, M.B., CH.B. (EDIN.); Easton, David Johnston, M.B., CH.B. (GLASG.), D.P.H.; Edgecombe, Beryl, M.B., CH.B. (LIV.), D.P.H.; Edmondson, Florence Maude, M.B., CH.B. (MANCH.); Evans, William Goronwy, M.R.C.S., L.R.C.P., D.P.H.; Farmer, John Lunsden, M.B., CH.B. (GLASG.), D.P.H.; Ferguson, Montgomery Du Bois, O.B.E., M.D., B.CH., B.A.O. (DUB.), D.P.H.; Forrest, William Patterson, L.R.C.P., L.R.C.S., L.R.F.P.S., D.P.H.; Frew, Elizabeth S., M.B., CH.B. (GLASG.); Gray, Robert Dalziel, M.B., CH.B. (EDIN.), D.P.H.; Howell, Tylford Howell, M.R.C.S., L.R.C.P.; Karran, Cyril Wilfred Curling, M.A., M.D. (CANTAB.), D.P.H., D.R.C.O.G.; Laidlaw, Stuart I. A., M.D., B.SC. (GLASG.), D.P.H., D.P.A.; Macfarlane, William Veitch, M.D. (EDIN.), D.P.H.; Masterton, Mary Graham, M.B., CH.B. (EDIN.); Millar, Jane Ogilvie, M.D. (GLASG.), D.P.H., D.R.C.O.G.; Newlands, Bethnia M., M.B., CH.B. (ABERD.), D.P.H.; Niall, Sheila Mary Madaleine, L.M.S.S.A.; O'Driscoll, William, M.B., CH.B., B.A.O. (IRE.); O'Regan, John B., B.SC., M.D., N.U.I., D.P.H.; Parish, Henry James, M.D., M.R.C.P.E., D.P.H.; Perry, Col. E. L., D.S.O., M.R.C.S., L.R.C.P., D.P.H.; Ryan, Elizabeth L. J., M.B., D.P.H., L.M. (ROT.); Shand, George Ernest, M.D. (PSYCH.) (ABERD.), D.P.H.; Shanks, Helena Mason, M.B., CH.B. (GLASG.), D.P.H.; Stephen, Effie Scott, M.B., CH.B. (GLASG.), D.P.H.; Thomson, Graham M., M.D. (EDIN.), D.P.H.; Thornton, John Wakefield de Witt Gray, M.A., B.M., B.CH. (OXON.), M.R.C.P.; Warren, Richard Moncrieff, B.A., M.B., CH.B. (EDIN.), D.P.H.; Watson, Phyllis Elizabeth, M.R.C.S., L.R.C.P., B.A.; Wells, Campbell Moncrieff, L.R.C.P. & S. (EDIN.), L.R.F.P. & S. (GLASG.).

As *Associate*: Rawnsley, Horace, L.D.S. (LEEDS).

Nominations were then received for the next election in respect of the following: Drs. Winnifred N. Gibbs (Senior A.M.O.H., West Bromwich), Dr. H. Margaret Hammond (A.C.M.O.H., Wilts), Dr. Francis J. Murray (A.C.M.O.H., Staffs), Dr. Horace A. Nathan (A.M.O.H., Epsom), Dr. Ronald G. Smithson (M.O.H. & S.M.O., Oldbury).

Dr. Jolly then delivered his Presidential Address which is printed elsewhere in this issue.

COUNCIL MEETING

A meeting of the Council was held at Tavistock House, Tavistock Square, London, W.C.1, on November 26th, 1943, with the President (Dr. R. H. H. Jolly) in the chair.

There were present: Drs. J. S. Anderson, Cyril Banks, H. Stanley Banks, Malcolm Barker, Vynne Borland, W. C. V. Brothwood, G. F. Buchan, J. J. Buchan, G. Lissant Cox, J. A. Charles, W. A. Daley, I. G. Davies, Jas. Fenton, Jas. Ferguson, D. H. Geffen, J. M. Gibson, F. Gray, F. Hall, C. E. Herington, J. W. Hunter, Sir Wilson Jameson, Drs. J. J. Jervis, Gordon Lilico, Thos. Orr, R. H. Parry, H. Paul, Prof. R. M. F. Picken, E. Virginia Saunders-Jacobs, J. E. Spence, J. A. Stirling, J. A. Struthers, Mr. A. G. Taylor, Drs. H. C. Maurice Williams and F. T. H. Wood.

Apologies for absence were received from Sir Alexander Macgregor, Drs. E. A. Gregg, G. V. T. McMichael, G. McKim Thomas and H. G. Trayer.

Minutes of meeting held September 24th, 1943 (see PUBLIC HEALTH, November, 1943, p. 20), approved and signed.

Report of General Purposes Committee.—Dr. J. A. Charles submitted minutes of the meeting of the General Purposes Committee held on October 29th, 1943, which were approved for publication in PUBLIC HEALTH (January, 1944).

Central Council for Health Education.—Dr. Thos. Orr reported as Chairman of the Committee appointed to consider the relations of the Society and the C.C.H.E. Recommendations submitted by the Committee were postponed for further consideration at the next meeting of Council.

The following were elected to represent the Society on the C.C.H.E. for the session 1943-44: Drs. J. F. Galloway, R. P. Garrow, J. W. Hunter, E. K. Macdonald, A. Massey, Maitland Radford, J. A. Scott, H. C. Maurice Williams, A. B. Williamson, and Mr. J. F. Pilbeam, L.D.S., with two other representatives to be nominated by the Association of County Medical Officers. The Executive Secretary continues to serve as liaison officer.

ELECTION OF COMMITTEES FOR 1943-44

General Purposes Committee.—Dr. R. H. H. Jolly, Dr. Cyril Banks, Sir Alexander Macgregor, Drs. F. T. H. Wood, G. F. Buchan, J. S. Anderson, J. J. Buchan, J. A. Charles, G. Lissant Cox, Jas. Fenton, Jas. Ferguson, J. M. Gibson, F. Hall, C. E. Herington, J. W. Hunter, G. Lilico, H. Paul, Prof. R. M. F. Picken, Drs. T. N. V. Potts, E. V. Saunders-Jacobs, J. A. Stirling and H. C. Maurice Williams.

Journal Committee.—Drs. R. H. H. Jolly, Fraser Brockington, G. F. Buchan, J. Fenton, Prof. R. M. F. Picken, Drs. E. W. Caryl Thomas and G. Lissant Cox.

The late Sir Arthur Newsholme.—The Council accepted with much pleasure, as a gift from the Royal Sanitary Institute, a handsomely bound and illuminated address presented to the late Sir Arthur Newsholme by Fellows, Members and Associates of the Society in 1897 in recognition of his long and valuable services to his colleagues.

The Council then adjourned.

Revision of Salary Scale.—The special committee for revision of the Askwith Scale of Salaries reported that they had held their first meeting on October 28th, 1943, and that Dr. G. F. Buchan had consented to act as interim chairman. They recommended that Dr. A. Massey be elected an additional member of the committee, and that they should be empowered to co-opt other members at their discretion. The report and recommendations were approved and adopted.

Public Health Training.—On the proposal of Dr. J. A. Charles it was agreed that the Society should appoint a committee of members and others connected with public health training to report on the character of training required for public health medical officers in view of possible replanning of the health services. The committee was constituted as follows: Dr. R. H. H. Jolly, Dr. G. F. Buchan, Dr. J. A. Charles, and Prof. R. M. F. Picken (Officers of the Society); Sir Wilson Jameson, Prof. Major Greenwood, Prof. G. S. Wilson, Dr. Alan Moncrieff, Prof. J. Johnstone Jervis, Prof. R. H. Parry, Drs. W. Allen Daley, J. A. Scott, H. Stanley Banks, W. G. Clark, F. Hall, with one representative each from the Tuberculosis and M. & C.W. Groups, with power to co-opt additional members.

Representation of the Society.—The following were elected to committees of the British Medical Associations: Insurance Acts Committee, Dr. J. W. Hunter; Public Health Committee, Drs. G. F. Buchan and J. Ferguson; Aliens Committee (C.M.W.C.), Dr. J. A. Struthers.

Hon. Treasurer's Report.—On the recommendation of Dr. G. F. Buchan it was decided to invest £1,000 from current account in Savings Bonds 1960-70. It was further agreed that Dr. Buchan should confer with Drs. R. L. Midgley, H. S. Banks and Violet Russell regarding grants for Group expenses during the session 1942-43.

Presidential Lunches.—The Council appointed a committee consisting of the President (Dr. R. H. H. Jolly), Sir Alexander Macgregor, Drs. Cyril Banks, G. F. Buchan and James Fenton to arrange for the entertainment of guests of the Society at luncheons to be held in the spring and early autumn of 1944.

Government Milk Policy.—A resolution was received from the Midland Branch in reference to the Pasteurisation and Testing of Milk in support of the submissions forwarded by the Council to the Ministry of Health.

Subordination of Technical Officers.—The following resolution was referred for consideration by the General Purposes Committee: "That the Yorkshire Branch of the Soc. M.O.H. notes with disappointment the increasing power and importance of administrative officers in the central Government departments and in the local government service, and the consequent gradual relegation of technical officers to a subordinate position."

GENERAL PURPOSES COMMITTEE

A meeting of the above Committee was held at Tavistock House, Tavistock Square, London, W.C.1, on October 29th, 1943, with Dr. J. A. Charles in the chair.

There were present: Drs. J. S. Anderson, Cyril Banks, G. F. Buchan, C. E. Herington, J. W. Hunter, R. H. H. Jolly, Gordon Lilico, H. Paul, Prof. R. M. F. Picken, Drs. E. V. Saunders-Jacobs, J. A. Stirling and H. C. Maurice Williams.

Apologies for absence were received from Drs. J. J. Buchan, J. Fenton, J. Ferguson, J. M. Gibson, T. N. V. Potts, Sir Wm. Savage and Dr. F. T. H. Wood.

The minutes of the meeting held on September 17th, 1943 (see PUBLIC HEALTH, November, 1943, p. 24) were approved and signed. Arising out of the minutes, the Chairman reported that Dr. Daley had been satisfied by the Secretary of the Central Midwives Board that there was no avoidable delay in notifying results of First C.M.B. Examination to candidates.

Training of Health Visitors.—Having considered the memorandum forwarded by the Joint Consultative Committee of Institutions recognised by the Minister of Health for the Training of Health Visitors, a subcommittee was appointed to submit the views of the Society on this matter direct to the Ministry. The subcommittee was constituted as follows: The President, Dr. G. F. Buchan and Prof. Picken (*ex officio*), with Prof. Parry, Dr. H. C. Maurice Williams and three representatives of the M. & C.W. Group.

Non-Pulmonary Tuberculosis.—The Chairman reported that he had been in correspondence with Dr. P. D'Arcy Hart of the Medical Research Council in reference to the national enquiry now in progress to ascertain the proportion of bovine and human strains from cases of non-pulmonary tuberculosis. In the course of the enquiry the Medical Officers of Health in areas where cases have occurred will have given valuable epidemiological information and received the typing results. This must mean that the M.O.H. will know more frequently than hitherto when individual cases of pulmonary tuberculosis are the result of bovine infection, and thus have a better basis for tackling the milk source. Dr. Hart suggested that the Society would be interested in the course of this enquiry as bearing on the whole question of safer milk supplies.

It was agreed that Medical Officers of Health should fully cooperate in this matter and that Dr. Hart's letter should be the subject of a notice in PUBLIC HEALTH (see issue for Nov., 1943, p. 14.)

Nursing and Domestic Staff for Sanatoria.—The National Association for the Prevention of Tuberculosis asked if the Society would receive some of their members to discuss the continuing shortage of nursing and domestic personnel in tuberculosis hospitals and sanatoria. It was agreed that the President, with Prof. Picken, Drs. Charles, Tattersall and Lissant Cox, should meet representatives of the N.A.P.T. at 10.30 a.m. on November 26th.

A National Certificate for Nursery Nurses.—The President (Dr. Jolly) reported that, with Drs. Hirst and Hunter, he had attended at the Ministry of Health on September 28th to discuss with Miss Puxley and others the desirability of a national certificate for "Nursery Nurses." They had reported that the Society favoured the establishment of a National Certificate and that the Royal Sanitary Institute should be the examining body. They had advised that inspection of approved nurseries should be the sole responsibility of the Ministry of Health. In reply to questions by the Ministry's representatives, they expressed the opinion that nursery-trained nurses would find careers after the war in day and residential nurseries and in private households, and that in any case the training period for the certificate would be a useful way of bridging the gap between the ages of 15 and 17. In this way many girls would get a liking for nursing and proceed to take up general nursing as soon as their age made them eligible.

The Future of the M. & C.W. Services.—The Committee received the report of the conference convened by the National Association of Maternity and Child Welfare Centres on the future maintenance or development of the maternity and child welfare services. The report was referred for further consideration when the Society's replanning policy is reviewed in the light of the Government's White Paper.

The Training of Nursery Nurses.—The Committee approved and adopted replies to the questionnaire forwarded by the Group Committee on the Training of Nursery Nurses, through the National Society of Children's Nurses.

Representation of the Society.—The following were elected to represent the Society for the Session 1943-44: British Social Hygiene Council, Dr. J. A. Struthers; Central Association for Mental Welfare, Dr. Hugh Paul. It was agreed that the Council should be recommended to authorise payment of travelling expenses for representatives on those important bodies whose proceedings were reported to Council from time to time.

The Committee then adjourned.

BRANCH NEWS

SCHOOL MEDICAL OFFICERS' GROUP

President: To be elected.

Hon. Secretary: Dr. A. A. E. Newth (S.M.O., Nottingham C.B.).

A meeting was held at Derby on December 3rd to consider the advisability of reviving the group. The President of the Society had intended to take the chair but was prevented from attending. Dr. Cyril Banks, Past President, took the chair; 14 members were present.

The Acting Secretary read extracts from a number of letters from members in all parts of the country expressing their interest in the movement and regretting their inability to be present. It was unanimously decided to revive the group and Dr. A. A. E. Newth was elected Hon. Secretary, Treasurer, and Representative on the Council of the Society. The following members were to be invited to form a temporary committee: Dr. Anderson (Staffordshire C.C.), Dr. Cohen (Sheffield C.B.), Dr. I. G. Davies (Bristol C.B.), Dr. Gamlin (Liverpool C.B.), Dr. Hogben (Tottenham C.B.), Dr. Kershaw (Accrington C.B.), Dr. Lishman (Devonshire C.C.), Dr. Mitchell (Birmingham C.B.), Dr. Morgan (Derbyshire C.C.), Dr. Morrison (Derby C.B.), Dr. Nathan (West Riding C.C.), Dr. Stockwell (Leeds C.B.). The election of a President was deferred. It was suggested that sub-groups be formed in various parts of the country so that members may be able to meet frequently to discuss clinical and other matters without unduly interfering with their duties.

A discussion was raised about the giving of vitamin and iron supplements to children under five in the public elementary and nursery schools. The difficulty of selecting those children who should or should not have iron was emphasised, and it was questioned whether it was advisable to prescribe it as a medicine without a thorough clinical examination, including estimation of the haemoglobin content of the blood, which would be impossible at the present time. Some doubted if it was allowable to treat children in this way without the permission of the parents. Several members thought that it should be considered as a food and given initially to all the children, with a second course to those who showed clinical signs of anaemia.

All those School Medical Officers who are interested in the revival of the group are asked to communicate with the Hon. Secretary, Dr. A. A. E. Newth, S.M.O., 28, Chaucer Street, Nottingham.

NORTHERN BRANCH

President: Dr. Madge Hopper (Assist. M. & C.W.O., Durham C.C.).

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

The annual meeting of the Branch was held in Newcastle-upon-Tyne, on October 23rd, 1943. The President and 25 members were present. The minutes of the meetings held on August 6th and 21st, 1943, were read, confirmed and signed by the Chairman.

Letter from M.O.H., Hebburn.—The Hon. Secretary read a letter which he had received from Dr. J. A. Forrest, of Hebburn, with regard to the present position of applying for posts under a local authority—namely, that it is impossible to apply for a post unless permission is obtained from the Ministry of Health. Dr. Forrest wished the Society to obtain an assurance from the Ministry that, while the ban existed, there would be no discrimination between medical officers of military age. The Hon. Secretary told the Branch that he had forwarded this letter to Headquarters, and that it had been considered at the last Council Meeting. He stated that it was felt generally that every case was considered on its merits and that there was no discrimination.

The Hon. Secretary submitted a report which he had received from the Branch's representatives on the Branch Council Executive of the B.M.A. regarding the work of that body during the year. Dr. Dickinson and Dr. Grant were accorded a vote of thanks by the Northern Branch for attending the meetings and preparing the report.

Dr. Grant raised the question of Medical Officers of Health and the supply of vaccine lymph, which they have always been able to obtain on request. He had made a request recently for such a supply and had been informed that M.Os.H. were no longer to hold supplies of vaccine lymph, but that they could obtain some (if required urgently) on request to the Regional Medical Officer of the Ministry of Health. Dr. Grant brought this letter to the notice of the Branch, as it was the first intimation received that M.Os.H. were no longer to hold supplies of vaccine lymph.

Dr. Tilley enquired whether the Branch had any information about the Nursing Advisory Committee which is at present advising the Ministry of Labour in the area. The Hon. Secretary stated that the Branch had no information as to the composition of this Committee, and suggested that the major local authorities should ask to be represented on the Committee, by either a member of their Council or a medical officer. It was also felt that the Northern Branch should approach the Committee and ask that it should have a representative on the Committee.

The Hon. Secretary informed the Branch that the Branch Council had considered the question of recruitment and had instructed him to write to all M.Os.H. in the area and enlist their help in an endeavour to persuade those members of the Public Health Staff who had not yet joined the Society to do so.

Dr. Hopper, the retiring President, before asking Dr. McCracken to take over the Presidency of the Branch, thanked members for their support during the session and also the Hon. Secretary for his valuable services. In asking Dr. McCracken to take over the Presidency, Dr. Hopper stated that the coming year was certain to be a very arduous and important one in the annals of the medical profession. She was confident, however, that Dr. McCracken would make an excellent President and wished him a very happy year of office.

Before Dr. McCracken took the Chair, Dr. Grant expressed, on behalf of the Branch, their warm appreciation of the charming and efficient way in which Dr. Madge Hopper had carried out her duties during the year. Dr. McCracken, in takingover the chair, expressed his deep appreciation of the action of the Branch in asking him to preside over it. He then delivered his Presidential Address on the changing aspects of public health in Durham County. The President was accorded a hearty vote of thanks for his interesting address.

The annual summer meeting of the Branch was held in Newcastle-upon-Tyne on August 6th. The President and 14 members were present.

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

The Hon. Secretary read a letter from the head office stating that Dr. James McConnell, late of the Education Office, North Shields, had retired from active service, having been a member of the Society for over 25 years. It was resolved that Dr. McConnell's name should be forwarded to the Council of the Society for election to fully paid life membership.

The Branch officers for 1943-44 were then elected (see PUBLIC HEALTH, October, 1943).

It was decided to invite the North of England Branch of the B.M.A. to elect a general practitioner representative to serve on the Northern Branch of the Society. The Hon. Secretary was instructed to express to the North of England Branch of the Association the warm appreciation of the services of Dr. J. Hudson during the past session and to state that his re-appointment would be welcomed.

A joint meeting of the Northern Branch of the Society and the Sanitary Inspectors' Association (Northern Centre), was held in Newcastle-upon-Tyne on August 21st. The President and 22 members were present.

The meeting was addressed by Dr. W. A. Lethem, Senior Medical Officer of the Foods Division of the Ministry of Health, on the Government's milk policy. After Dr. Lethem had dealt adequately with many questions put to him, the meeting accorded him a hearty vote of thanks.

YORKSHIRE BRANCH

President: Dr. R. Watson (M.O.H., Doncaster C.B.).

Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

An Ordinary Meeting of the Branch was held in Leeds on September 24th, 1943. Twenty-six members were present. The minutes of the last meeting were read, approved, and signed by the President.

It was resolved that the following resolution, proposed by Dr. Gebbie, be sent to the Council of the Society: "That the Yorkshire Branch of the Society of Medical Officers of Health notes with disappointment the increasing power and importance of administrative officers in the central government departments and in the local government service, and the consequent gradual relegation of technical officers to a subordinate position."

HEALTH EDUCATION

Dr. Robert Sutherland, Medical Adviser, C.C.H.E., then gave an address on health education. He said that the level of health could be raised by improving the environment, and by educating the public to take advantage of their opportunities. The approach must be positive, teaching people not to be content merely with not being ill, but to desire the highest possible standard of health. We must inculcate good health habits before bad ones had an opportunity to develop; we wanted people to do the right thing not only because of habit but also because they understood the reason for it. They should understand their bodies and those of the opposite sex. All this called for more instruction in parent-craft classes, in ante-natal clinics, and in child welfare clinics. Health education must be an integral part of the educational system from the nursery class onwards, and it was essential that the school environment should be of the highest quality. Instruction of selected or volunteer teachers and youth leaders, and gaining the interest of parents by radio talks, films, and newspaper advertisements, were important. Public lectures, posters, and leaflets were of doubtful value, but the personal efforts of health-minded general practitioners, health visitors, and sanitary inspectors could have a great influence. In health education, Medical Officers of Health must come into the movement at the beginning as it is essential that the technical side should be under their direction.

A vote of thanks to Dr. Sutherland was passed unanimously.

MIDLAND BRANCH

President: Dr. H. P. Newsholme (M.O.H., Birmingham).

Hon. Secretary: Dr. R. H. H. Jolly (M.O.H., Wolverhampton).

The first meeting of the Session was held in Birmingham on October 7th. The President and 24 members were present.

The minutes of the meeting held on March 4th were confirmed.

Dr. H. P. Newsholme, the retiring President, welcomed Dr. A. J. B. Griffin and installed him as President for the coming year. Dr. Griffin, taking the chair, thanked Dr. Newsholme and other members for the honour conferred upon him. He paid a tribute to Dr. Jolly for his services as Hon. Secretary over a very long period of years, and regretted that he was now giving up that office. The President then moved a resolution of appreciation of the services of Dr. H. P. Newsholme as President for the Session 1942–3, and this was carried by acclamation.

A discussion was opened by Dr. W. A. Lethem, of the Ministry of Health, on the Government's milk policy. Dr. Lethem outlined

the various proposals suggested in the White Paper, proposals intended to improve the health of cattle, to encourage the production of T.T. milk, and to ensure a greater measure of safety of all milk sold in certain areas. Dr. Lethem claimed that, although the proposals would not ensure that all raw milk sold, even in scheduled areas, would be free from pathogenic organisms, they would help to make a determined effort to improve the safety of the nation's milk and to exercise an increasing control over the whole field of milk production and supply.

A full and frank discussion followed. The President mentioned the difficulty of diagnosing actual tuberculous disease in the cow merely by superficial examination. He asked what exactly was the significance of the double intradermal test? Did it connote disease or infection? Dr. Wyndham Parker said that although the White Paper attacked the local authorities, it was the Government Departments which were much more to blame. There was, he said, no standard of clean milk, and the local authorities got no help from the Ministry. He asked what the position of the S.M.O. would be under the new scheme. Mr. de Vine criticised the various designations of milk, and claimed that the proposed scheme of veterinary inspection would be totally inadequate. Dr. Jolly expressed disapproval of the Government White Paper and complained that M.Os.H. had not been consulted about it. He deplored the official sanction given to sterilised milk.

After a vote of thanks to the speaker, Dr. Lethem suitably replied.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles M.B.).
Hon. Secretary: Dr. W. C. V. Brothwood (Deputy C.M.O.H., Lancashire).

A meeting was held at Preston, on October 15th. There were present the President and 36 members and visitors.

The President referred to the sad loss sustained by the President of the Society in the death of his wife. The Secretary was instructed to convey to Dr. Banks the members' sympathy.

The President then introduced Dr. Lethem, of the Ministry of Health, who opened a discussion on the Government's White Paper on milk.

During the discussion, the President said that the larger local authorities could quite well undertake the work. Dr. Hall could not think that an increased milk yield would produce better herds; that under the new system the work would possibly not be as well done as it was now; and that adequate legal powers should be obtained to carry out whatever was to be attempted to improve the milk situation.

A vote of thanks was accorded to Dr. Lethem for his address.

HOME COUNTIES BRANCH

President: Dr. J. Ferguson (M.O.H., Surrey C.C.).
Hon. Secretary: Dr. C. E. Herington (M.O.H., Dagenham).

A meeting of the Branch was held at Tavistock House South, London, W.C.1, on October 15th. There were present the President and 16 members. The minutes of the meeting held on July 9th, 1943, were confirmed and signed.

Dr. Ferguson installed Dr. Malcolm Barker as President of the Branch. Dr. Ferguson mentioned his association with the new President in the past and commended him to the Branch with the full assurance that he would maintain the traditions set by his many predecessors. Dr. Barker then delivered his Presidential Address entitled "Rehabilitation and Resettlement." A vote of thanks to the President for his very able and human address was carried with acclamation.

An enthusiastic vote of thanks was then accorded to Dr. Ferguson for the very able manner in which he had presided over the Branch for the session just ended.

SOUTHERN BRANCH

President: Dr. T. E. Roberts (S.M.O., Portsmouth).
Hon. Secretary: Dr. H. C. Maurice Williams (M.O.H., Southampton C.B. and Port).

A meeting of the Southern Branch was held at Bournemouth on October 22nd, when 18 members and guests were present.

Dr. T. E. Roberts, from the chair, installed Dr. W. P. Cargill as President of the Branch for the ensuing year. Dr. A. B. Williamson proposed, and Dr. H. D. Kelf seconded, a vote of thanks to Dr. T. E. Roberts for his services as President during the past year.

The minutes of the meeting held on June 4th having been circulated, were approved as correct and signed by the Chairman.

A welcome was accorded by the Chairman to the Visitors (members of the Joint Advisory Committee *re* Cancer Act).

A discussion was opened by Dr. H. Gordon Smith, who described the scheme formulated by the Bournemouth County Borough Council under the Cancer Act, 1939. It is hoped to publish a description of the Scheme in PUBLIC HEALTH.

A hearty vote of thanks was conveyed to Dr. Gordon Smith for opening the discussion, and to the Health Committee for the facilities provided.

A meeting of the Southern Branch was held at Winchester on October 1st, when 19 members and guests were present, with Dr. T. E. Roberts in the chair.

Officers for the Session 1943–4 were elected (see PUBLIC HEALTH, October).

Colonel W. A. Lethem, M.C., of the Ministry of Health, addressed the meeting on the recent White Paper issued by the Government in connection with measures to improve the quality of the nation's milk supply. In the discussion which followed, members felt that the sale of accredited milk from one herd in certain scheduled areas was a bad policy. They said that it was frequently proved that the samples contain tubercle bacilli, and the designation of accredited milk was misleading to the public. Most of the speakers expressed dissatisfaction with the policy advocated in the Government's White Paper, and, although it was agreed that the endeavour to produce a milk free from tubercle bacilli by the encouragement of tuberculin-tested herds was an advantage, owing to the fact that nearly all the milk contains other pathogenic organisms, compulsory pasteurisation for all milk should have been the policy of the Government.

Col. Lethem was accorded a hearty vote of thanks for his most interesting address.

MIDLAND MATERNITY AND CHILD WELFARE SUB-GROUP

The eleventh general meeting of this sub-group was held on October 24th in Birmingham. Dr. Scott presided, and 16 members were present. The minutes of the previous two meetings were read, and adopted after the substitution of the word "maternal" for "ante-natal" in the report of Dr. Crosse's address on toxaemias of pregnancy, given on October 10th, 1942.

The Committee proposed the following office bearers for 1943-4: *Chairman*: Dr. Findlay, Stoke-on-Trent. *Vice-Chairman*: Dr. Dickson, Northampton; *Ex-Chairman*: Dr. Scott, Warwick; *Secretary and Treasurer*: Dr. O'Brien, Birmingham; *Committee*: Drs. Grant, Hallum, Cooper, Martin Williams, Hastilow. These names were carried unanimously. Dr. Scott thanked the members for their support during her year of office, and welcomed Dr. Findlay to the chair.

Dr. Findlay expressed regret that Dr. Cooper had signified her desire to give up the work she had done for two years as Secretary and Treasurer. She thanked her for all the excellent work she had done during that time. Dr. Cooper suitably replied. Representatives on the Group Executive Committee were invited to remain in office.

ACCIDENT SERVICE

The members visited the Accident Hospital, Bath Row, Birmingham, where Mr. Gissane, the Clinical Director, gave an interesting account of the work done there. A film was shown on Rehabilitation at the Austin Motor Works, Birmingham. Mr. Gissane explained that the inception of this idea was by laymen—Birmingham citizens themselves—who believed that specialised treatment of the injured was necessary to obviate the danger of prolonged or permanent disability after injury, and that specially trained personnel with adequate facilities should be made available—in other words a hospital, specifically catering for the treatment of injuries. This hospital, the first of its kind in the country, was taken over for this purpose two years ago. Since the war industrial accidents had increased, with consequent wastage of human effort and interference with production. Thus the importance of specialised treatment for injured persons and their return to maximum activity as soon as possible. Many accidents did not endanger life, but did endanger limbs and therefore must have first-class care and first-class rehabilitation. The seriously injured were very sick men, but rehabilitation began from the first day in bed, and patients used muscles which otherwise would have lain dormant and might have become useless.

Another experiment was started in co-operation with one of the biggest industrial concerns in the country, the Austin Motor Works. The patients went into the rehabilitation workshop, where wages are earned for work done, and they use their injured limbs till full recovery took place.

A vote of thanks was given to Mr. Gissane for his interesting address.

Mr. Badger then conducted the members round the male ward, explaining each case, and Miss Lumsden gave an interesting demonstration of the exercises in rehabilitation carried out by the patients in bed. The members were then conducted round the new department in the process of construction.

Dr. Findlay proposed a vote of thanks to Mrs. Badger and Miss Lumsden for providing such an interesting afternoon.

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EDITORIAL

The Education Bill

The Education Bill may be regarded as the first instalment of the Government's plan for reconstruction of the social services after the war. Apart, therefore, from its direct effect on the work of school medical departments it deserves careful scrutiny by all those engaged in the public health service. Readers will already be aware that the school-leaving age is to be raised to 15 in April, 1945; that education is to be in three stages—primary, secondary, and further education in young people's colleges—that the relations between local authorities and non-provided schools (now called auxiliary schools) are to be substantially changed; and that private schools (now called independent schools) are to come under central supervision.

The proposed administrative structure is of considerable interest. The Board of Education becomes a Ministry with more mandatory powers, and the Minister is to be advised by two Central Advisory Councils—one for England, and the other representing Wales and Monmouthshire. The members of these Councils are to be appointed by the Minister himself, not nominated or elected as representatives of any groups, and will include persons of experience in education both in and outside the statutory system. Presumably this experience embraces the ancillary services, such as the health services related to education. Locally the distinction between education authorities for elementary and higher education disappears, and the Part III authorities are abolished. The new authorities for all purposes are the county and county borough councils, except that the Minister may by order constitute two or more of them a joint education board if he thinks that it would tend to diminish expense, or increase efficiency, or would otherwise be to the public advantage. Such a board would consist entirely of members of the constituent authorities and would have all the powers and duties of an education authority. Every education authority must appoint an education committee, the majority of the members being members of the authority itself. Within counties provision is made for wide delegation of functions to "divisional executives" the constitution of which is to be defined in approved schemes. Although it is not explicitly stated in the Bill, the areas of jurisdiction of these bodies are apparently intended to be coterminous with those of minor authorities, or combinations of them, and special arrangements are made for divisional schemes of administration by the larger of the old Part III authorities, with populations not less than 60,000 or school rolls not less than 7,000. The proposals, then, embody the two principles of concentration and delegation, which may also conceivably be intended to be the first steps in the reform of health and hospital administration.

The wording of the clauses which relate to the special services is substantially changed from that of the Act of 1921. These are now grouped under two separate headings—*viz.*, Primary and Secondary Education of Pupils requiring Special Educational Treatment, and Ancillary Services. Under the former the categories of pupils requiring special education are not now specified but are to be defined by regulations. The local authority must ascertain what children *over 2 years of age* require such education, and provide it for them either in a special school or special class if a medical officer employed by the authority advises that it is necessary. Certification is not to be required unless it is needed to secure the child's attendance at a special school. The process of sending a child for special education will thus be much less rigid and the types of child regarded as requiring it can be extended by the Minister from time to time in the light of experience. The ages for compulsory attendance at a special school (but not a special class in an ordinary school) are to be 5 to 16, not 7 to 16 as hitherto. The duty remains of reporting to the mental deficiency authority ineducable mental defectives and also those requiring supervision on leaving a special school or class for mental defectives.

The bulk of the work of the school medical service is covered by Clause 46, which provides for medical inspection and free medical treatment of pupils for whom the authority is responsible at every stage of education up to and including young people's colleges—*i.e.*, all children from 5 to 15 years of age, and a large proportion of children over 2 but under 5 and of young persons up to 18 when the new provisions are in full operation. The duty of the authority is to secure that comprehensive facilities for free medical treatment are available for the pupils either under this Act or otherwise, and to encourage and assist pupils to use them. Medical treatment includes dental care, but does not extend to the treatment of a pupil at home. While some larger authorities now provide a wide range of treatment, it is obvious that these obligations mean for all authorities a great increase in the scope of school medical work, in addition to its extension over a longer period of child life. The phrasing of the clause suggests that the scheme is meant to dovetail into a comprehensive medical service for the whole community.

It will be noted that the Board has now dropped the wording which covered medical treatment in the Act of 1921—*viz.*, to make arrangements sanctioned by the Minister of Health for attending to the health and physical condition of the children. As the word "treatment" is used throughout the Bill to describe educational methods, perhaps the words "medical treatment" are not to be read as excluding from the purview of the school medical officer measures for promoting health as distinct from the cure of disease and defect. This is, or ought to be, a prime interest of the school medical service. It does seem odd, however, that whereas the Minister is to make regulations imposing a duty on authorities to provide milk, meals, and other refreshment for pupils, which are acknowledged to be a substantial contribution to the maintenance of health, they are empowered but not compelled to provide facilities for recreation or social and physical training. Another departure from precedent is seen in the clause relating to cleansing of verminous pupils. For many years the medical officer, or usually in practice a school nurse exhibiting his authority, has been able to examine the person or clothing of any elementary school child, under a general direction of the authority. Now the initiative is to rest with the head teacher of a school, who, when it is reported to him that a pupil is verminous or unclean, will be empowered to require the parent (or the pupil at a college) to submit him to medical examination, preparatory to the usual steps being taken for cleansing. This recognition of the teacher's share in maintaining personal cleanliness will be welcome to the public health service, but nit-infested heads cannot usually be detected without careful examination, and neither this Bill nor the Public Health Act nor the Scabies Order provides anything to take the place of the cleanliness surveys, which have been an important part of the work of school nurses, even though K. Mellanby's inquiries have indicated that they have not always been very thorough. The new proposals seem to remove a means of ascertainment without affording any adequate substitute. It is certainly not desirable that medical time should be wasted on this work, as it would come to be if head teachers made a vigorous attempt to exercise their new powers.

The Bill continues the nominal control of school medical functions by the Minister of Health but provides for arrangements being made, as before, for its being exercised by the Minister of Education. Reform of the health services generally may give the opportunity for dropping this undesirable departure from the principles of the Haldane Report, but it can be assumed from the experience of 1919-21 that administrative obstacles, both real and illusory, will have to be vigorously attacked before the new Ministry of Education will part with its health functions. Locally the education authorities are empowered by the Bill to appoint medical officers, and some of their duties cannot be exercised without such appointments. Just as the Local Government Acts compel councils to appoint certain officials, including a medical officer of health, the Education Bill now makes it the duty of every education authority to appoint a chief education officer. This official will certainly be regarded, as he has been in the past, as the superior of all other officers employed by the authority, including the school medical officer, unless their relationship is otherwise defined. This matter has been the subject of recent representations to the Board of Education and cannot be allowed to drift. The Ministry and the Board have repeatedly advised local authorities that the medical officer of health should be school medical officer and as such the independent adviser of the authority on health matters, but they have admitted that they have no power to enforce their views. They are not seeking such power now, unless it is inherent in the power of the Minister of Health to make regulations. If it is, the question could be simply settled by recognising the position of the medical officer of health as the adviser to the authority on all medical and public health questions relating to education, as he is for similar purposes under the Poor Law in terms of the Public Assistance Order, 1930. If this is not possible within the Bill, the matter ought to be raised in the House at an early stage of its deliberations, and immediate representations should be made to the Board.

Infant Mortality in Scotland

Scotland has an unenviable pre-eminence in infant mortality. In the quinquennium 1936-40 the infant mortality rate in Scotland was 76 per 1,000 births as against 55 in England and Wales. It was higher in Scotland than in any British Dominion or in any country of Western Europe except Spain and Portugal. For many years, up to the end of the first decade of this century, the Scottish rate was below the English, but during the last 30 years, while the English rate has fallen from 117 to 55, the Scottish rate has only fallen from 112 to 76. The neo-natal mortality is 68% greater than that of the best countries (New Zealand and Holland) and 23% greater than that of England and Wales. Taking regions instead of countries, West-Central Scotland had an infant mortality rate of 88 during the quinquennium 1934-38, whereas the highest figure for any English region—the North—was 66. Taking cities, the mortality rate in Glasgow in 1938 was 87, comparing with 50 for Greater London.

Under the chairmanship of Sir John Boyd Orr a committee, promoted by the Secretary of State, has been sitting to consider the high infantile mortality experience in Scotland and has just issued its report.* Certain causes of or "associations" with the high mortality rate are first mentioned. These include the low income level of an unduly large proportion of the population of Scotland, the large percentage of family overcrowding in the 24 large burghs (only three English towns—namely, Sunderland, Newcastle-upon-Tyne, and Gateshead—are in any way comparable with Scottish burghs in this respect), and—though this can hardly be a factor in wartime—the higher unemployment rate in Scotland than in England as a whole.

It is to be expected that in the report of any committee over which Sir John Orr presides attention would be drawn to the importance of the feeding of mothers and infants. That deficiencies of diet can be correlated with stillbirth and prematurity is shown by an unpublished survey made in Glasgow by Graham and Cameron in 1942. They took the diets of 300 mothers, of whom 100 had stillborn infants, 100 premature live-born infants, and 100 full-term live infants. Statistical analysis showed that the difference between the diets of mothers with full-term infants and mothers with premature infants was significant, but not between mothers with live premature and stillborn infants. The diets of poor mothers in general are characterised by low energy value, low protein content, and deficiency of calcium, iron, vitamins A and C, and riboflavin, and this does not complete the list of deficiencies but enumerates only those definitely known. On infant feeding the report says that studies in Scotland show no difference from surveys in England in the percentage of lactations initiated or the average period of breast feeding, but social differences in respect of maintenance of lactation suggest that in Scotland in general there may be an excess of unsatisfactory lactations of short duration. This is because there is more poverty.

So far as medical services are concerned the Committee draws attention to the smaller amount spent in Scotland on maternity and child welfare centres. In 1935 the expenditure on these services in Scotland was £3·5 per birth, as compared with £5·2 per birth in England and Wales. The number of births in Scotland in 1937 was equal to one-seventh of the number in England and Wales but the number of ante-natal centres was only one-ninth, and of child welfare clinics only one-twelfth. Scotland has lagged behind in the provision of maternity and child welfare services. Clinic premises are often poor, ill-equipped, and overcrowded; nutrition supervision is inadequate; liaison between the hospital, the family doctors, and the child welfare service is poor, and health visitors have usually much larger districts than they can efficiently manage. The powers to supply extra food and domestic help are not sufficiently used by local authorities. It is also added that, while the provisions for the training of midwives and maternity nurses in Scotland are similar to those in England and Wales, the conditions of training are unsatisfactory. In the wards of some hospitals where medical students are also taught, nurses compete against the students for the limited amount of clinical material available.

* H.M.S.O., Edinburgh. 1s. 3d. net.

The Committee makes certain recommendations. Some of them are of a very general character. Housing must be improved without waiting for formal town planning. The special measures taken by the Ministry of Food to improve the health of mothers and infants must be continued and extended, pending the bringing into force of the recommendations of the Hot Springs Conference. Child welfare services must be extended and improved. Education of mothers in infant feeding and domestic hygiene is of paramount importance. The health visitor should be more highly trained in the principles of mother and child care, and the number of families for which one health visitor is responsible must be limited. The ante-natal clinic must be made an essential part of the obstetric service and staffed by obstetricians. More maternity hospitals, well planned and with full-time obstetricians in charge, are required, the aim to be to admit to hospital all primigravidae and all others with bad obstetrical histories or from unsuitable homes. Finally, more attention should be given in the medical curriculum and in post-graduate courses to the teaching of child health and nutrition. The Committee makes one further recommendation having to do with illegitimate and boarded-out infants, that the medical officer should be made infant life protection officer, with the health visitor responsible to him. The report contains much useful information on the general subject, apart from the application to Scotland.

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Civic Restaurants

A survey of the place of the British Restaurant in the life of a war-time community has been undertaken by a research group (with the help of Mr. F. Le Gros Clark of the Children's Nutrition Council) under the auspices of the Standing Committee on Communal Feeding, which is part of the London Council of Social Service. The results are embodied in a very readable sixpenny pamphlet published by the London Council. The survey comprised just over forty restaurants in the London area, all of them, as it happens, directed by voluntary bodies. This fact may rather bias the conclusions, because the majority of these restaurants are controlled by local authorities. But the choice of the voluntary restaurants was made because the committees in charge were likely to be less embarrassed by a request for intimate information than the servants of a public authority, and also because it happened to be known to those undertaking the survey that these diversified restaurants furnished a more representative sample of the country as a whole than the standardised canteens controlled by one municipality.

Here, therefore, for what they are worth, are the conclusions to be drawn from the survey. Although local authorities and many even of the managers of the restaurants regard them as no more than a war-time expedient, they have created their own faithful public. They are democratic in price, they provide reliable fare, and there is a homely atmosphere about many of them, suggesting, as Mr. Le Gros Clark says, patently domesticated women preparing food for an incredibly enlarged family. About 8% of the diners, at least in the restaurants covered by the survey, were elderly folk, mainly old-age pensioners, some of whom received full meals at special prices and at reserved tables. That in itself is a social service, for many of these people, living by themselves, are likely to be neglectful in their diet as in other respects. About 6% of the daily diners are housewives and mothers, most of them probably choosing this means of ekeing out the domestic ration. About 27% of the diners, before the restaurants were opened, used to lunch off sandwiches which they brought with them. It is considered that at least 200,000 people in this country have been saved by the civic restaurants from the monotony, and the frequent inadequacy, of the carried lunch. Finally, it has been shown that the restaurants can pay their way, though not all of them do.

Is there a possibility that, among their multifarious activities, local authorities will continue after the war the business of catering? In other words, will the 2,000 or more British Restaurants, the majority of which are controlled by the local authority in whose area they lie, continue to operate? No doubt, if they do, the commercial caterers will put up opposition.

REHABILITATION AND RESETTLEMENT OF THE DISABLED*

By Malcolm Barker, M.R.C.S., L.R.C.P., D.P.H.,
Medical Officer of Health, East Ham C.B.

Many of us recall after the last war the numerous requests made to us by disabled men for advice and help in finding suitable occupations. The King's National Roll, though it showed appreciation of the nation's gratitude, was by no means comprehensive; it was based mainly on the numerical factor and disregarded the severity or degree of injury. Except for such institutions as Roehampton for limbless men, St. Dunstan's and the National Association for the blind, Papworth, Preston and Wrenbury for the tuberculous, a few industrial training centres and voluntary organisations, no attempt was made to deal on any large scale with the loss of working capacity and waste of manpower consequent upon disability. The interim scheme of the Ministry of Labour and National Service was therefore particularly welcome, and was initiated to assist the war effort by encouraging such handicapped persons to enter the munition industry or to accept work which would permit others to do so. The object to be attained is that the disabled citizen should get back to suitable employment as soon as possible—not to any employment but to the most skilled work of which he is capable—and it embodies a new procedure for training disabled persons, including the payment of maintenance grants. It is a war-time measure which it is hoped will continue in the post-war period.

Procedure Adopted Under Interim Scheme

The procedure adopted by the local office of the Ministry of Labour and National Service under the interim scheme is to contact the patient while he is still in hospital, to ascertain in consultation with the surgical specialist the degree of his disability, and to estimate as far as possible his suitability for employment, or alternatively, the extent of training required to fit him for other work. The information must embody a description of the nature of the residual disablement whether permanent or temporary, slight, material or severe, and the use of any surgical appliance. It is necessary to ascertain if further treatment is needed after discharge from hospital, whether this would interfere seriously with employment, and whether he is able to use a public conveyance, or work under ordinary industrial conditions. The interview with the patient supplies data about his past employment and his intention to continue in it, or alternatively, the occupation which he desires to follow. Arrangements are thus made for placing him in work appropriate to his condition, or for training in workshops under the Ministry of Labour or voluntary associations or private employers, where he is taught some new occupation. The demand for skilled craftsmen, or at any rate for those who are capable of augmenting the staff of factories, is so great now that little difficulty is experienced in finding suitable posts. Those trained in munitions are, of course, immediately absorbed in that industry. The technical colleges of local authorities are used as instruction centres, although apparently the number of trainees in some areas is comparatively small.

The Tomlinson Report

The success of this scheme has paved the way for the recommendations contained in the Report of the Tomlinson Committee but it must be remembered that the interim scheme deals mainly with surgical disabilities occurring during the war, although recently other conditions have been included. The terms of reference of the Tomlinson Committee were (*a*) to make proposals for introduction at the earliest possible date of a scheme for the rehabilitation and training for employment of disabled persons not provided for by the interim scheme, and (*b*) to consider and make recommendations for introduction as soon as possible after the war of a comprehensive scheme for (i) the rehabilitation and training of, and (ii) securing satisfactory employment for disabled persons of all categories.

*Presidential address to the Home Counties Branch, delivered on October 15th, 1943.

The Tomlinson report envisages measures for benefiting large numbers of civilians and ex-Service men and women who for reasons of health are unable to follow their normal occupations, and those who remain absent from work for long periods or are unable on medical grounds to engage in any employment available to them ; it includes, not only surgical cases, wounds and injuries, but also medical defects of all varieties.

There is, here, a very wide field for research into the limitations of each particular defect group and for close enquiry into the potentialities of rehabilitation and into the methods of vocational training and resettlement. The report recommends extension of hospital facilities and the provision of specialised services in certain existing up-graded institutions. It will be the duty of the County and County Borough authorities to provide adequate hospital treatment not only through municipal hospitals, but also in conjunction with voluntary hospitals. The scheme would follow, to some extent, the present E.M.S. hospital system.

The report also suggests that local education authorities should have their powers extended to permit them to make provision for young disabled persons beyond the age of 16 years, and that where such authorities continue to make their own arrangements, including the payment of suitable maintenance allowances, this should be a grant-aided service similar to the training of the adult blind and the placing of skilled workers in suitable employment. The local authority already makes provision for these, and for the care and treatment of the tuberculous. There are, too, the mental welfare clinics and M.D. Committees. Such facilities as these would be extended.

There is need for adequate and competent hospital staffs. The value of psychotherapy and occupational therapy is recognised, and for this purpose the Committee suggest that the University and Royal Colleges should issue diplomas for proficiency in rehabilitation to both medical and ancillary staff.

The ascertainment of the degree of disability depends largely upon specialist advice and can be determined satisfactorily only by close co-operation with hospital services. The Ministry of Labour has established a liaison with the E.M.S. in respect of surgical disabilities, but in medical as well as surgical cases the procedure will entail a system of examination and report by consultants on the capabilities of each individual patient, together with a recommendation in respect of the work and environment best suited to his disability. We may presume that in medical cases rehabilitation means more than resumption of work or sheltered employment. Resistance must not be lowered or old-standing disease re-activated. The occupation must suit the particular disadvantages.

Constant reference is made in the report to the need for development and extension of existing facilities. The co-operation of local authorities on a regional level, and regional level only, as well as that of voluntary undertakings is sought, in order that at the end of hostilities measures may proceed forthwith.

Local Authorities *v.* Regionalisation

At first sight the part assigned to local authorities and their Medical Officers of Health appears almost negligible. Ascertainment and subsequent administration is to be entrusted to a local committee attached to the local employment offices working under the general directions of the Ministry of Labour and National Service. Each committee is to be responsible for the operation of the scheme in its area, and it is proposed that a regional committee should co-ordinate the work of such committees on a wider basis. The membership of each committee is to include medical experts and representatives of both employers and workpeople. Thus a new body is to be formed to deal with a whole range of medical disabilities. It may be presumed that their responsibilities will include the assessment of invalidity and consideration of the means to reduce periods of abstention from work, as well as the methods of rehabilitation.

There is little doubt, I think, that so far as medical disabilities are concerned such scanty provision would prove ineffective. I suggest that the medical members on the committee would be placed in a somewhat invidious position in their relationship to other general practitioners and to their colleagues on the committee. The word " regional " implies a control of these matters much wider than even an amalgamation of two or more existing local authorities, and the result would be loss of personal contact, ignorance of local conditions and a lack of knowledge in respect of home difficulties, domestic worries and environmental factors. It seems anomalous that the Tomlinson report, while advocating, on the grounds of past successful administration the continuance of local authority services in respect of young persons, the blind, deaf, mentally defective, and tuberculous, and while recognising the need for extension of these provisions, seeks to place a responsibility for the after-care of other disabilities upon an *ad hoc* body with little or no experience in these matters. I think that the consensus of opinion would oppose a central body of the Ministry of Labour and National Service undertaking the organisation and administration of a medical scheme of this kind. There is abundant evidence of the development of civic sense, and with it a desire that provisions affecting the welfare of the residents of the area should be dealt with largely by the local authority. This is in great measure due to the success which has already been attained by our health services.

The Local Hospital

I submit that the health services of a borough or populated area should, so far as circumstances permit, be centred at the local hospital. It is not intended that all the duties of a public health and education committee should be abrogated to the hospital, but that the public health and hospital services should be an entity without any dividing line in their provisions for the public. The functions of a hospital must be not only curative but preventive. Whatever facilities are required to maintain the health of the people of the area should logically be based on hospital service. Not only advice but all necessary measures for prophylaxis and for the guarding of health should emanate from this source. The aim should be to maintain health and working capacity. Although specialisation for particular purposes of certain hospitals in the region is to be advocated, the number of patients requiring further advice and treatment with the possible exception of fracture units, cancer investigations and treatments is unlikely to be excessive.

The Tomlinson report states " that the measure of co-operation between hospitals and the Employment Exchange Service will be materially assisted if, as the Committee understand is the present intention, the organisation of the hospital services on a regional basis, and the principle of concentration into specialised centres or hospitals of particular types of disabilities are to be continued into the post-war period." A further quotation, however, to the effect that " continued medical supervision is rarely required for the surgical but it may be necessary for a substantial period for the medical group of disablements " raises the practicability of treating and supervising adequately medical cases at regional centres. Again, occupational therapy and physiotherapy for the purpose of rehabilitation should not present any serious difficulty. Many of the local general hospitals provide requisite treatment under the care of the consultant staff and auxiliary helpers. It should be the aim to multiply the number of those specialists and other workers who are conversant with such methods and not to restrict it to the few attached to a regional hospital some miles away where patients can receive such treatment only at considerable inconvenience. The answer to any criticism of inadequate treatment on account of lack of skilled personnel is, surely, the institution of postgraduate study and recognised instruction.

It will, I think, be in the interests of all concerned to attract to the staff of the hospital consultants who are afforded full scope for their activities, and such a policy will prove more helpful to patients, public health medical staff and general practitioners. There are advantages in a complete hospital unit and in a system of investigation by a team of consultants, such as at the Mayo Clinic in the States, at Ruthin Castle in this country, and at hospitals in Soviet Russia. Only cases requiring some special form of treatment where the condition warrants particular investigation need then be referred to regional hospitals.

My authority has for some years contributed a large sum annually to its local hospital, a voluntary institution, and by representation on the Board has taken some share in its control. Special arrangements both for in-patient and out-patient treatment are available to the public health and school medical services, and a maternity block has been added by the Council. It is desired at the end of the war to extend such facilities, including a new out-patient department. The agreement is that the East Ham Memorial Hospital will take such action as may be necessary to provide or augment, as early as is possible, the following services, which it is anticipated will accord with the Council's policy for the centralisation of the public health services in the vicinity of the hospital and with the post-war development of the hospital and public health services : (1) Mental welfare clinic. (2) Rheumatism clinic. (3) Electro-cardiology. (4) Solarium. (5) Facilities for the investigation of cancerous conditions. (6) Pathological laboratory service. (7) Electrical treatment, massage and remedial exercises and other forms of physiotherapy ; a foot clinic. (8) Any other service, the establishment of which is considered by the Council to be desirable in the interests of public health. Material help under Section 181 of the Public Health Act, 1936, will enable the hospital to provide the amenities and services required by inhabitants of the borough while maintaining its voluntary status. Such arrangements between local authority and voluntary hospitals are advocated in the Tomlinson report. In some areas municipal hospitals afford equal opportunities, although the appointment of consultant staff is on a different basis. In view of the need for rehabilitation and the maintenance of working capacity, especially medical cases, further demands may yet be indicated.

Home Conditions and Clinic Facilities

Home conditions and domestic difficulties do not make for stability in disease, and retrogression may occur simply through disturbing factors—*viz.*, noise, want of proper rest, the indifferent preparation of food, and lack of suitable environment. It is more advantageous to provide care and nursing attention under supervision and control during employment than to await the inevitable breakdown. Local hospitals could meet the needs of the workers in this way for continued supervision and treatment. Many would derive great benefit and assurance under a system of short-stay institutional care.

If group practice and health centres are to be established at our hospitals, clinics and other convenient centres, perhaps also the physical capabilities of the partially disabled and the neurotic could be tested in occupational units or municipal workshops at or in close proximity to the hospital. Medical observation would eliminate a percentage of those cases now looked upon as chronically sick and therefore unable to work, while sheltered employment would be available in such units either as a temporary measure or as permanent employment. Such occupational methods are adopted in our modern mental hospitals : why should not similar facilities be offered to those suffering from other disabilities ?

Employment of Disabled

This brings us to the consideration of measures devised for the engagement by employers of a quota of the unfit. Many large firms are capable of absorbing a proportion of such persons and of paying normal wages. These arrangements are to be extended. It is obvious that in many instances the industrial medical officer, with his intimate knowledge of numerous trade processes, is able to assess the degree of incapacity for any particular occupation more accurately than the hospital consultant, and his advice is therefore essential to rehabilitation. Wherever possible he should be attached to the specialist staff of the hospital. Except in very large works, however, there is little opportunity for him to acquire experience of a varied character, and it might therefore be desirable to extend the scope of his activities, to afford instruction on a more general basis, and to multiply the number of appointments so as to cover a group of smaller factories.

To help the disabled and sick to return to their former occupations or to graded employment, consideration must be taken of the needs and possibilities of the individual job. Such considerations go beyond the ordinary methods adopted in occupational therapy and physiotherapy. Results can be achieved only by the provision of adequate equipment and skilled staff at the works, under the supervision and the control of an enthusiastic industrial medical officer.

A local authority is one of the largest employers in any area, and the Ministry of Labour will look to local councils for the placing of disabled men and women in employment. A review of many departments shows that a variety of jobs could be made available, and considered from a broad aspect this should prove an economic proposition.

Another striking feature of the report is the suggestion that the manufacture of certain articles and particular occupations should be reserved exclusively for the unfit. This would mean regular and remunerative work. The Ministry of Labour have established a number of training centres and workshops throughout the country, but it is the local needs that require satisfying, and the municipal workshop or co-operative trading association offers a solution.

Tuberculosis

With modern methods of treatment there is probably less need to site our sanatoria in localities difficult of access and with few amenities for patients and staff. Fresh air anywhere is good air ! We visualise in the future planned cities and satellite towns with green belts and open spaces. It should be possible to provide in the same area sanatoria, workshops, and houses for our tuberculous sufferers. The T.B.-plus case should be removed to an environment where the danger to his family and others is negligible and where he can yet live and work as a member of the community without being isolated as at present. The Colony meets these requirements, and is the ideal place ; but many will not accept and others are unsuited to such a life. They continue to be a reservoir of infection in our cities. In *Papers of a Pioneer* the late Sir Pendrill Varrier-Jones said : " The opportunity to earn is essential, and until such opportunity is provided there can be no rehabilitation. These men know they cannot make good in the world at large, but they can and do make good when they have the right environment. A man engaged in productive work, keeping his wife and children, ceasing to be a danger, is a more economical proposition than a similar person propped up by Poor Relief, a danger to his family and to the community, as well as an unproductive unit thereof." If by extension of maintenance grants the incentive to work is minimised, the danger to the community under certain circumstances may be even greater than it is now.

In addition to facilities provided for employment at our sanatoria, some help may be afforded by the formation of working parties attached to factories and other large local employment agencies. By this means we can go part of the way towards the solution of this very difficult problem. The training provided at Alton Hospital and College and other Orthopaedic Centres for cases of surgical tuberculosis in children and adolescents shows a high percentage of working capacity in suitable occupations and is an example of rehabilitation for employment.

In conclusion, the words of Sir Reginald Wingate appear most appropriate : " To substitute real, effective rehabilitation for the meagre comfort of cash compensation : to convert disabled people, pauperised through no fault of their own, into wage-earners again : to restore to them the independence of which chance has robbed them : to enable them to bring up their families in healthy conditions : to save them from the bitterness which is inseparable from prolonged, ill-remunerated idleness—surely that is a task worthy of our best endeavours, and one of great service to the nation as a whole ? "

The Minister of Health has accepted an invitation of the Council to be the guest of the Society at a luncheon to be held at the Connaught Rooms on May 5th. The number of seats available will be limited, so Fellows and Members who hope to attend are asked to give early notice to the Acting Executive Secretary. Tickets (exclusive of wine), 10s. 6d.

THE CARE OF ILLEGITIMATE CHILDREN*

By ETHEL CASSIE, O.B.E., M.D., D.P.H.,
Senior Assistant M.O.H., M. & C.W., Birmingham (Retired)

There is no group of children so greatly handicapped as the illegitimate. From earliest infancy they present a problem to medical officers of health, since the relatively high infant mortality rate has continued unchecked by child welfare centres and health visitors. An unstable background and, too often, no parental care have made them unhappy and difficult children in later years. Speaking generally, little has been done to help them through the child welfare services. Now, however, we have a circular from the Ministry of Health to encourage action.

War and Peace

The problems affecting the illegitimate child remain fundamentally the same in war and peace, but war magnifies them not only by increasing the number of illegitimate children, but by increasing the domestic problems in all homes. It becomes more difficult to secure foster mothers, and the girl's mother hesitates to add to her own responsibilities. At the same time the financial situation may actually be simplified.

The increase in numbers tends to be exaggerated. In 1942 there were 35,164 illegitimate live births as compared with 26,379 in 1938. The figure is, however, high enough to merit attention.

Two Guiding Principles

There are two principles which should guide us in trying to help the unmarried mother, for it is through her we must help her child. First, it is important to get in touch with her as soon as possible in pregnancy, and second, to remember hat the mother has not only a right to keep her child, but that ultimately it may be the best thing for both of them. Many well-meaning people think only of relieving the girl of a burden, and press for early adoption, but the mother should be given time to know her own mind. There is, however, one situation in which early adoption or removal of the baby seems called for, and that is where the mother is an immature child under 16. In other circumstances, however sure the mother may be before the birth of the child that she wishes to get rid of her baby, she may feel very differently a fortnight later. These principles may seem simple, but they involve a good deal when it comes to organising a scheme.

Solutions

The happiest solution is usually to secure the return of the mother and baby to the family home, or to that of a suitable relative, at least for the time being. This can be arranged in about half the cases, often after a period of doubt and difficulty during which the case needs tactful handling. Marriage to the father of the child is a comparatively simple and not infrequent conclusion. In cases of extreme poverty it may be necessary for the marriage fees to be paid through a voluntary committee. Marriage to a man who is not the father of the child is sometimes a possibility. In such cases it is generally better to arrange adoption for the child. The potential husband may, however, wish to become the adopting father; this would require careful consideration of all the circumstances. In the case of a married woman who has a child by another man, it is often necessary to arrange adoption in order to avoid a family break-up. The husband, in some courts, is required to give his consent, but fortunately not in all.

Infant life protection work and the supervision of foster children are closely associated with the care of the illegitimate child. There is no voluntary association which can deal with these questions as a whole. Some hostels for unmarried mothers have been provided, and sometimes social workers have been appointed to help girls to secure affiliation fees. But efforts should be co-ordinated and have the financial backing of the local authority.

* Paper read before the Metropolitan and Home Counties Branch in December, 1943.

Illegimate Infant Mortality Rate

A reduction of the illegitimate infant mortality rate (I.M.R.) can be obtained by a well co-ordinated scheme. Such a scheme exists in Birmingham, where in 1931 the legitimate I.M.R. was 70 and the illegitimate I.M.R. 122. The previous five-year average was 68 and 128 respectively. The five-year average for 1936 to 1940 was 61 and 88. In 1940 the figures were actually 70 and 69, but such figures could not be maintained under war-time conditions. The illegitimate birth rate rose from an average of 33 per 1,000 live births to 54 in 1942. Before the war Birmingham had 600 to 700 illegitimate births a year. In 1942 the figure was 938. In 1930, when the M. & C.W. Department became responsible for infant life protection, it was decided to appoint a special worker to help the unmarried mothers, and shortly afterwards the foster-mothers scheme was organised. This scheme has amply justified itself.

Welfare Work

A personal and individual interest is essential if anything is to be accomplished with unmarried mothers. The average health visitor, while interested in the child, is seldom able to get the mother's point of view. The work requires personality and understanding, avoiding sentimentality. It also requires the health visitor's training and background, since a knowledge of midwifery and child care is essential. Birmingham was fortunate in finding the right type of woman. The title of social worker was used as more easily understood by the general public. Financially the social worker was placed on the same level as the superintendents of child welfare centres. In order to get in touch as soon as possible with unmarried mothers, midwives and maternity institutions were asked to send such cases to the social worker of the district in which the girl lived before any arrangements were made for the confinement. Ante-natal clinics were also asked to co-operate. Diocesan and other workers were also approached. The voluntary association now known as the National Council for the Unmarried Mother and her Child was already employing a social worker to deal with questions of affiliation payments. It was agreed that she should continue to do this work, leaving the official worker more time for home visiting, a most important activity.

The majority of the girls continue at work till the sixth month of pregnancy, but they usually try in advance to make some arrangements for the later months. They may approach the public assistance officials. At the outset, then, there should be an understanding with the Public Assistance Committee, so that their officials are instructed to refer all the cases to the social worker, who will decide what is best for the mother.

Having got in touch with the expectant mother, the next step is to visit the home and obtain a full knowledge of the background. If the girl is not co-operative, a bed is booked for the confinement, an appointment made for the ante-natal clinic, and an assurance is given that help will be available if required. The expectant mother is invited to report progress. The majority do so. It is often a help to talk things over with another woman, and gradually the successful social worker will win confidence and co-operation.

The best approach is to assume that the girl wishes to have a healthy baby. It is made clear that all necessary help will be given, but that the girl must play her part and that the father of the child should help. If the girl knows little or nothing of the father, she is advised how to obtain more information, as in the frequently recurring case where the man's full name is not even known, but only his car or motor-bicycle number. When the desirability of finding the man in relation to affiliation payments and other matters has been pointed out, the girls often find some way of getting in touch even after some months. Such contacts not only bring financial help to the girl, but in happier circumstances may lead to a satisfactory marriage. In other cases the girls refuse to have any more to do with the putative father. Then it is much better to encourage independence and give a little extra financial help if required. Claims for affiliation payments should be made as soon as possible. This matter should never be overlooked in framing a scheme.

Ante-natal Care

Ante-natal supervision at a clinic or hospital is of course essential, and in either case arrangements should include a full investigation into the possibility of venereal disease. Where necessary, treatment in special hostels is desirable, particularly for first cases. Such girls should not be sent to ordinary V.D. wards, where they may be influenced by undesirable women. Wolverhampton has an excellent church home, co-operating with the V.D. clinic and maternity hospital. Birmingham has been glad to use some of the beds, though too few are available for the city's needs. The number of cases is not large, but the period in the home may be long. One home between several authorities is the best arrangement. The social worker should take the girl to such a home, or arrange for a voluntary worker to do so. The personal approach must always be emphasised. In the same way the girl must always be met on discharge. The local authority should be responsible for the charges, although the girl may wish to contribute, and should in fact be encouraged to do so. The majority of the cases require to return to the hostel after the birth of the baby. A nursery is therefore necessary.

When, later in pregnancy, a girl has to give up work, it is often necessary to find accommodation. If she is living in lodgings, a too-respectable landlady may turn her out. The same thing may happen if she is living at home, not necessarily because of super-respectability but perhaps for financial reasons or because there is no suitable accommodation for a pregnant woman. A mother may not wish her younger girls and boys to know what has happened.

A number of homes or hostels exist, run by voluntary or church agencies, to which admission can be secured, as a rule for first cases only. The local authority can make arrangements to pay maintenance costs, and by giving grants can often secure higher standards. No local authority should send girls to a home that has not been inspected and passed by its own medical officers. This applies equally to children's institutions. Some of these homes for mothers are much too rigorous, and impose unreasonable discipline and too heavy work, while the diet, heating, and sanitary arrangements may be of too low a standard for a woman in advanced pregnancy. There is no need for coddling, and some open-air exercise is desirable, but it should not include working a heavy mangle in an open shed, or shovelling and carrying coal in a yard. A friendly and cheerful atmosphere is desirable. In some homes floor polish is more noticeable than cheerfulness.

One does not wish to belittle these very valuable institutions, but it is the obvious duty of the local authority to see that suitable standards are maintained, and to pay for them. If this is done and full co-operation is secured, the results can be excellent. As a rule the mother and baby return to the home after the confinement, and suitable nurseries must be provided. Arrangements should include the provision of a night nurse. The babies should not sleep in the mothers' dormitories.

Apart from hostels, the social worker can often find suitable lodgings for a pregnant girl by guaranteeing full payment. This may involve supplementing what the girl can pay. To such lodgings the girl and her baby may often return after the birth of the child.

The social worker should visit maternity wards weekly, to see new cases or those with whom she has already been in touch. Such visits are particularly valuable in relation to the baby. Parents who have been unrelenting previously will often take another view if now approached by the social worker, and the young mother may be permitted to return with her baby to the family home.

Voluntary homes seldom admit second cases; the Salvation Army will if they have not previously dealt with the girl. Here a local authority hostel is very necessary. It is not desirable that these girls should be sent into public assistance institutions, where they will remain for months or years, or escape under most objectionable conditions. The custom of refusing to allow the girl to go out without her baby sometimes leads to the abandonment of the baby. Visits from the social worker are seldom welcomed by public assistance officials, even though the girl might be found work or lodgings in this way. Some public assistance committees appoint ward visitors but this is an example of overlapping.

Foster Mothers

Foster mothers are obtained by advertisement, offering guaranteed payments to women interested in the care of children. Such payments should be not less than 15s. a week at present. Partly to keep her in touch with the child, the mother pays on an assessed basis and is required to supply clothing and pay doctor's bills. In the Birmingham scheme half the cost is recovered. The scheme can apply only till the age of five, but it will be found that it is seldom difficult to deal with the few children still in the care of foster mothers at that age. Some have been taken into the homes of relatives, some have been adopted by foster parents, some mothers have married and taken the child. If the mother deserts the child, or dies, the child becomes the responsibility of the public assistance committee. In Birmingham it was agreed that the child should be retained in the foster mothers scheme till the age of five, and then transferred to the boarding out scheme, the same foster mother keeping the child if she wished to do so. Payments are made to foster mothers by vouchers, cashed at child welfare centres, to which the child must be taken. Home visits are paid by health visitors.

Practically all the larger local authorities have some accommodation for homeless children. It is desirable that the nursery section should be under the M. & C.W. authority, and that it should be co-ordinated with a foster mother scheme, since young children do so much better in individual homes. Accommodation for illegitimate children should be included in these homes, as mentioned in Circular 2866. A nursery home of this type should have a cubicle receiving section, and special wards for feeble and sick children.

Adoption

The special worker should deal with the problem of adoption. The home and adopting parents should be judged from the point of view of their fitness to receive a child, while the suitability of the baby (sex, age, health, religion, and nationality) must also be taken into account. The child of the mental defective cannot be adopted. Nursery life in the early years, with boarding out later, seems best. Where the child is mentally defective institutional life is indicated.

The suggestion in the circular that the girl and her baby might be together in an institution, or with a private family where the girl can work, is more easily arranged when the child is under nine months old. The circular also suggests the use of day nurseries; these are of great value and often allow the girl to keep her baby with her.

In Birmingham six workers are dealing with the foster mothers scheme, the children's home service, and the unmarried mothers, two full time and one half-time for the last. Only workers specially interested are of value.

Finally, I should like to emphasise again the importance of the personal rather than the official approach, and the importance of co ordination and of co-operation in meeting and solving the individual and social problems of the illegitimate child.

Further steps should be taken to encourage the breast-feeding of babies. This recommendation is made by the Minister of Health's Advisory Committee on the Welfare of Mothers and Young Children, in a Report just issued from H.M.S.O., at a price of 4d., post free. The Report estimates that while 95% of the babies delivered in their own homes by domiciliary midwives are breast-fed at the end of 14 days, only about 80% of babies leave the maternity hospital wholly breast-fed. At least 80% of all babies are wholly breast-fed at the end of two weeks, but only 50% at the end of three months.

In the Advisory Committee's opinion, after making allowance for the fact that the hospitals tend to accept complicated cases for confinement, the main reason for the difference between home and hospital babies is that in many hospitals the routine of feeding is over-mechanised. Breast-feeding tends to become regimented, over-scientific and unnatural. In some hospitals babies are weighed too frequently and given artificial feeds too readily. The Report, therefore, recommends more elasticity in the hospital routine of infant management, and appointment of paediatricians, or other medical officers especially interested in babies, to maternity wards or hospitals, with full authority over the care of babies, both normal and abnormal. Any feed other than a breast-feed should be given only after due consideration in each case, and recorded, together with the reason, on the baby's chart.

CANCER AS A PUBLIC HEALTH PROBLEM*

By H. GORDON SMITH, M.D., D.P.H.,
Medical Officer of Health, Bournemouth

The Cancer Act, 1939, places on County and County Borough Councils the duty of establishing a service under which facilities for the diagnosis and treatment of cancer will be available to all who are, or are suspected to be suffering from the disease. The responsibilities are somewhat similar to those imposed by the tuberculosis regulations and the Venereal Diseases Regulations, but the object is not entirely the same. Tuberculosis and the venereal diseases are caused by specific organisms which may be transmitted to others. In cancer this does not apply as there is no evidence that it is an infectious disease, so that at present we are not concerned with contacts. There are, nevertheless, many difficulties to be overcome in formulating an adequate scheme in war-time—so much so that many authorities, with the approval of the Ministry of Health, are content to wait. Bournemouth County Borough Council is, I understand, the first local authority to produce what may be described as a complete scheme and to obtain the sanction of the Ministry.

Preliminary Steps

Before taking any definite steps, the Council consulted, as is required by the Act, representatives of the Bournemouth Division of the British Medical Association and of the Royal Victoria and West Hants Hospital. At the meeting the medical delegates expressed, *inter alia*, the following views: (1) The Cancer Act was more of a political enactment than one inspired by authoritative medical opinion, and the money to be expended could be more profitably used in research work and the education of the public. (2) The facilities available in the Royal Victoria and West Hants Hospital for the diagnosis and treatment of cancer are up to date and adequate, but extensions are desirable to enable larger numbers of patients to be dealt with without delay. (3) It would be an unwise procedure for patients to have access to the clinic without first consulting their own doctor. (4) In a large number of cases surgery is not only the treatment of choice but the only treatment.

One surgeon with exceptional experience in cancer institutions in this country and on the continent advocated the erection of a special hospital in which treatment would be given to cancerous and pre-cancerous conditions, and accommodation be provided for patients without facilities for alleviation in their own homes—that is, inoperable terminal cases. He considered it highly desirable that the last-named should be kept separate from the early cases.

The delegates, on behalf of their organisations, agreed to co-operate, and the Council duly formulated a scheme which was approved by the Minister of Health in October, 1942. Approval was subject to the following recommendations:—

1. The expert to be appointed as Director of the Council's scheme should work in close co-operation with a radiotherapist associated with the Royal South Hants and Southampton Hospital.
2. The proposed intensive publicity advising persons that, if they suspect they have cancer, they may receive advice from a specially established clinic appears to the Ministry open to considerable objection. Such action should be resorted to only if publicity through medical practitioners appears to be producing inadequate results.
3. The clinic should form a constituent part of the activities of the Royal Victoria and West Hants Hospital.
4. It is understood that the scheme now provisionally approved will, in due course, be merged in a wider area scheme on the lines already suggested to the Medical Officer of Health.

The scheme having been approved, the next step was to appoint a director. It was anticipated that a highly qualified man with exceptional experience of cancer would be found—one who would command the respect of local medical practitioners and attract to the clinic those for whom it would be established. The intention was that the director should be in sole and complete charge of the diagnostic clinic, able when he so desired to confer with any member of the staff of the Royal Victoria and West Hants Hospital, where the clinic was to be held. The Council was fortunate enough to obtain the services of Mr. Sampson Handley. Some publicity to the scheme was given in the local newspapers, and by means of a personal letter sent by me to all medical practitioners before the first session on March 5th. On this occasion, 14 persons attended—2 males and 12 females, 4 having been sent by doctors and 10 coming on their own initiative.

The following are some statistics relating to the work of the clinic during the first six months.

Number of sessions, 25. First attendances: Male 30; Female 76—total 106. Re-attendances: Male 14; Female 24—total 38. Average attendance per session, 5·7. Attended voluntarily: Males 16; Females 47—total 63. Referred by G.P.s: Males 14; Females 29—total 43. Highest attendance, 14; lowest attendance, 1. There were two nil attendances, one presumably on account of inclement weather.

Disposal.—For x-ray treatment, 18. To pathological department, 3. For surgical treatment, 13. For various forms of hospital treatment, 9. To own doctor with advice, 51. Not cancer—reassured, 37.

General.—Consultations held, 8. Age of youngest female, 23; age of oldest female 81. Age of youngest male 17; age of oldest male 82. Average age of all patients 58.

DEATHS

Females		Males	
Age	Cancer Site	Age	Cancer Site
53	Breast	57	Rectum
55	..	19	Tongue
62	..	73	Tonsil
68	..	18	Lung
63	..	60	Larynx
32	Liver	35	Tonsils
		60	Brain

Value of Clinic

The question arises whether the clinic is serving any important purpose. Does it in fact achieve anything which the hospital failed to do? It is not easy to give a definite reply. The fact that 63 out of 106 persons presented themselves voluntarily is encouraging. Doubtless some of these would have eventually consulted a doctor, but not necessarily a specialist. On the other hand, several of the patients were hopeless cases. It will be interesting to see if the proportion of these and also the total number of deaths from cancer in the County Borough tends to decrease. In 1942, there were 2,045 deaths from all causes, and 334 were attributed to cancer. This appears to be a high death-rate; but 1,370 of the 2,045 deaths related to individuals aged 65 or more, and 1,825 had attained or exceeded the age of 45. In other words, Bournemouth favours the incidence of cancer. It is not to be expected that there will be large attendances at the clinic, for there are still many residents who are in a position to pay for a specialist's services. To the poorer inhabitant every facility is offered. No charge is made at the clinic unless treatment is given, when a particularly favourable scale is employed. It was not proposed to ask for any payment, but the Ministry of Health pointed out that "the Council are under a statutory obligation to assess all cancer patients treated by them or at their instance in respect of their cost of treatment and maintenance and to recover from them, or from their representatives, any expenses incurred by the Council. In making their assessment, the Council may have regard to the financial circumstances of the patient."

Publicity

The next aspect to be considered is the education of the public. When the attendances at the clinic appeared to be on the wane a small poster was displayed in the Corporation buses, which, of course, are now used by most—if not all—of the adult population. This poster is of the "snappy" variety and seems to have aroused some interest. Simultaneously a letter was sent to a number of organisations—mostly women's (*e.g.*, Women's Co-operative Guilds), The Salvation Army, and St. John Ambulance Association. This communication drew attention to the existence of the clinic and the facilities provided, and indicated that addresses on cancer would be given if

* Paper read before the Southern Branch of the Society in October, 1943.

required. The response has been quite good and excellent attendances are being recorded. The audiences consist chiefly of women of the cancer age, who apparently are interested in the subject and ask intelligent questions. The method of approach needs a little contemplation as it is desirable to arouse interest without creating alarm. The following is a summary of the information which should be of interest and use to the general public.

Cancer is an insidious disease affecting the rich and poor but particularly liable to attack people aged 40 or more. It is somewhat more prevalent in women than in men. There are various theories of causation, but as the disease is not due to a specific organism or virus it is unlikely that an antitoxin or serum will be used to prevent or cure the disease. Nor does it seem probable that any valuable remedy such as insulin in the treatment of diabetes will be discovered. Consequently, if the incidence of cancer or its mortality is to be materially reduced, it will be by an effort of the public in co-operation with the medical profession. An individual should at once report to a doctor any suspicious sign or symptom. Early cancer is not associated with pain, and in certain parts of the body it may be painless from first to last. It is not necessarily a terrible disease, as many people imagine. In many cases, if detected early and treated properly, cancer can be cured; and even when the disease is advanced and surgery cannot help, by means of x-rays or radium it is possible to alleviate symptoms and perhaps prolong life for several years. Sometimes the disease is preceded by a condition which is not malignant. This applies especially to the breast, where any lump or abnormality should be referred at once to a doctor. A factor of great importance is chronic irritation. As illustrations may be quoted cancer of the tongue due to a sharp tooth or of the lip resulting from the use of a clay pipe and of the skin attributable to the effect of tar, soot, x-rays, etc. Then there is the matter of sepsis causing chronic irritation. This applies particularly to the mouth, cervix uteri, and the skin as a result of long-standing ulceration. As cancer is commonly associated with sepsis, it is customary to offer disinfection of premises when a patient has been removed or has died. Special reference should be made to the sex organs, indicating that cancer of the breast occurs more frequently in unmarried women, and that cancer of the uterus is much more common in those who have borne children. It will be of interest to a male audience to know that cancer of the penis is never seen in a Jew, and that cancer of the uterus is much rarer in Jewish women than in those of races which do not practise circumcision (? transference of organisms from male to female). As regards cancer of the stomach and intestine, advice needs to be given cautiously. So much dyspepsia is of the functional variety that there may be a risk of establishing a phobia. However, this difficulty must be faced, as cancer of the stomach must be detected very early if the patient is to be cured. Perhaps something should be said about heredity. Apparently the family history does count but not to a marked degree, so that the public can be reassured on this point.

It appears to me that education on these lines can do no harm and may achieve appreciable results, which I hope will be apparent in Bournemouth during the next few years. Such is Bournemouth's cancer scheme, which I am aware differs in several respects from those visualised by other authorities. It is not based on a population of 1,000,000, as is commonly recommended, nor is the radiotherapeutic centre placed in the foreground. It is, however, nearly self-contained and, I venture to say, even in its present condition, a good scheme.

BOOK REVIEWS

First-Aid at the Incident. By E. K. MACDONALD, O.B.E. Published by the City of Leicester Defence Committee. 1943. Pp. 128. Not yet for sale.

When, in 1938, large numbers of volunteers in the Casualty Services of local authorities were being trained in the elements of first-aid, many would have been grateful for a training manual which stressed the special application of first-aid to war injuries. The Ministry of Home Security A.R.P. Handbook, No. 10, on the training in first-aid for civil defence purposes, is a manual on team and combined training of those who had already received their basic training. The closest approach to a comprehensive handbook is that recently written by Dr. E. K. Macdonald, M.O.H. for the City of Leicester, entitled *First-Aid at the Incident*. The author emphasises that the manual is not intended in any way to replace the textbooks on first-aid issued by the first-aid organisations. As he has included in detail, however, all those problems of first-aid which the civil defence worker needs, instruction to members of the casualty services might be based on his handbook rather than on the manuals of the various associations.

It is a well-balanced book containing many useful chapters. That on transport problems includes an outline of the duties of the ambulance attendant, whose importance is rightly stressed. A helpful chapter, which contains the essence of what the casualty services members should know about war gases, might have been extended to include particulars of the arrangements of the gas cleansing of the public and of the personnel. If the book is to be used by those elsewhere than in Leicester, it might be made clearer that local arrangements differ; for instance, in many areas where there is no medical officer attached to a depot; and when dealing with mobile first-aid posts, reference should be made to the light unit which will probably prove the simplest way of getting a doctor to an incident.

Dr. Macdonald can be congratulated on having produced a most useful handbook and the publishers on the clear and attractive style and helpful illustrations. Many will agree with the writer of the Foreword in his regret that the book could not have been available in 1939. It is, we understand, available only for those working in the Civil Defence Services in Leicester. It is hoped that, paper permitting, it may become available to a wider public.

The Principles and Practice of Industrial Medicine. Edited by FRED J. WAMPLER, M.D. (Professor, Preventive and Industrial Medicine, Medical College of Virginia). Baltimore: The Williams & Wilkins Company. 1943. London: Bailliére, Tindall & Cox. Pp. xiv + 579. Illustrated. Price 33s. net.

This is a large textbook written by 33 experts on the subject of industrial medicine. There is no book published in England which can to-day serve as a complete reference for those many medical men interested in the maintenance of health and prevention of illness and accident within the factory. The fine book by Sir Thomas Legge on industrial maladies is not only to some extent out of date, but it does not include within its scope such "housekeeping" matters as lighting, ventilation, cleanliness, temperature, humidity, and dust control. Prof. Wampler's book deals at length with all these subjects. The chapter on lighting is a most thorough and lucid review of modern knowledge on this subject. That on the cause and prevention of industrial accidents is a first-class summary of this last subject. We regret that Prof. Don. Cumming, the author of this section and one of the youngest and liveliest contributors to the volume, has recently lost his life in an air accident.

The chapters on the specific industrial diseases, such as those due to toxic chemicals, lead, carbon monoxide poisoning, toxic solvents, skin irritants, etc., are well presented, and there are a number of chapters on subjects not usually included in industrial health textbooks—chapters on the industrial back, occupation and tuberculosis, V.D. control in industry, and on nutrition in industry. The only weak section is that on history. In a textbook of this size and importance, space might have been found for a less hackneyed article on this subject.

A section entitled "Government Agencies in Industrial Hygiene" outlines the interesting relationship of the U.S. Public Health Service to industrial health work. It should be studied by all those concerned in planning our future national health service. In America in 1936 funds were made available under the Social Security Act for the development and extension of all branches of public health work. This resulted in a big development, through the Office of Industrial Hygiene and Sanitation, of an Industrial Hygiene Service in the various states of the Union. Since January, 1941, the article says, "the division of industrial hygiene was streamlined in order to meet the emergency situation which was created by the President's National Defence programme." Clearly more official notice has been taken in America than in this country of the importance to the war effort of efficiently organising industrial health.

A weakness of this textbook is the paucity and dullness of illustrations. Plenty of illustrations should be available which would illuminate and add to the understanding of the subject, as witness the recent publication of the Industrial Health Research Board of a threepenny pamphlet on "Lighting and Seeing."

OBITUARY

G. C. Anderson, C.B.E., M.D., LL.D., F.R.C.P.

Many formal and informal tributes to the late Dr. G. C. Anderson have already been printed in the professional and lay Press. The coronary thrombosis which took him off as a very ill man to University College Hospital last October removed him from the centre of medical affairs at the one moment in his career when he could least be spared. On top of his heavy duties as Secretary to the Central Medical War Committee, and as the originator and leading spirit of the Medical Planning Commission, the conferences of the Representative Committee and with the Ministry of Health undoubtedly laid upon him that extra burden which finally proved too much. As an invalid in hospital he fretted at his forced inactivity, and was clearly counting on the day he could return to work so as to be ready to guide the profession in the negotiations with the Ministry that would follow the publication of the White Paper. During the war years Anderson had come to act less as a Secretary of a professional organisation than as an acknowledged leader of medicine in the medico-political sphere. In a sense it became his self-appointed task to co-ordinate the activities of different groups of the profession who, but for him, would in many cases have pulled apart and broken that unity which he so clearly saw as the first desideratum in the present difficult stage of medical history. He never sought controversy, but was never afraid to speak his mind freely when the occasion demanded it. In one or two instances in the past his acceptance of an uncomfortable task meant much to the public health service. To the Society of Medical Officers of Health and its officers he was always a courteous friend, ready to give of his time and energy whenever it was demanded. Although he was at one with the B.M.A.'s policy of opposition to a whole-time salaried State medical service, he saw the difficulties in the way of harmonising the idea of a unified medical service, centrally directed, with the divergent interests of various professional groups and especially with the somewhat fierce individualism of the private general practitioner. He was perhaps more anxious to preserve a clear field for negotiating the terms and conditions of a service than to decide dogmatically what the service should be.

George Anderson was personally a man of great charm and much distinction of figure. He had a fine, athletic frame, and his easy stride showed clearly that in his youth he must have been no mean athlete. He was the easiest of men to approach, and he put up no barriers either of office or of person between himself and the numerous medical men who came to visit him throughout the years at Tavistock Square. An impressive tribute was paid to his work in the profession and in the B.M.A. when medical men of every rank and distinction gathered together for a memorial service at St. Pancras Church on January 5th.

Maitland Radford, M.D., D.P.H.

We much regret to record the death on January 19th at the age of 59 of Dr. Maitland Radford, Medical Officer of Health to St. Pancras Borough Council, a position he had held since 1934.

Maitland Radford was the son of Mr. Ernest Radford, a barrister who lived in Hampstead and numbered among his friends those who were considered advanced thinkers at the turn of the century, Bradlaugh, Wells, Shaw, and William Morris. And it was in this almost ultra-rational atmosphere that Maitland Radford was brought up, and from which he derived an attitude to life which changed but little in the years to come. He was educated at Abbotsholme School, Derbyshire, and University College Hospital. He took the Conjoint qualification in 1912, the London M.B., B.S., in 1914, and the D.P.H. and M.D. in State Medicine, London, in 1920. He served as a Lieutenant in the R.A.M.C. in the war of 1914–18. In March, 1921, Radford was appointed Assistant M.O.H. to Shoreditch, and after a time as Deputy he was appointed Medical Officer of Health in 1927. He was President of the M. & C.W. Group of the Society in 1931–32, and of the Metropolitan Branch in 1941. He was also active in the councils of his local B.M.A. Division. Radford was one of the founder-members of the Central Council for Health Education and always one of its ready counsellors. He was for some years its treasurer. At the time of his death he was its Vice-Chairman, and would probably have been Chairman had he lived. Many of his ideas and ideals found their expression in the anonymously presented work of this body. It was the kind of public health work which appealed to him probably more strongly than the routine of an M.O.H., and in this work he was always acutely conscious of the part played by pounds, shillings and pence in the health of the people.

Radford was a man completely without guile, and he measured all he did and said against an exacting scale of values from which in his personal and professional life he never deviated. What always mattered to him was the principle and not the details of the matter. He was at times perhaps too impatient with the humdrum facts of a case. He never lost a certain boyish enthusiasm for a new idea, and he was always at his best when pursuing one idea after another in a conversation which he would punctuate with wit and almost invariably a quotation from *Alice in Wonderland*. Radford was always urbane, courteous, friendly, fearless in saying what he thought and seeking little for himself. He will be sadly missed by his friends and colleagues.

G. H. Pearce, M.D., M.R.C.P., D.P.H.

We regret to record the death on January 6th of Dr. G. H. Pearce, late M.O.H. and School Medical Officer for Batley, Yorkshire. He was President of the Society of Medical Officers of Health in 1932–33 and at various times President, Treasurer, and Hon. Secretary of the Yorkshire Branch. The funeral took place at Leeds on January 10th and was attended by the President and Secretary of the Yorkshire Branch and by Medical Officers of Health from the surrounding districts.

George Harper Pearce received his medical education at Cambridge, Glasgow, and Durham, qualifying L.R.C.P., L.R.C.S. Edin., L.R.F.P.S Glas. in 1897. He took the D.P.H. of Cambridge in 1905, the M.D. of Durham in 1914, and the M.R.C.P. London in 1935. He was also a Barrister-at-Law and member of the Inner Temple.

Dr. W. J. Frain, M.O.H. to the Borough of Batley, sends the following appreciation :—

The death of Dr. George Harper Pearce removes one of the most prominent personalities in the public health world during the present century. He had been Medical Officer of Health for Batley for almost thirty years prior to his retirement five years ago. His great gifts of personality and ability soon began to be felt in his profession, and his influence extended far beyond the boundaries of Batley. He worked hard to improve the status of M.O.H. in the country, and those of us who belong to the younger school owe a great debt to his untiring efforts on our behalf. He was an outstanding figure in the Society of M.O.s H. and was elected President in 1932. He was also well known at the Ministry of Health, and was a friend of nearly all its leading medical personalities. At Batley he produced a Public Health Department which was probably second to none in the country. The health and welfare of the people of Batley were his first concern, and with a stern sense of duty he attacked all obstacles. From his staff he demanded first-class efficiency, and he set a high example himself. He was deeply touched when the Batley Councillors combined to give him a presentation on his retirement, as he had the erroneous idea that he was not a popular man, contending that if a medical officer of health did his duty he could not expect to be popular with the community. Those of us who were among the people of Batley know how much he was respected for that quality of devotion to duty. During his retirement he lived in Upper Batley and did part-time work for the Ministry of Pensions at Leeds, a work which gave him great joy and satisfaction. He attended regularly the meetings of the Yorkshire Branch of the Society, and was a valued member owing to his rich experience in procedure. He was ever ready to help the younger members with sane counsel. He was a true and loyal colleague and had almost a schoolboy enthusiasm when visiting the old department which he loved so much and had spent the best years of his life in establishing. He had a fine Victorian courtesy of manner which made him a charming companion socially, and which was particularly evident in his own home.

Reginald Green, M.D., D.P.H.

We regret to record the death on January 7th, at the age of 76, of Dr. R. Green, late M.O.H. Stroud and Nailsworth Urban and Rural Districts, and at the time of his death acting M.O.H. Cirencester, Tetbury and Wheatenhurst.

Reginald Green qualified M.B., B.S. in 1892 at Newcastle-on-Tyne, and received the M.D. of Durham University in 1895. In the same year he took the B.Hy., and he proceeded to the D.Hy. in 1901 and the D.P.H. in 1902. After serving as M.O.H. at Gateshead-on-Tyne and then at King's Norton and Northfield, he went in 1912 to Stroud, where he was M.O.H. for Stroud and Nailsworth Urban and Rural Districts until his retirement in 1939, just before the outbreak of war. When younger men were called up he was appointed temporary M.O.H., Cirencester, Tetbury and Wheatenhurst, holding this office until the day of his death. In spite of suffering from heart trouble for the past seven years, he gave himself untiringly to his work, as he had done, indeed, during the whole of his professional life. He will be deeply missed by all those who came into contact with him in his work. To his widow we offer our sincere sympathy.

J. M. Glasse, M.B., Ch.B.

We regret to record the death of Dr. J. M. Glasse, Medical Officer of Health for Haltwhistle, Northumberland.

John Morley Glasse, born at Edinburgh in 1879, was educated at George Watson's College and Edinburgh University. He qualified M.B., Ch.B. in 1903, after having served in the South African War. He then became house-physician and -surgeon to Ayr City Hospital, and later surgeon to the Ocean Steamship Co., China-Japan. He served in the war 1914-18 in France and Mesopotamia and was mentioned in dispatches. In 1922 Dr. Glasse was appointed M.O.H. to the Haltwhistle Rural District. At the time of his death he had practised in Haltwhistle for nearly forty years, and he will long be remembered for his kindness and generosity towards his patients. He worked energetically to supply the Haltwhistle district with a good water-supply, and he was much interested in the establishing of Haltwhistle War Memorial Hospital. Dr. Glasse is survived by his widow, two sons, and three daughters. His younger son is serving with the Scots Guards and his eldest daughter is nursing abroad. Our sympathy is extended to his family in their sad loss.

NEW YEAR'S HONOURS

When the New Year's Honours list was published on January 1st the last pages of this *Journal* had already been passed for press, so we had to postpone recording the names of those members of the Public Health Service who had received fitting recognition of their services. The following were awarded the C.B.E. (Civil Division): Dr. William Leslie Burgess, Medical Officer of Health, Dundee; Dr. George Lissant Cox, Chief Tuberculosis Officer, Lancashire County Council; Dr. Claude Edward Tangye, County Medical Officer of Health, Wiltshire. The O.B.E. (Civil Division) was awarded to Dr. Edward Loggie Middleton, Medical Inspector of Factories, Ministry of Labour and National Service. Dr. Jean Murray Orkney, Director of the Maternity and Child-Welfare Bureau, Indian Red Cross Society, was granted the Kaiser-i-Hind Gold Medal.

Fellows and Members of the Society received with high gratification the news that Captain George Sampson Elliston, M.P., had had conferred upon him the honour of Knighthood for public services. Sir George Elliston has many links with the medical profession, and more especially with the public health service. His father was at one time President of the B.M.A., and his brother, the late Mr. Guy Elliston, was Financial Secretary and Business Manager to the Association. Sir George's son, as readers of the journal hardly need reminding, is Executive Secretary of the Society and Editor of this journal; he is at present serving as Lieutenant-Commander with the Royal Naval Volunteer Reserve. Sir George, in addition to his Parliamentary duties, is Editor of the *Medical Officer* and also of *Better Health*, the official organ of the Central Council for Health Education. He was for many years Executive Secretary to the Society, and when his son took up this post in 1930 Captain Elliston, as he then was, became Consultant Secretary. For many years he has been a member of Council. During this war he has added to his several duties by taking on the post of Acting Executive Secretary in his son's absence on war service. Sir George's services to medicine have thus been of no mean order, and the Society of Medical Officers of Health may feel that in some sense it shares with him the honour recently bestowed and so richly deserved.

The final report of the Select Committee on Health Services in Northern Ireland, just issued, recommends that a Ministry of Health be set up at once to be the central controlling authority for all health services in Northern Ireland and that an honorary Advisory Health Council be appointed to advise the Ministry. The Committee further recommends the opening immediately of a special school for mentally defective children and that all such children educable should be transferred from elementary schools to this school.

Other recommendations include that the State should establish a colony for mental defectives other than school children, the financial burden to be divided between the various local authorities; that blindness should be classified as a notifiable disease and additional schools for blind children should be established, mostly in rural districts; that the Ministry of Education should provide home teachers for the education of blind children; that the Government should ensure that local authorities provide ante-natal clinics where necessary; that tuberculosis schemes in Northern Ireland should be co-ordinated by the Ministry to ensure uniformity of treatment and administration; that the present method of maintaining and administering 23 fever hospitals is wasteful and the present local fever hospitals should be closed, more modern ones being provided.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

YORKSHIRE BRANCH

President: Dr. E. C. Benn (Med. Superintendent, Seacroft Hospital, Leeds).

Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

The Branch held the inaugural meeting of the 1943-44 session at Leeds on October 29th, 1943. The annual luncheon of the Branch was held immediately before this meeting. The retiring President, Dr. R. Watson, presided, and 51 members and guests were also present.

At the inaugural meeting 24 members were present. The minutes of the last meeting were read by the Hon. Secretary, approved and signed.

The retiring President invested Dr. E. C. Benn with the President's badge of office and installed him in the presidential chair.

Control of Infectious Diseases

Dr. Benn then gave his presidential address. Infectious disease, he said, had a powerful influence upon the well-being of any community. Mass protection against such disease left much to be desired. There was, for instance, the failure to stop atmospheric pollution; the failure to pasteurise milk and so end the annual death roll from bovine tuberculosis; the failure to prevent the removal of essential vitamins, minerals, proteins, and fats from foodstuffs during their processing, only to return them to the public later in fancy packets and at fancy prices. Nevertheless, a pure water supply, proper disposal of refuse, a water-carriage system of sewage disposal, the drainage of unhealthy areas, and other measures had been achieved. Existing prophylaxis against diseases spread by ingestion and by flying insects was not completely effective, but under normal conditions kept these diseases below epidemic level. Public health measures were, however, less effective against droplet infection, contagious (including venereal) diseases, and diseases spread by non-flying insects. In the last two groups much could be done by improving living conditions and by encouraging bodily cleanliness. In the control of droplet infections much had been attempted with but little result. School closure had been found less effective than was hoped, because by the time there were enough clinical cases to warrant closure, many of the remaining susceptibles were already infected. The closure of public meeting places could obviously have little effect so long as ordinary community life continued.

Greenwood, Hill, Topley, and Wilson had shown that a herd in which there was an infectious disease sooner or later reached a state of equilibrium at which the mortality due to the infection remained fairly constant. But this equilibrium was easily upset. Moreover, so long as migration of susceptibles continued the disease would not die out. Topley also showed that a disease might remain latent for some time, and appear later in epidemic form. At present, said Dr. Benn, we were awaiting the reappearance of epidemic influenza, and we were little better prepared to meet it than in 1918. Dr. Benn thought that at the earliest sign of an epidemic active immunisation should be offered to those to whom influenza was an occupational risk.

Immunity against some diseases—e.g., protozoal diseases—was never great and often non-existent. Against bacterial conditions it was variable. Against virus diseases, with the notable exceptions of the common cold and herpes febrilis, it was considerable. But it always went sooner or later. People had died of their second attacks of smallpox; and Murchison, who gave us our classical account of typhus fever, himself suffered twice from that disease. When Jenner claimed that vaccination gave permanent protection against smallpox he made, Dr. Benn considered, a mistake which did much disservice to his great discovery. During the last 25 years we had almost made the same mistake again in claiming that toxoid injections gave permanent immunity against diphtheria. In Canada and the United States there were cities which had had no diphtheria deaths for two or more years; but it had to be remembered that the duration of the experiment was short. What, asked Dr. Benn, would be the story after many years' "freedom from diphtheria?" Would it be the story of vaccination over again? Would temporary control be followed by a false sense of security? We might then expect epidemics of a virulent type. Smallpox could be controlled by vaccination during an epidemic because immunity developed rapidly. Active immunisation against diphtheria, on the other hand, took weeks to become effective. Passive immunity could be brought about in a few hours, but it was at best only an emergency measure. Besides, whereas the carrier did not exist in smallpox, Dr. Benn had no doubt that the diphtheria carrier would present a greater problem in a highly susceptible community than he does to-day. The solution was obvious. We had to aim at a degree of herd immunity as near to 100% as possible, and at preserving this degree of immunity by giving refresher doses at regular intervals.

Dr. Benn concluded by advocating more intense health propaganda, especially with regard to the venereal diseases and to phthisis. In the task of educating the public, clinical medical officers, sanitary inspectors, health visitors, and medical officers of health had all most important parts to play.

MIDLAND BRANCH

President: Dr. A. B. Griffin (M.O.H., Worcester City).
Hon. Secretary: Dr. H. Paul (M.O.H., Smethwick C.B.).

The second meeting of the session was held at Birmingham on November 4th. The President, 30 other members and two visitors were present.

The minutes of the meeting held on October 7th were read, confirmed, and signed by the President.

Dr. Griffin then read his Presidential Address—a paper on the control of venereal diseases. In the war of 1914-18, 416,498 British and Dominion soldiers were treated for venereal disease, and in 1917 the deaths from syphilis were double those of 1912. In the present war the position had again steadily deteriorated. The war had affected the whole population more than any previous war, especially women, as greater numbers of them had been removed from home influences, or had long hours in factories, and often had unsuitable and undesirable billets. Many of them, he said, drank too much. The increase of disease might be attributed to the war, but the end of the war would not necessarily see a return to pre-war levels. Moral standards were more easily lost than regained.

Dr. Griffin then outlined present powers and controls, from the Venereal Diseases Regulations of 1916 to Regulation 33B. The Regulation would be of negligible value in the control of venereal diseases. He condemned the use of bluff in using the information gained through 33B, where such information was not sufficient to enable the M.O.H. to use legal powers. Dr. Griffin then gave a detailed description of the methods used in the Dominions, Denmark, Sweden, the U.S.A., and New Zealand, and came to the conclusion, based on the results attained in these countries, that notification of venereal diseases should be made compulsory in this country. He also suggested that (*a*) treatment should be obligatory; (*b*) defaulters should be subjected to disciplinary action and enforced treatment; (*c*) notification should cite the probable source of infection; (*d*) contacts should be subject to the same control as patients; (*e*) no marriage should be legalised without a certificate of freedom from venereal disease. He believed that the solution of the problem must largely depend on a return to religion and on the restoration of the sense of moral values.

After an interesting discussion, a vote of thanks to the President for his address was carried unanimously.

A discussion then took place on the Motion of the Agenda proposed by Dr. McWhirter and seconded by Dr. Downer. An amendment was proposed by Dr. Warin and seconded by Dr. Newsholme as follows:—

> "That the following conclusions have been reached by this Branch after careful consideration of the Government milk policy outlined in the recent White Paper, Cmd. 6454: (1) All milk for human consumption should be either pasteurised or tuberculin tested. (2) All milk before pasteurisation should comply with a prescribed methylene blue test. (3) The only method of heat treatment recognised should be the process of pasteurisation as defined in the Milk (Special Designations) Orders, 1936-1941. Introduction of such a loose conception as 'heat-treated' milk is condemned. It is the wish of this Branch that these views be forwarded for the consideration of the Council of the Society, and it is hoped that the Council will see their way to make representations to the appropriate authority on the lines suggested."

The amendment put as a substantive motion was carried with one dissentient.

HOME COUNTIES BRANCH

President: Dr. Malcolm Barker (M.O.H., East Ham C.B.).
Hon. Secretary: Dr. Cecil Herington (M.O.H., Dagenham M.B.).

A meeting of the Branch was held at the London School of Hygiene and Tropical Medicine on November 12th, 1943, there being present the President and 22 members. The minutes of the meeting held on October 15th were read, confirmed and signed.

A paper on routine medical care in public schools was then given by Dr. G. O. Barber, Medical Officer Felsted School and a member of the Medical Officers of Schools Association.

HEALTH IN THE SCHOOL

Our social and economic structure, Dr. Barker said, was in the melting pot, and we had only a vague idea into what mould it would be recast after the war. Public schools were bound to be affected in the change; but that there was a future for them was not in doubt. They were free agents, who depended for their success on their own initiative, and the public school medical officer had unbounded opportunity for development and improvement, as witnessed by the four great pioneers: Dukes of Rugby, Fergus of Marlborough, Armstrong of Wellington, and Shelley of Haileybury. Fifty years ago they initiated a new era when they changed the old haphazard procedure of calling a doctor in to the very ill boy, to a systematic control of the health of both the individual and the school as a community. Their radical changes were along three lines: first the care of the actual sick was brought up to date, and sanatoria were built in the main public schools so that boys need not be nursed in their bedrooms or dormitories. Secondly, it was seen that preventive medicine could control epidemics and reduce the number of hours lost by sickness, and that it would help to build stronger physical bodies to resist the strains and stresses of later life. The third aspect was only seen by Dukes and his fellow workers as a dream of the future—the education of the schoolboy in all that pertained to his own health.

The school M.O. should keep in touch with general medicine and the outside world. Where possible, major operations should not be performed in the sanatorium, because there should not be enough work to keep the theatre and its staff up to the necessary efficiency, and also because of the fears of impressionable boys. Medical examination on entrance was of a life insurance standard, and physical defects were notified to parents via housemasters; suitable cases being directed to the P.T. Instructor for remedial exercises. The doctor advised the Headmaster on the organisation of the time-table, work, play, meals and rest; he curbed the scholastic enthusiasm of the bright boy who was also growing too fast; in some schools there was a complete half-hour's rest after the midday meal; the food was dietetically balanced, usually by a trained housekeeper or cook. The doctor also had much to say on clothing, heating and ventilation; and he could point out to the headmaster the direct connection between overcrowding and epidemics, particularly upper respiratory infections by haemolytic streptococci. Infections were introduced unwittingly into schools, and it was rare for the originator to know where he had been in contact. Once in the school, the diseases ran their course despite every precaution, and care had to be directed to spotting and treating each case early.

The Code of Rules drawn up by The Medical Officers of Schools Association served as a useful guide. The teaching of the elements of hygiene to schoolboys gave a valuable opportunity for a frank explanation of the facts of sex and reproduction. Given in this correct context, as part of the functioning of the whole body, it need not be a "pi-jaw," and the boys need have no self-conscious reactions. To boys leaving school he gave a complete and matter-of-fact summary of the venereal diseases, stressing the tendency to exposure under the influence of alcohol. He heartily welcomed the Board of Education's recent pamphlet No. 119 on sex education in schools and youth organisations.

Dr. Bullough, Essex C.C., *suggested that instruction in venereal* diseases might be given to boys aged 10 to 11 years. This was advocated by the Central Council for Health Education.

Dr. Davies, Middlesex C.C., referred to the difficulty of selecting teachers for instruction in sex matters, and to the value of close liaison in schools between the medical officers and dieticians.

Dr. Maddison, Twickenham, wondered whether general practitioners had the training in preventive medicine to fit them for duties in residential schools.

In replying to various questions, Dr. Barber stated that there was an exaggerated belief that infections were spread by swimming baths. The only ill effect was mechanical, when the water acted mechanically on an already inflamed mucous membrane. They certainly were not a reservoir of streptococci, and were in no way a danger to boys known to be free from infection. He was of the opinion that disinfectants such as chlorine were harmful. Feeding in schools had improved with the disappearance of the practice of individual housemasters making profit from boarders. Sex education should be given by parents ideally, but some parents were quite incapable of carrying this out. In these cases it should be given by the school doctor. Dr. Bullough's query regarding the separation of the sexes would be overcome if economic circumstances permitted large families, with the brothers and sisters inviting their friends during the holidays, thus enabling boys and girls to attain a right outlook with regard to association with the opposite sex. At Felsted it was the present practice for dances to be given weekly, and for the senior boys to invite their girl friends.

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EDITORIAL

The White Paper

The long awaited proposals of the Government for a National Health Service appeared on February 17th, and probably every member of the profession at present in this country has already had a copy. In this issue we publish the official summary in full for convenience of reference and for record purposes. Fuller résumés appear in the *British Medical Journal* and the *Lancet* for February 26th, both of which journals also contain important leading articles discussing the general professional implications of the White Paper. Here it will be most appropriate to look at the proposals from the public health and administrative points of view.

Just over a year ago the Society of Medical Officers of Health issued a report on a National Health Service.* Among its recommendations were the creation of a new Health Ministry to absorb the health functions of other governmental departments, such as 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; new elected local authorities for areas of sufficient size to administer all health services, hospital, clinical, laboratory, domiciliary, and environmental, but also to be responsible for other services of local government; the establishment of health centres by the new health authorities at which general practitioners would work in groups on a whole-time salaried basis; and that every member of the community should be entitled to the benefits of the service without charge. It was stated as a cardinal principle that hospitals are an integral part of the health service and that 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.

Read in the light of these conclusions, the White Paper is disappointing. True, a comprehensive service is contemplated, and without charge to its recipients, but the new organisation is to be concerned only with "the direct services of personal health care and advice and treatment." The integration which is already long overdue is to depend, apparently, on the inevitability of gradualness. The right of any central government department to establish and maintain its own medical and health organisation is to remain. In the meantime a new disorder is to be introduced into local government, and a new central statutory body is proposed with curious functions in relation to the Minister of Health, the local bodies, and the profession.

Let us examine the architecture of the scheme a little more closely. The Ministry of Health is apparently to retain its present functions in relation to the existing health services and also to become the central department responsible for ensuring that every member of the community will have free access to a comprehensive medical service, which will include hospital care, consultant and specialist attention, a family doctor, nursing, midwifery and "the other things which ought to go with medical care." Its responsibility will extend to mental as well as physical disease, injury, abnormality, or disability. The Minister will be advised by a Central Health Services Council in regard to the generality of his responsibilities in this field, this body being statutory, primarily medical in its make-up, nominated after consultation with appropriate organisations, appointing its own chairman and reported upon yearly to Parliament by the Minister. Side by side with it will be a small executive Central Medical Board of civil servants, whole-time and part-time, mainly professional, acting as the "employer" of general practitioners. The latter's contracts will be primarily with this body, which will control to an increasing extent the location of their practice and their conduct as public servants. Its relation to those practising in other fields is undefined. The power proposed to be given to the Board to "require the young doctor during the early years of his career to give his full-time to the public service" is mentioned only in the chapter relating to general practice; but, as the new area authorities and their constituents will depend for recruitment of their staffs upon the policy of the Board as to the personnel to be engaged in general practice, and as the engagement of general practitioners in other forms of medical service is envisaged, it is difficult to see how the Board can confine its interest only to the general practice field of employment.

As to local arrangements, the Minister will take power, after consulting local interests, to form Joint Boards† of a sufficient number of county and county borough councils to ensure their operation over satisfactory and sufficient areas to manage an efficient and economical hospital service. These Boards will take over not only the general, mental, tuberculosis, and other special institutions of their constituents, but also all infectious diseases hospitals now owned by any type of authority; with the hospital will go the related out-patient services, such as tuberculosis dispensaries and cancer diagnostic centres; and the Boards will be responsible for managing the consultant and specialist service, whether in hospital or at clinics or in the home. They will enter into contracts with voluntary hospitals, which will become eligible for an Exchequer grant (like the local authority hospitals) of £100 per available bed per annum, as well as payment for service, provided that they continue to find some money from voluntary sources.

* PUBLIC HEALTH, January 1943, 53, 42.

† It is convenient to use the term "Joint Boards" although it is only in Scotland that the White Paper describes the new joint authorities as such.

The Boards, however, are to have the wider function of surveying and planning the medical services of their whole area, including those which, like the school medical and maternity and child welfare services, are to remain with county and county borough councils or may even be delegated to the larger borough or urban district councils. Since it seems to be implied that existing minor authorities will remain responsible for environmental hygiene, the framework of local health administration is evidently not so designed as to attain that integration on which the Society's report laid such stress.

The new, powerful hospital and planning authorities will be advised by Local Health Services Councils, technical expert bodies, comparable to that at the centre, with access not only to the Boards and the constituent authorities, but also to the Minister. Included in their functions will be reporting on the area plan and any subsequent modifications of it. Their constitution will be a matter for determination by local scheme to be approved by the Minister.

The White Paper accepts the principle of health centres, but recognises the need both for experiment in the detail of their organisation, and for local agreement with the medical profession before they are initiated. Where they are provided, the responsibility for their erection and maintenance will rest with the county or county borough councils. The terms of employment of general practitioners will then change. Whereas it may be assumed, subject to agreement with the profession, that practitioners working singly or in voluntary groups will be paid by capitation fee, as soon as they join an official centre their remuneration will be by whole- or part-time salary and they will enter into a side-contract with the local authority. It appears to be contemplated, therefore, that general practice will sooner or later come under the management of county and county borough councils; in any case, whether health centres are provided or not, minor functions of the Central Medical Board will be delegated to a local committee replacing the insurance committee, and somewhat resembling it in constitution. The local allocation of functions may be summarised in the words of the Paper. The Joint Boards "will usually administer themselves only those branches of the service which demand direct administration over the larger area as a whole, and not those which can suitably be administered (when once a unified plan has been settled) on a more localised basis. In short, the existing major local authorities will combine to secure, with the Minister, a unified general plan of the whole service for their grouped areas; they will then combine to carry out those parts of the plan which demand a single administration over all their areas together; but they will be charged individually to carry out those parts which can be separately and locally administered."

It will be seen that the Government proposes to break up the whole structure of medical practice and of local health administration without rationalising either of them. The difficulties surrounding a reform of this kind must be recognised, and the need for readiness to meet the post-war situation leaves little time to iron out the creases. Evidently the proposals of the White Paper are intended to canalise the evolution of the health services in a certain direction without too clearly defining the issue. Our main criticism is that there is not the slightest indication that reform of the chaos in central government departments will march with the changes in local government and the practice of medicine which these proposals will make inevitable. So far as the public health service is concerned, it will at once be appreciated that the proposed changes will remove from county and county borough medical officers (with few exceptions), and also from some medical officers of health of boroughs and county districts, a sphere of occupation and interest in which they have been increasingly absorbed during the past 40 years or more, including the institutional care of tuberculosis, infectious disease, the general sick and mental defectives. This is meagrely recognised in a short and vague paragraph at the end of the Paper, but it is an aspect of the question that cannot be overlooked by the Society of Medical Officers of Health and the British Medical Association.

In Scotland the administrative structure will be somewhat different. The Secretary of State will have, as in England, advisory and executive bodies—*viz.*, a Central Health Service Council and a Central Medical Board. New types of body, however, will be interposed between the central and local authorities in the form of Regional Hospitals Advisory Councils which will be concerned with hospital planning and co-ordination. Apart from consultant and allied clinic services they will not be concerned with the general medical scheme. Their membership will consist of equal representation of local authorities and voluntary hospitals with, perhaps, a few medical representatives. They will advise the Secretary of State directly. Executive functions in relation to hospitals will pass to Joint Boards for less extensive areas. For these areas there will also be Local Medical Services Committees, mainly concerned with general practice and its relation to other services, again containing representatives of local authorities and directly answerable to the Secretary of State. Health Centres will be provided in the first instance by the Scottish Department of Health and not by the local authorities, so that in Scotland the general practitioner will have only one employer, the State.

Pneumokoniosis and Working Conditions in Coal-miners

The First Report of the Medical Research Council's Committee on Industrial Pulmonary Disease,* dealt with the results of the medical survey and pathological study of chronic pulmonary disease in South Wales coal-miners. At the same time investigation was made *into* possible causative environmental factors. In the first report it was pointed out that air-borne dust must be regarded as primarily responsible for the pneumokoniosis of coal-miners, and the present report† considers mainly the physical and chemical nature of the dust to which the miner is exposed at the coal face, and to the chemical and petrological characteristics of the coal seams and the immediately adjacent rock strata from which that dust is derived.

The reporting committee points out that the technique of estimating the concentration and size distribution of the dust particles in the air is laborious, as is the chemical and petrological analysis. And so it was not possible to study in detail all the environmental conditions in all the mines included in the medical survey. The selection of samples of coal and rock from different mines has given a general idea of the varying characteristics of the coal and rock strata. There was, however, one serious difficulty in gauging the effect on the miners of air-borne dust at the coal-face: pneumokoniosis may take years to develop, and disease, now unmistakable, may have started in the conditions which prevailed many years ago. An attempt was therefore made to select mines where conditions had not changed much.

Recent research suggests that small dust particles are more injurious than large ones: particles larger than five microns are thought to be of little pathological significance. In dust surveys at four anthracite mines and one bituminous mine, using the thermo-precipitator for sampling, Bedford and Warner found that in narrow places of working the total dust count was 75% higher than in the wider, long-walled place. The number of particles of dust other than coal was similar, and the excess was due in the narrow places to more numerous coal particles. The mass concentration of all dust of presumably harmful size—that is below 5 microns—was nearly 40% more in the narrow places. Other methods of mining also influence the concentration of dust, and comparisons were made during coal-handling and ripping. The concentrations of minerals other than coal were about the same for the two kinds of work. Ripping creates more dust than coal-handling, especially of the non-coal elements, but when the coal is shovelled there is much disturbance of dust lying about, this containing particles which have settled after the ripping operation. After ripping, therefore, as much dust as possible should be disposed of to reduce the amount of ripping dust in the air during other

* See PUBLIC HEALTH, October, 1942, p. 1.

† *Chronic Pulmonary Disease in South Wales Coal Miners.* II.—Environmental Studies. Report by the Committee on Industrial Pulmonary Disease. Reports on Physical, Chemical and Petrological Studies. M.R.C. Special Report Series 244. H.M.S.O., London, 1943. 10s. 6d. net, pp. 222.

operations. Atmospheric humidity itself appears to have no effect on dust concentration, but where rock faces were visibly wet low dust-concentrations were found.

When allowance is made for the changes in working conditions mentioned in the report, it is clear that the dust concentration is related to the incidence of pulmonary *x*-ray abnormalities among the colliers. The higher incidences are associated with dust concentration.

Briscoe and his colleagues determined the mass concentrations of air-borne dust in a number of anthracite, steam-coal, and bituminous mines. Their samples were ignited and the ash weighed; the mass concentrations of the whole dust and of the ash, and the percentage of ash in the dust, were thus ascertained. They concluded that the incidence of pulmonary abnormalities *is significantly and positively correlated* with the average ash concentration. High ash concentrations tend to be associated with high total dust concentrations, and probably on that account there is an apparent correlation between incidence and total dust concentration. It is concluded, however, that this latter relation is only apparent and that there is no independent association between incidence and total dust concentration. It appears that the *incidence of chronic* pulmonary disease is not related to the ash percentage *per se*.

In an analysis of mineral matter in coal-seams, rock-strata, air-borne dusts, and screen fractions of run-of-mine coal, Hicks and Nagelschmidt show that kaolin and carbonates predominate in the coal-seam mineral matter, mica (illite) and quartz in the rock strata. Dusts and screen diffractions are very similar to each other, and show all these constituents. Except in the anthracite mines the proportion of quartz does not vary, but in the anthracite mines dusts in general have more quartz than in the low-incidence mines. On an average in all mines the proportion of quartz in the dust is 2%.

According to Brammal and Leech the incidence of pneumokoniosis is apparently associated with the geological changes *induced by pressure. It increases as the rank of coal changes* from bituminous coal to high-grade anthracite. High incidences of radiological abnormalities are associated with increased compression effects in the shales that form the clods and roofs, with an increase in the amount of secondary quartz and mica with high-grade differentiation effects in the ground mass. This association stands out clearly in a comparison of anthracite with non-anthracite mines. *It cannot be proved that the* relation between geological changes and the incidence of pneumokoniosis is direct, for it has been shown that the concentration of minerals, other than coal, in the air-borne dust at the coal-face is also correlated with that incidence.

Bedford and Warner conclude that there is some—but not a close—association between the incidence of pulmonary *x*-ray abnormalities and the degree of chilling experienced when riding on spakes. Similarly, Graham and Runnicles show that there is no direct association between the incidence of pneumokoniosis and the concentration of nitrous fumes liberated during shot firing. But the slightly irritant effect of low *concentrations* of these fumes cannot yet be disregarded as a possible factor in the causation of the disease.

Coal miners emphasise that the mechanisation of coal-mines has increased dust in the mines. At present mechanisation of all mines is urged to increase production. Engineering methods of dust elimination should therefore be overhauled in all mines and brought up to date.

The committee makes the following recommendations, some of them already made in their first report. (1) The maintenance of adequate ventilation: this is bad in many mines. (2) The use of water at the coal-face itself: many mines in South Wales, in both anthracite and bituminous areas, are now making use of water on the coal-face with excellent effect. (3) Allaying dust in mine roadways and at loading points. (4) Reducing shot-firing to a minimum, and carried out at a period when fewer men will be exposed to dust and fumes arising therefrom. (5) All processes of ripping, including the disposal of ripping, should where practicable be carried out on a shift other than coal-getting shift. (6) Suitable means to prevent chill should be used during spake journeys. The report has emphasised the need which has been felt in South Wales among those interested in the problem of pneumokoniosis that more attention must be paid to the coal-face than hitherto.

Lighting and Ventilation

Both lighting and ventilation have been imperilled by the "black-out." The hurriedly improvised methods of shutting out the light which were adopted in factories and other places early in the war have largely given place to something more scientific and sensible, but there is nevertheless a great neglect of the importance of good lighting and of ventilation to the health and efficiency of the worker. Some windows are still permanently obscured, others carry "mourning borders" which cut down by about one-half the light which they should give, and the usual natural ventilation is often cut off, especially at night, with unfortunate consequences for those working on night shifts. The Industrial Health Research Board of the Medical Research Council has done good service by issuing a small pamphlet, the first of a series on conditions for industrial health and efficiency, entitled *Ventilation and Heating: Lighting and Seeing*, obtainable at the Stationery Office for threepence.

The Board has not conditioned its tune, so far as lighting is concerned, to excessive demands for fuel economy. Some of the examples of light saving which one finds in public places strike one as being, not economy, but wild extravagance. They save a few pence on lighting at the cost of pounds in the shape of loss of alertness, vigor, and cheerfulness of the people, not to speak of peril to life and limb. The tonic effects of good lighting ought to be more adequately recognised, and it is worth taking some trouble, especially at a time like the present, to ensure that the lighting is not only sufficient for the worker's job without eyestrain, but sustaining to his spirit. There is, of course, a contest between those who prefer a general bright lighting and those who would have local lighting with a dark surround. It depends to a great extent upon the task in hand and upon the temperament of the worker. But it is well to remember that, although the Fuel Controller is in the offing, the Factories (Standards of Lighting) Regulations now in force require an illumination at bench level or on a horizontal plane 3 feet above the floor to be not less than 6 foot-candles.

As for heating, the optimum temperature for a work-place depends again a good deal upon the character of the work and upon the individual. It is suggested in this pamphlet that in Great Britain during cool weather persons doing sedentary or very light work are generally comfortable when the air temperature is about 65° F.; those doing active and yet light work can support a temperature of 60 to 65, and those engaged in more strenuous work a temperature of between 55 and 60; it is added that when in the national interest fuel economy is a matter of urgency a temperature a few degrees lower than 65 may be permissible for the sedentary. No doubt an over-heated room is undesirable for persons doing concentrated work, but so is an under-heated room. The important thing is not so much the air as the movement of it, not so much the temperature as the ventilation. The temperature on the platforms of London Tube stations is almost invariably 68°, but they are not work-places one would covet even on a cold day.

The pamphlet states that during the winter months the speed of air movement in an ordinary factory is usually greater than 20 feet per minute and averages about 30, and that in summer a more rapid movement is highly desirable. The pamphlet indicates some measures which go a certain way to overcome the disadvantages of the "black-out" for the night shift, such as light traps at the windows and unit heaters in which a fan passes air over a heating surface and then propels the air forward into the room so that the room air is both warmed and re-circulated. But we are afraid that until the incubus of the "black-out" is removed no device will quite make up for the lack of natural ventilation.

British Journal of Industrial Medicine

The appearance of this new medical journal,* under the capable editorship of Dr. Donald Hunter, will be widely welcomed. The volume of the articles on the industrial and occupational aspects of illness is rapidly increasing. Many of them are scattered throughout the general literature of medicine,

* British Medical Association, Tavistock Square, London, W.C.1. Annual subscription, 25s.; single number, 7s. 6d.

and no doubt this will continue, since the problems of occupational disease are of general medical interest. The result is that, except in the industrial hygiene section of the *Bulletin of Hygiene*, it has been hard to trace quickly references to any writings on this aspect of medicine. The new journal not only contains original articles but also useful abstracts of articles appearing in other publications, as well as reviews of books and official reports. The first issue, which came out in January, includes a retrospect by Professor Major Greenwood of the evolution of an industrial society, and a discussion of certain aspects of sick absence in industry by Sir Henry Bashford, whose studies of the health of Post Office workers are well known. On the more technical side are articles by Stewart and Witts on chronic carbon tetrachloride intoxication and by Goldblatt on toxic hazards; but perhaps those of most immediate value to public health officers are Dr. Bedford's exhaustive discussion on heating and ventilation, Dr. Capel on the nutrition of the industrial worker, and Mr. Sayle Creer on foot faults related to form and function.

The public health service should be glad of this opportunity to keep in touch with observations in the industrial field, for much of the sickness which causes absenteeism is not peculiar to industry. Its prevention is a problem of public health in the widest sense. Moreover, the malign effects of industrialisation are not entirely industrial in their origin. We cannot express the point better than by quoting from Greenwood's paper :—

> "It is important, too, to realise that the evils of industrialisation which first horrified our professional ancestors were the *indirect* evils, not the factory but the domestic environment of the workers: their squalid, horrible, living quarters. It is only too easy to put on blinkers, to see nothing but the home or nothing but the working place. The evils of long hours of labour, of brutal oppression, of ghastly accidents due to reckless disregard of dangers, are more dramatic than the squalid misery of homes but, in our study, not more important. Perhaps they are less important."

The rails of local government and industrial hygiene have run parallel for a century, with weak and irregular cross-connections. The anomaly of a separate organisation concerned solely with the workers' health, and centrally controlled, is receiving little attention in the present discussions on the future of the public health. The time may come, however, when a major reform of local government and the scrutiny of recent movements toward the centralisation of other services may bring it into the forefront. The case for devolution is unanswerable, provided that local authorities are created which are big enough to employ specialised staff and to resist the pressure of powerful industrial interests. The younger men in public health might well, therefore, regard the subject of occupational disease and hygiene as something which has not merely an immediate scientific interest but may also come to be within the field of their day's work to a greater extent than it is at present.

Medical Centre in Ethiopia

An appeal is being made for funds to found in Ethiopia a hospital with medical school, library, and ambulance services, in memory of the late Princess Tsahai, and as a token of goodwill to Ethiopia from the people of Great Britain. It is hoped that those engaged in our own health and hospital services will help in this work, and that their gifts may be commemorated in some special part of the hospital. It will be remembered that during the days when Ethiopia lived under the burden of Italian rule, Princess Tsahai, with her father, the Emperor, sought refuge in this country. She trained as a nurse at the Great Ormond Street Hospital for Sick Children, and later at Guy's Hospital. After qualifying as a State Registered Nurse she returned to Ethiopia with the nucleus of the modern medical and nursing service she intended to create there; her work was tragically stopped by her death at the age of 22, on August 17th, 1942. The matrons under whom she trained in this country have given their warm support to the appeal, which is endorsed by leading medical men in England and Scotland. It is hoped that funds will be generously subscribed towards the urgent medical needs of this gallant country.

SEVENTEENTH CENTURY MEDICINE IN THE HEBRIDES*

By W. P. Cargill, M.B., Ch.B., B.Sc.
Deputy M.O.H., Southampton

Towards the end of the seventeenth century a native of Skye travelled through the western islands of Scotland collecting information about the conditions and habits of the islanders. He was Martin Martin, presumably a person of means and position, for he styles himself "Gentleman," and his travels must have consumed much time and money. He is said to have collected the data for an antiquary. A brief survey of Martin's observations on the diseases and cures of the Hebrides in his time may be of interest. His book, *A Description of the Western Islands of Scotland*, was published in 1703. At that time he was not a doctor, although he was M.A. of Edinburgh University. In 1710 he entered Leyden University and graduated M.D., afterwards residing in London until his death. He contributed papers on the conditions in the Hebrides to the Royal Society. Martin's work is the earliest we have apart from a small work of Dean Monro's, a very brief description of the isles without any medical information. A journey to the western isles was in Martin's day looked upon as a formidable feat of travel, even for a native of the isles. For the sea journeys only open boats of no great size were available. Transport between the isles is now more speedy and safe, though some of the isles may in winter be isolated for weeks by storms. The practitioners of the Highlands and Islands medical service are well aware of the difficulties.

Martin adds a note on the Orkney and Shetland isles. These were at one time called the Nordreys as opposed to the Sudreys, or Western Isles. The Bishop of the Isle of Man is still Bishop of Sodor and Man.

"Moist and Cold" and their "Correctives"

Martin states that in most of the isles he visited, and they number more than 40, the air was moist and cold. In almost every instance the climate required what is described as a corrective, and the only variation in correctives is the percentage of alcohol they contain. The corrective had the faculty of qualifying the moisture in the air. Most of the correctives appear to have been very hygroscopic. The particular corrective varies from isle to isle. In Lewis the natives brewed several sorts of liquor from corn. Common usquebaugh is first on the list. Trestarig was three times distilled and strong and hot. A third was four times distilled, and so potent was this that at first taste all the members of the body were affected: two spoonfuls were a sufficient dose; and "if any man exceed this, it would presently stop his breath and endanger his life." The natives of Harris brewed no liquors such as usquebaugh. They used brandy, presumably imported.

In Skye the air was even more cold and moist and the inhabitants took treble the dose of liquor taken in the other isles. Martin should know, as a native. Yet hobnail liver does not figure in Martin's lists, though jaundice was common. Headaches were frequent.

Correctives for Correctives

In Mull we find a corrective for the corrective. The natives chewed a piece of charmel root when they intended to have a drinking bout, to prevent drunkenness. Jura is the only isle where the fresh breezes purified the air to such an extent that qualification was not required. This is hard to believe as Islay is so near, with its numerous distilleries.

The Hebridean people had a reputation for insobriety. As far back as 1609 Acts were passed prohibiting the importation of wines and spirits from the mainland. These measures seem to have been as successful as most measures of prohibition. Most of the excessive drinking was due to imported beverages.

* Paper read before the Southern Branch of the Society at Southampton.

Communicable Diseases

Several communicable diseases were recorded by Martin. Smallpox was prevalent in certain isles but less so in remote places. In Lewis, where the smallpox came but seldom, it swept away many young people. Lingay, north of North Uist, was commonly visited by the smallpox once every 17 years. Bute was visited every six to seven years. In Skye and the neighbouring isles the smallpox was prevalent, due no doubt to the nearness of the mainland. Martin makes a surprising observation on St. Kilda, where smallpox was not heard of for several ages except in one instance when two of the steward's retinue who had not well recovered of it infected one man only. The steward represented the owner, a Mcleod, and paid an annual visit in the summer. One would expect more spread among a susceptible population.

Samuel Johnson, whose journey to the Western Isles in 1773 is thought to have been due to his reading Martin's book, comments on Muck: "The devastation of the smallpox when it visits places where it comes seldom is well known. The laird here disarmed it of much of its terror by inoculating 80 (of 160) of his people at an expense of 2s. 6d. per head." This was 20 years before Jenner successfully practised vaccination, and must have been inoculation with actual smallpox. As inoculation was introduced in 1721 by the wife of the British Ambassador from Constantinople, the practice had soon spread to the Hebrides.

Scarlet fever is mentioned once only by full name, though "fevers" appear often. Scarlet fever was not described until 1675 by Sydenham and then as a mild disease. Scarlet fever appeared in Skye two years before Martin's visit. It was ordinarily cured by drinking now and then a glass of brandy. If an infant was affected the nurse drank the brandy, so qualifying the milk: this was said to be successful. At any rate brandy does not produce serum rashes.

Measles was prevalent in Syke and the adjacent isles. It does not appear to have been very fatal. It would probably have been mentioned had it occurred in the more remote isles, as there it would have been more severe. Smallpox was not differentiated from measles until 1670 by Sydenham, and only at the close of the eighteenth century did measles and scarlet fever come to be regarded as different diseases. In this respect Martin seems to have been up to date.

Chin cough or whooping cough afflicted the children of Lewis. Although traced back as a disease to the mid-sixteenth century there are only few references to it by seventeenth century writers. Again Martin is up to date.

Leprosy occurred in the most outlying island, St. Kilda. It had broken out 13 years before Martin's visit, and in one year 12 lepers died. Two families were affected. The symptoms were declining appetite, failing feet, hoarse voice, red papules on the skin, ulceration of the crown of the head, and falling of the hair—all symptoms of leprosy as it occurs at the present day. Martin ascribed the disease to gross feeding on fat sea birds, the favourite diet of the St. Kildans. There was apparently no segregation of affected persons and Martin mixed freely with them, even advising them to eat sorrel, which he had seen the sea birds eating.

The population of St. Kilda in Martin's time was about 180, and the island was looked on as a health resort. The steward selected the most "meagre" among his friends in the neighbouring isles and took them to St. Kilda to enjoy the nourishing if plain food and to restore their health. In 1930 the remaining 36 natives were evacuated to the mainland at their own request. The causes of the decay are probably as much economic as medical, but intermarriage may have played a part. They were said to examine carefully degrees of consanguinity before marriage. Martin commented that the generation of his time was not so strong and long-lived as the previous one as evidenced by their power to lift certain stones.

Consumptions were not frequent in the isles. Pleurisies occurred in Lewis, and stitches were said to affect many in the isles. These latter may have been fibrositis.

Diarrhoea and dysentery were prevalent in many of the islands. Our author's only comments were on the various cures and treatments, milk, often with powdered stone in it, being the most popular. Brandy and usquebaugh were also used.

Spotted fever was carried from Mull to Lingay, where it had not been known before. When the fever was violent the spots appeared on the second day, but commonly on the fourth day, and there was a crisis on the seventh day. The disease was considered mortal if the spots did not appear by the fourth day. The usual remedy was brandy or usquebaugh liberally. This fever may be typhus though the crisis is rather early, except perhaps for mild cases. Typhus was first named in 1760. There is no description of cerebrospinal meningitis in the literature before an account of an outbreak at Geneva in 1805. No crisis occurs usually in cerebrospinal meningitis.

A spotted fever was also prevalent in St. Kilda and was confined to one tribe to whom it was hereditary. If really hereditary, the condition may have been hereditary haemorrhagic thrombasthenia, which has purpuric symptoms. The fever is difficult to account for.

Coughs and colds were common in many of the isles. An unusual cough which troubled the St. Kildans shows that Martin did not accept without question all information given him. The natives told him that whenever the steward landed in the island they always contracted a cough, very troublesome at night, very productive of sputum, and lasting up to two weeks. Martin said that in his opinion the notion of infection was mere fancy. This offended the St. Kildans, who said none had ever doubted it before. They said that even infants at the breast were subject to the cough and that they could not affect it, and therefore they were satisfied that they were infected by the lodgers in their houses. Martin questioned most of the islanders and all confirmed it. They also remarked that if the fever had been among those of the steward's retinue, though before their arrival in St. Kilda, some of the inhabitants were infected with it.

Deficiency Diseases

Two deficiency diseases were common in the isles. Rickets was prevalent in many of them, and also scurvy, particularly in the most northerly. In Shetland scurvy was the disease which most afflicted the inhabitants and it was thought to be due to eating too much salt fish.

Parasites

Ectoparasites such as lice and fleas are nowhere mentioned. This is probably because such things were taken for granted.

Cures for worms were used in many of the isles. An unusual worm was found in the head, neck, or legs of several persons in Skye and the neighbouring isles. It was distinguished by the name Fillan, and caused pain and swelling in the affected part. In one case a man's cheek swelled, and after a poultice had been applied a little worm was drawn out of the flesh. It was about ½ inch long, as thick as a goose quill, with a sharp-pointed white head and red body and many little feet on each side. In one boy a pain moved from one part of the body to another, and where it was felt the skin appeared blue—toe, thigh, arms, head. The last part affected, the back of the head, had a little swelling from which the worm was forced out by external pressure. This may be some sort of filaria.

Liver flukes must have existed in Orkney, for there the sheep often died of a disease called sheep dead, occasioned by little animals ½ inch long engendered in the liver.

Rats

Rats were pests then as now. Fourteen years before Martin's visit to Lewis the people on Rona, a small island to the north, were wiped out when a swarm of rats came to the island and ate up all the corn. No supplies were sent from Lewis for a year, and all the inhabitants were dead when a boat finally made the journey. In Harris a great many rats overpowered the cats. The remedy was to give the cats milk to strengthen them after each encounter with the rats. The rats were then wiped out.

Only one "nuisance" is recorded by Martin—a bay where every seven years a prodigious quantity of shell fish was cast up out of the sand, making the air unhealthful to the inhabitants, on account of the noisome smell.

Jura and Benbecula

Jura had a good record in addition to its reported sobriety —no maternal deaths in the 34 years before Martin's visit. He believed that the health of mothers and children was due to the fact that the women of all ranks ate less food than the men and wore nothing straight about them.

In Benbecula the natives discovered a stone vault and enquired of a distinguished visitor, one of the Macleods, as to the nature of numerous small bones which caused much speculation. Some thought they were the bones of pygmies. Macleon replied that plainly they were the bones of infants born to nuns who had lived in the nearby nunnery. The natives liked this so little that they sealed up the vault.

Some " Cures "

Some cures are of interest. As in many places, blood was let plentifully for fevers and pleurisies. Faintness of the spirits was cured by one smith who laid the patient face uppermost on his anvil and, picking up his hammer and grimacing fearfully, made as if to smite the patient on the forehead. But " ending in a feint, else the patient would have been cured of all ills," he just avoided such a blow, and cured the patient.

Jaundice was cured by laying a patient face down and pretending to examine the bared back. Instead, a bucket of cold water was flung on the back, and cured the jaundice. Alternatively, red hot tongs were applied to the back, causing the patient to run furiously out of doors. When the pain of the tongs had abated the jaundice was cured.

Falling of the uvula was cured by cutting in Lewis. A noose of horsehair was passed through a long quill, drawn tight around the uvula, which was then cut off by scissors below the noose.

Medicines were little used in some of the isles. In Barra none was used other than a stone to rub the body—perhaps supposed to have magical powers. Providence was, however, very favourable to the inhabitants of Barra in granting them a good state of health " since they have no physician among them." In Skye nothing was used by way of prevention of sickness, for the natives observed that as a rule it did little or nothing of that nature. The inhabitants of St. Kilda were ignorant of the virtues of herbs and never used physic, nor did they practise blood letting. As Martin comments, a physician could not expect his bread in this commonwealth.

Holy wells were much resorted to in the seventeenth century, and the practice still exists in some parts of Europe. This pagan water cult is found in the same areas as are megalithic monuments. A well in Skye was much frequented by strangers as well as inhabitants, and it was believed to be specific for several diseases—stitches, headaches, stone, consumptions. The water was drunk and the individual then made a tour of the well sunways. In Bute and Mull certain wells were considered remedial for all diseases. In fact most of the isles had one or more wells which were considered holy and healthgiving. Some acted if a proxy were sent. However, Martin says that only a few of the oldest and the most ignorant of the vulgar were guilty of such practices and beliefs. For the most part the inhabitants of the isles, though labouring under want of knowledge of letters and arts and science, were well versed in the book of nature.

The British Social Hygiene Council have issued at a cost of 6d. per copy a pocket-sized booklet, *Private and Personal Problems*. This is intended primarily for " welfare workers, labour managers, industrial nurses, hostel wardens, and others, whose advice on personal matters is constantly sought." The Social Biology Board of the B.S.H.C., under whose direction the notes were prepared, recognises the family as the basic social unit, the seriousness of the decline in population, the need for relating scientific knowledge to ethical values, the need for encouraging responsible parenthood within marriage, the detrimental effect of irresponsible sex behaviour, and the dangers of venereal disease. Many of the problems made particularly acute through the circumstances of war are dealt with clearly and frankly, and a short reference book list is provided.

THE WHITE PAPER

We reproduce below the general summary of the Government's White Paper on a National Health Service, with slight modifications in the cross-headings. An editorial on the White Paper appears elsewhere in this issue.

Objects in View

(1) To ensure that everybody in the country—irrespective of means, age, sex, or occupation—shall have equal opportunity to benefit from the best and most up-to-date medical and allied services available.

(2) To provide, therefore, for all who want it, a comprehensive service covering every branch of medical and allied activity, from the care of minor ailments to major medicine and surgery; to include the care of mental as well as physical health, and all specialist services, *e.g.*, for tuberculosis, cancer, infectious diseases, maternity, fracture and orthopaedic treatment, and others; to include all normal general services, *e.g.*, the family doctor, midwife and nurse, the care of the teeth and of the eyes, the day-to-day care of the child; and to include all necessary drugs and medicines and a wide range of appliances.

(3) To divorce the care of health from questions of personal means or other factors irrelevant to it; to provide the service free of charge (apart from certain possible charges in respect of appliances) and to encourage a new attitude to health—the easier obtaining of advice early, the promotion of good health rather than only the treatment of bad.

General Principles to be Observed

(1) Freedom for people to use or not to use these facilities at their own wish; no compulsion into the new service, either for patient or for doctor; no interference with the making of private arrangements at private cost, if anyone still prefers to do so.

(2) Freedom for people to choose their own medical advisers under the new arrangements as much as they do now; and to continue with their present advisers, if they wish, when the latter take part in the new arrangements.

(3) Freedom for the doctor to pursue his professional methods in his own individual way, and not to be subject to outside clinical interference.

(4) The personal doctor-patient relationship to be preserved, and the whole service founded on the " family doctor " idea.

(5) These principles to be combined with the degree and kind of public organisation needed to see that the service is properly provided—*e.g.*, to ensure better distribution of resources and to give scope to new methods, such as group practice in Health Centres.

General Method of Organising the Service

(1) The maximum use of good existing facilities and experience; no unnecessary uprooting of established services, but the welding together of what is there already, adapting it and adding to it and incorporating it in the larger organisation.

(2) The basis to be the creation of a new public responsibility; to make it in future somebody's clear duty to see that all medical facilities are available to all people; the placing of this duty on an organisation answerable to the public in the democratic way, while enjoying the fullest expert and professional guidance.

(3) Some temporary limitations of the full service inevitable—*e.g.*, in dentistry (owing to insufficient dentists), in ophthalmology and perhaps elsewhere; but the design to be comprehensive from the outset, and to be fulfilled as fast as resources and man-power allow.

(4) The first step to be the making of positive plans for each area of the country, determining what is needed for all people in that area; this to be followed by measures to ensure that what is needed is then secured.

(5) A combination, for all this, of central and local responsibility, to ensure that both general national requirements and varying local requirements are equally met.

Central Administration

(1) Central responsibility to Parliament and the people to lie with the Minister.

(2) At the side of the Minister, to be a new central and statutory organisation for voicing professional views on technical aspects of the service generally; to be known as the Central Health Services Council; to represent general and specialist medical practice, medical teaching, hospital organisation and other professional interests; to be appointed by the Minister in consultation with those interests, and to choose its own chairman; to be consultative and not executive; to advise the Minister not only on questions referred to it by the Minister but also on its own initiative; the Minister to report annually to Parliament on the work of the Council.

(3) A special executive body to be also set up, composed in the main of members of the medical profession; to be known as the Central Medical Board, and to act under the general direction of the Minister; to be the " employer " body with which the general practitioner enters into contract in the new service, and to concern itself with the distribution and welfare of practitioners and assistants.

Local Administration

(1) Local organisation to be based on the county and county borough councils, operating in their normal local government areas where possible, but combining as joint authorities over larger areas where necessary.

(2) Areas of suitable size and resources for the operation of a full hospital service of all kinds, to be designated by the Minister after consultation with local interests.

(3) For each of these new hospital areas a joint authority to be constituted, being a combination of the existing county and county borough councils in the area; in the few cases where the area may coincide with an existing county area, the authority to be the county council of that area.

(4) The new joint authority also to be charged with preparing an area plan for the health service as a whole, not only the hospital service, in manner described below.

(5) Existing county and county borough councils, while combining for these duties of the new joint authority, to be responsible severally for local clinic and domiciliary services not belonging to the hospital and consultant sphere, within the general area plan; the responsibility for child welfare to be assigned broadly on the same lines as responsibility for child education. General medical practice to be the subject of special organisation, partly local, partly central.

(6) In each joint authority area, to be a local consultative body for voicing professional guidance on technical aspects of the service; to be known as the Local Health Services Council; to serve a similar purpose locally to the central professional body already described; to advise both the joint authority and the county and county borough councils, and to be free to express advice and views to the Minister.

Planning of Local Services

(1) Each joint authority, in consultation with the local professional body referred to and with others locally concerned, to prepare an " area plan " for securing the comprehensive health service for its area; the plan to be based on an assessment of the needs of the area in all branches of the service, to propose how each of those needs should be met, and to be submitted to the Minister.

(2) The Minister to consider each area plan, and any representations made to him by the local professional body or others affected, and to approve the plan with or without modification; the plan, as approved, to be the operative plan for that area; to be the duty of all concerned to provide and maintain their services within the general framework of the plan; the plan to be modified or replaced from time to time, according to requirements, by the same procedure.

Hospital and Consultant Services

(1) To be the duty of the joint authorities themselves to secure a complete hospital and consultant service for their area—including sanatoria, isolation, mental health services, and ambulance and ancillary services—in accordance with the approved area plan.

(2) The joint authorities to do this both by direct provision and by contractual arrangements with voluntary hospitals (or with other joint authorities) as the approved area plan may indicate.

(3) Powers of present local authorities, in respect of these services, to pass to the joint authority, with all existing hospitals and similar institutions.

(4) The voluntary hospital system to continue side by side with the publicly provided hospitals; voluntary hospitals to participate, if willing to do so, as autonomous and contracting agencies; if so, to observe the approved area plan and to perform the services for which they contract under that plan and to receive various service payments.

(5) All hospitals, municipal or voluntary, taking part in the service to observe certain national conditions (*e.g.*, as to remuneration of nurses, appointment of consultants); these conditions being centrally prescribed.

(6) Special provision to be made for inspection of the hospital service, through selected expert personnel (some part-time) working in panels over different parts of the country.

(7) Consultant services to be made available to all, at the hospitals, local centres or clinics, or in the home, as required; to be based on the hospital service, and arranged by the joint authority, either directly or by contract with voluntary hospitals under the approved area plan.

(8) Measures for improving the distribution of consultants, dealing with methods of appointment and remuneration, and relating this to other branches of the new service generally, to be considered after the report of the Goodenough Committee, but general direction of changes to be: (*a*) Consultants taking part to be remunerated in future (usually by part-time or whole-time salary) by the particular hospital or hospitals with which they are associated under the area plan; standards of remuneration to be centrally settled in consultation with the profession. (*b*) New arrangements for securing proper standards for consultant appointments in the service, possibly through suitable machinery set up to advise all hospitals making appointments of senior staff.

General Medical Practice

(1) The Minister, with the new Central Medical Board, to undertake nationally the main arrangements for a general practitioner service for the country, through which anyone who wishes to do so can associate himself with a " family doctor " of his own choice and obtain the advice and treatment of that doctor at home or at his present consulting room or at a specially provided and equipped consulting room in a Health Centre, as the case may be.

(2) These central and national arrangements to cover terms of service, remuneration of doctors from public funds, and other general aspects of organisation, and the individual doctor to be in contract with the Central Medical Board.

(3) The joint authority in each area to have the duty of (*a*) including in their area plan an assessment of the needs of their area in general medical practice; (*b*) keeping these needs under review and bringing to the notice of the Minister and the Central Medical Board any general features or requirements of the general practitioner situation in the area which they consider to need attention; (*c*) ensuring that general medical practitioners taking part in the service in the area are acquainted with hospital and consultant and other services available under the area plan, and that they are able (as, under their terms of service, they would be required) to use those services for their patients.

(4) The county and county borough councils to be responsible for providing, equipping and maintaining such Health Centres for the conduct of general medical practice in the new service as may be approved from time to time by the Minister in respect of any part of their area, and in such cases to be joined in the doctor's contract with the Central Medical Board.

(5) Future development to include both new methods of " grouped " medical practice in Health Centres (and, where suitable, outside them) and familiar methods of " separate "

practice; each being developed as experience proves best in each area. A high place in the scheme to be given to a full and careful trial of the Health Centre method.

(6) Existing practitioners to be able to participate in the new service in their present areas of practice, and where they do so from their own consulting rooms to be normally remunerated on a capitation basis (though other methods to be considered in certain cases if desired by the practitioners themselves). Where they participate in group practice in Health Centres, remuneration to be by salary or similar alternative.

(7) Practice in the public service not to debar a doctor from private practice for such patients as may still request this.

(8) Appropriate limits to be fixed to the number of persons whose care a particular doctor can undertake, taking into due account the extent of private medical practice and the calls made upon a doctor's time by other public appointments; higher limits where assistants are engaged; more regulation of the conditions of the employment of assistants in the service; a requirement that newly qualified doctors shall normally serve a period as assistants before practising on their own in the new service, and power for the Central Medical Board to require them to give full time to the public service in their early years if necessary.

(9) New practitioners wishing to participate in the service, and existing practitioners wishing to do so in new areas or new practices, to be required to obtain the consent of the professional Central Medical Board—to check the need for additional public practice in the area, and to ensure a reasonable distribution of resources inside the public service.

(10) Compensation for loss of selling value of practices to be payable where a doctor transfers his public practice into a Health Centre, or where a public practice falling vacant is not allowed to be refilled by the Central Medical Board.

(11) Superannuation to be provided for doctors practising at Health Centres and, if practicable, for doctors participating in the service in other forms of practice.

(12) The question of the sale and purchase of public medical practices in future to be discussed more fully with the profession.

Clinic and Other Local Services

(1) To be the duty of the joint authority to deal in its area plan with all necessary clinic and other local services (*e.g.*, child welfare, ante-natal and post-natal clinics, home-nursing, health visiting, midwifery and others), and to provide for the co-ordination of these services with the other services in the plan.

(2) Administration of these local clinic and non-hospital services, however, to be normally the responsibility of the individual county and county borough councils which collectively make up the joint authority: the administration to be in accord with the general provisions of the area plan.

(3) The exact allocation of responsibility between the joint authority and the individual county and county borough councils to be settled in each case by the Minister in determining the area plan; but normally on the principle that services belonging to the hospital and consultant sphere fall to the joint authority, while other local and clinic services fall to the individual councils.

(4) Child welfare duties always to fall to the authority responsible for child education under the new Education Bill, but to be as much the subject of the "area plan" as any other branch of the service.

(5) New forms of service, *e.g.*, for general dentistry and for general care of the eyes, to be considered with the professional and other interests concerned as soon as circumstances allow. In the case of dentistry, the report of the Teviot Committee to be first awaited.

The Service in Scotland

(1) The scope and objects of the service to be the same in Scotland as in England and Wales, and the foregoing proposals to apply generally to both countries—but subject to the differences below.

(2) Certain differences in detailed application in Scotland, due to special circumstances and geography and existing local government structure there; differences mainly affecting the arrangement of responsibility, central and local, for planning and carrying out the service.

(3) Central responsibility to rest with the Secretary of State. A Central Health Services Council and a Central Medical Board to be set up, as in England and Wales.

(4) Local organisation to differ from that in England and Wales and to be on the following lines:—

(*a*) Regional Hospitals Advisory Councils to be set up for each of five big regions; to consist of equal representation of the new local authority Joint Hospitals Boards (below) and of voluntary hospitals; also representation of the Local Medical Services Committee (below) and of medical and medical-education interests; independent chairman to be appointed by Secretary of State. Councils to be advisory to Secretary of State on the co-ordination of the hospital and consultant services in each region.

(*b*) Joint Hospitals Boards to be formed by combinations of neighbouring local authorities (county councils and town councils of large burghs), to ensure an adequate hospital and consultant service in their areas; these to take over all responsibility for the hospital services of the constituent authorities (including services like the tuberculosis dispensaries, which essentially belong to the hospital and consultant field) and also to arrange with voluntary hospitals. These Joint Boards to prepare a scheme for the hospital service of their areas, to submit this to the Secretary of State, who will consult the Regional Hospitals Advisory Council before deciding to approve or amend it.

(*c*) Education authorities (county councils and town councils of four cities) to retain responsibility for school health service and clinics; existing major authorities (county councils and town councils of large burghs) to retain responsibility for the ordinary local clinic and similar services; the necessary co-ordination to be secured (i) through their membership of the Joint Hospitals Boards, and (ii) through the Local Medical Services Committees (below). Powers of Secretary of State to be strengthened to require local authorities to combine for any purpose proved necessary, after public local enquiry, for the efficiency of the new service as a whole.

(*d*) Local Medical Services Committees to be set up over the same areas as the Joint Hospitals Boards; to be advisory bodies; to include representation of all the local health authorities and of local medical, dental, pharmaceutical and nursing professions and other interests; free to appoint smaller sub-committees and groups, as found desirable. These Committees to advise the Secretary of State on local administration of the general practitioner service; also to provide liaison between the different branches of the service.

(5) Central provision of Health Centres more suitable in Scotland owing to the smaller size of the problem and the special circumstances of geography and distribution of population—with a power to the Secretary of State to delegate his functions in this respect to a local authority, where found desirable.

Financial

(1) The service to be free to all, apart from possible charges for certain appliances. Questions of disability benefits, for those ill at home and for those in hospital, to be dealt with in later proposals on social insurance.

(2) Cost of the service to be met from both central and local public funds. These arrangements, as affecting the various local authorities and the voluntary hospitals, are fully considered in a special financial memorandum (appended).

The Medical Research Council have, as part of their staff organisation, established a unit for research in human nutrition, and have appointed Dr. B. S. Platt as Director. Temporary accommodation has kindly been provided at the National Hospital for Nervous Diseases, Queen Square, London. Some part of the investigations undertaken by the unit will be directed towards nutrition problems in the tropics. Among other things, Dr. Platt will continue the work, for which he joined the Council's staff in 1938, of co-ordinating a programme of nutritional investigations in the Colonies by arrangement between the Colonial Office and the Council.

BOOK REVIEWS

Food Inspection Notes. By H. Hill and E. Dodsworth. London: H. K. Lewis. 1943. Pp. 121. Price 6s. net.

To meet the needs of the student, H. Hill and E. Dodsworth, Sanitary Inspectors of the Boroughs of Southgate and Edmonton respectively, have written this small volume. Even though it is intended as a practical hand-book for the meat inspector, some legal details might with advantage have been included, especially as reference is made to the fact that certain animal diseases are notifiable. As so much hinges on Memorandum 62 Foods, at least an extract should have been included; while, again, the subject of tuberculosis in animals warrants more detailed treatment than the two pages devoted to it. Exception might be taken to certain judgments about the disposal of the carcase or part of the carcase, as in the case of caseous lymphadenitis (p. 34) and foot-and-mouth disease (p. 39). In view of its importance these days, it is unfortunate that the description of horse-flesh on p. 8 is hardly accurate enough to enable the meat to be identified, being at complete variance with the conclusions of Lt.-Col. J. A. Dixon in the *Journal of the Royal Sanitary Institute* for January, 1942: "If there exist any preconceived ideas regarding the colour and texture of the musculature and the colouring and consistency of the fat they must be revised. Even in the flesh of old horses the cut surface has an unexpected brightness and the fat is no deeper coloured and no softer in consistency than that of poor cow beef." In a book intended primarily for students, care should have been taken to avoid confusion by describing septic metritis as an inflammation of uterus and womb (p. 41) and by giving a different description of animals which have been choked from those which have been suffocated (p. 49) without explaining the differences in the modes of death. And details might have been given of the terms used by butchers.

This book, in which much has been condensed into the pages of a volume of pocket size, may well be of value as a ready reminder for the qualified inspector; but so much has been concentrated that it can hardly be assimilated except by a student who has already learned much from larger volumes.

After-care and Rehabilitation. By various authors, with an introduction by Prof. F. R. Fraser. pp. 128. Price 8s. 6d. net.

Minor Surgery. By various authors. pp. 174. Price 16s. net. Practitioner Handbooks. 1943. London: Eyre & Spottiswoode.

The *Practitioner* continues with commendable regularity to publish what it describes as "handbooks" and "booklets" on various medical topics which are to the fore. One of the latest to appear is on a subject which we have all heard a good deal about during this war—namely, rehabilitation. After an introduction by Prof. F. R. Fraser, there follow twelve chapters on after-care and rehabilitation by medical men expert in the subjects dealt with. For example, Mr. H. E. Griffiths writes on rehabilitation after fractures, Dr. Elizabeth Casson on occupational therapy, Dr. Anthony Feiling on nervous and mental post-operative complications, Dr. Geoffrey Evans on rehabilitation in patients confined to bed, Dr. Lawrence Roberts on the after-care of pulmonary tuberculosis.

Like the word "psychology," the word "rehabilitation" has become rather overworked in the last few years, but at least it serves to remind us that the day has gone when the first and last a surgeon sees of his patient is in the operating theatre. Some years ago a surgeon who claimed excellent results in the treatment of peptic ulceration by gastro-enterostomy was unwillingly persuaded by his house-surgeon to see in the out-patient department a group of cases operated on many months previously. After that unfortunate experience little was heard from that surgeon about the successful treatment of peptic ulcer by a short-circuiting operation. The lesson that seems to come out of the present emphasis on after-care and rehabilitation is that no medical man should treat the individual patient unless he is prepared to see the patient through the acute stages of his disease to as complete restoration of mental and physical capacity as is possible. The *Practitioner* booklet under review gives some indication of what measures are needed for this. Although it is called a "booklet," we note that the price is 8s. 6d.

Minor Surgery, another *Practitioner* book, this time a "handbook," costing 16s., is perhaps of less interest to men in the Public Health Service. Eighteen chapters deal clearly and simply with familiar problems. It is always difficult to decide just how much should be included in a book on minor surgery, simply because the term implies that it is surgery which can be done by a general practitioner. While a few general practitioners are skilful with their hands and able to perform major surgical operations with skill, are there many who should, shall we say, be tempted to amputate the cervix, to insufflate the fallopian tubes, to suture tendons in the hand—to mention just one or two subjects dealt with in this admirably produced book on "minor" surgery?

Transactions of the Royal Sanitary Association of Scotland. 1942. Published by the Royal Sanitary Association of Scotland. Glasgow. Pp. 128.

"Domestic Hygiene in War-time" was the subject to which most attention was given at the Annual Congress of the Royal Sanitary Association of Scotland held in Edinburgh in September, 1942. The medical aspects were submitted in a paper by Dr. J. M. Mackintosh, Professor of Public Health at Glasgow University, and the personal aspects dealt with by Miss Jessie Gordon, of the Scottish National Health Visitors Association. Both developed into an advocacy of the importance of health education. Dr. Mackintosh demanded that health education based on domestic hygiene should be the principal subject of the school curriculum of every child from nursery school to adolescence. Miss Gordon felt that until clear ideas had been taught and practised under supervision, from babyhood through childhood and adolescence, results must be anything but satisfactory. "While we are rapidly developing a social conscience and improving the economic condition of the wage earner it cannot be said that our health education has progressed at the same rate. . . . Personal hygiene is not an instinct. It requires to be taught and learned. It should therefore form part of every child's personal education." Post-war problems figured largely in the presidential address of Mr. William Asher, Chief Sanitary Inspector of Perth; and the economics of post-war public health policy in a paper by Mr. J. Falconer, Treasurer, Edinburgh, who urged because additions to the rates are reflected in increased rents, to the prejudice of those for whom the services are provided, that increases in public health expenditure should be met preferably by Exchequer help, though necessarily by way of percentage grants.

OBITUARY

The Late Dr. Maitland Radford

A correspondent writes: All of us who knew Dr. Radford and had the privilege of working with him will value the sympathetic appreciation of his character and career which appeared in Public Health for February, 1944. It was against the intellectual background which you depict that his work as Medical Officer of Health must be set, and to which that work owed its characteristic vitality and balance. Whether he was dealing, in peace-time, with improvements in the maternity services or with unfit houses; or, in war-time, with anti-gas precautions or the medical problems in air raid shelters, one felt that he regarded these matters not only as requiring treatment by various technical measures, but also having an intimate relation to the life of the community; and as being social as well as medical problems. He gave invaluable help at the meetings of the Metropolitan Borough Medical Officers' Committee and of the Medical Advisory Body of the Metropolitan Standing Joint Committee. The happiness of his relations with the local medical profession is attested by his having been elected as Chairman of the St. Pancras Division of the British Medical Association in 1936 and again in 1943.

CORRESPONDENCE

First-Aid at the Incident

To the Editor of Public Health.

Sir,—I wish to thank you for your kind review of my manual, *First-Aid at the Incident*, which is published in your February issue (p. 57). I am glad to be able to inform you that the manual is now for public sale at 2s. a copy, though the edition is limited owing to the difficulties of the Paper Control. If any copies are wanted, I should be glad if application could be made to me at City of Leicester Civil Defence Headquarters, 24, Halford Street, Leicester.

I am, etc.,

E. K. Macdonald.

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, January 28th, with the President (Dr. R. H. H. Jolly) in the chair.

There were present: Drs. J. S. Anderson, Cyril Banks, H. Stanley Banks, Malcolm Barker, Vynne Borland, W. C. V. Brothwood, G. F. Buchan, G. Lissant Cox, W. Allen Daley, Jas. Fenton, Jas. Ferguson, D. H. Geffen, J. M. Gibson, F. Hall, C. E. Herington, Katherine M. Hirst, J. J. Jervis, A. W. Johns, G. Lilico, A. A. E. Newth, T. Orr, R. H. Parry, H. Paul, R. M. F. Picken, E. Virginia Saunders-Jacobs, J. A. Scott, J. A. Struthers, J. A. Stirling, G. M. McKim Thomas, F. T. H. Wood and Mr. A. Gordon Taylor.

Apologies for absence were received from Drs. E. A. Gregg, A. Massey, G. V. T. McMichael, J. J. Buchan, J. E. Spence and H. G. Trayer.

Minutes of meeting held on November 26th, 1943 (see PUBLIC HEALTH, January, 1944, p. 45), were approved and signed.

In opening the meeting the President expressed the sorrow of the Society at the death of Dr. G. H. Pearce, a former president, and Dr. Maitland Radford, for some years a valued member of the Council. Votes of sympathy for Mrs. Pearce and Dr. Muriel Radford were passed upstanding.

New Year's Honours.—The President invited the Council to record their hearty congratulations to the Acting Executive Secretary on the Knighthood conferred on him by H.M. the King in recognition of his political and public service. He also proposed that letters of congratulation should be forwarded to Dr. W. L. Burgess, Dr. G. Lissant Cox and Dr. C. E. Tangye on the occasion of their decoration as Commanders of the Order of the British Empire. Both these proposals were adopted by acclamation.

Education Bill.—The Report of the General Purposes Committee in reference to the Bill was received, and it was agreed to continue co-operation with the British Medical Association to secure consideration of amendments to be recommended to the Parliamentary Medical Committee.

Annual Luncheon.—On the recommendation of the Luncheon Committee it was agreed that the Society should hold two luncheons during the year. The first of these will be held at the Connaught Rooms Gt. Queen Street, W.C.2. on May 5th, 1944. The Minister of Health, Mr. H. U. Willink, K.C., M.P., has kindly consented to be the Guest of Honour on this occasion. Representatives of the Association of Municipal Corporations, the County Councils Association, Urban District Councils Association, the Rural District Councils Association, the London County Council and the Metropolitan Boroughs Standing Joint Committee will also be invited.

It was further agreed that the charge for the luncheon should be 10s. 6d. per head (including gratuities but excluding wines), and that in view of the limited accommodation seats should be allocated according to priority of applications.

Central Council for Health Education.—Dr. Thos. Orr as Chairman of the Committee appointed to review the relations of the Society with the C.C.H.E. submitted recommendations in reference to the censorship of publications and films by medical members of the C.C.H.E. and to preliminary consultation with local medical officers of health before including their areas in any special campaign. These recommendations having been approved, it was agreed to discuss them at a conference with representatives of the C.C.H.E.

The Association of County Medical Officers of Health notified the re-election of Drs. Dunlop and Ponder as their representatives on the C.C.H.E. It was decided that nominations to fill the vacancy caused by the death of Dr. Maitland Radford, and two other vacancies on the C.C.H.E., should be submitted to the next meeting of the Society's Council.

Salaries Committee. The Committee appointed to consider the proposed revision of the Askwith Scale of Salaries reported the proceedings of their meeting held earlier the same day (January 27th).

Dr. A. Massey was appointed Chairman.

After general discussion the Committee had agreed that they should proceed at once to formulate suggestions for an interim revision of the salary scales affecting medical officers in existing local authority services and subsequently consider the questions relating to salaries in the future new comprehensive medical service.

It was decided to co-opt to the Committee a member representing the mental hospitals service.

D.P.H. Committee. It was reported that the Committee appointed to consider the character and training required for public health medical officers in view of possible replanning of the health services met on Friday, January 28th, for a preliminary discussion of procedure. Prof. R. M. F. Picken was elected chairman, and it was decided to circulate papers for future meetings as follows: (1) D.P.H. Regulations of the General Medical Council. (2) Society's comments on G.M.C. Report on public health examinations from PUBLIC HEALTH, July, 1941, p. 191. (3) R.C.P. report on training of medical students. (4) Memorandum on the public health curriculum (Pro. Major Greenwood, F.R.S. (5)Memorandum on history of D.P.H. (Dr. J. A. Charles). (6) Memorandum on TB. courses (Dr. G. Lissant Cox). (7) Memorandum on fever courses (Dr. H. Stanley Banks). (8) Memorandum on M. & C.W. courses (Dr. Jean Mackintosh).

It was decided to invite the School Medical Group to nominate one of their members to serve on the Committee, and to submit a memorandum on training for the school medical service.

Representation of the Society. Dr. J. J. Buchan was re-elected as representatives of the Society on the Central Midwives Board for a further period as from March 31st, 1944.

Life Membership. Dr. A. M. Glass (formerly M.O.H., Farnworth U.D.) was elected to fully paid life membership of the Society on the nomination of the North Western Branch.

The Council then adjourned.

GENERAL PURPOSES COMMITTEE

A meeting of the above Committee was held at Tavistock House, Tavistock Square, London, W.C.1, on January 27th with Dr. J. A. Charles in the chair.

There were present: Drs. Cyril Banks, G. F. Buchan, G. Lissant Cox, Jas. Fenton, Jas. Ferguson, J. M. Gibson, F. Hall, C. E. Herington, J. W. Hunter, R. H. H. Jolly, G. Lilico, A. A. E. Newth, H. Paul, Prof. R. M. F. Picken, Drs. E. V. Saunders-Jacobs, J. A. Stirling, H. C. Maurice Williams and F. T. H. Wood.

An apology for absence was received from Dr. J. J. Buchan.

The minutes of the meeting held on October 29th, 1943 (see PUBLIC HEALTH, January, 1944, p. 46), were approved and signed.

The Education Bill.—Dr. G. F. Buchan reported the attendance of a joint deputation representing the B.M.A. and the Society to confer with representatives of the Board of Education in reference to certain clauses of the Education Bill. The Committee also considered correspondence from Dr. W. M. Frazer (Liverpool) and Dr. J. Maddison (Twickenham) and others suggesting desirable amendments.

The Committee then approved representations in regard to Clauses 6(4), 8(2)b, 31(2), 32(1), 32(5), 32(6), 52 and 81, for the consideration of the Board of Education, the Association of Municipal Corporations, the County Councils Association, and the British Medical Association. It was also agreed to seek the co-operation of the B.M.A. in the selection and drafting of amendments for the Committee stage of the Bill.

Allowances for Tuberculosis Patients.—A resolution forwarded by the Tuberculosis Group was adopted as follows:—

> "That ultimate fitness for work should not be the criterion for eligibility for financial allowances on the scale laid down under Memo 266/T, but that all cases of pulmonary tuberculosis who conform with the instructions of the Tuberculosis Officer should be eligible to receive allowances."

It was agreed that the resolution should be forwarded to the Minister of Health with a request that he would consider any necessary steps that would make it possible to modify the terms of Memo 266/T on the lines suggested by the Resolution.

Reorganisation of Medical Services.—The Committee considered a letter from the Representative Committee of the profession asking for the observations of the Society on the report circulated in July, 1943, submitting fundamental principles which should form the basis of any further reorganisation of the health services. It was agreed to reply that while, pending consideration of the Government's White Paper, the policy of the Society remained as stated in the brochure "A National Health Service," the Society welcomed the opportunity of forwarding observations in reference to Recommendations F, D, L and M in the report of the Representative Committee which might be helpful at the next stage of the consideration of these matters.

Grants and Payments to Groups.—Dr. G. F. Buchan submitted proposals in this connection which had been the subject of discussion with the Groups It was agreed to appoint a subcommittee consisting of the President, the Treasurer, the Chairman of the General Purposes Committee and four representatives of the Clinical Groups to submit definite proposals, and possibly to consider any revision of the Society's constitution which might become necessary before this adoption. It was further agreed that the subcommittee should report on the Society's representation on kindred bodies in view of the decision to pay expenses for attendance at their meetings.

A resolution from the Yorkshire Branch in reference to increasing power of administrative officers in government departments as affecting the responsibilities of of technical officers of local authorities was deferred for consideration at the next meeting of the Committee.

The Committee then adjourned.

BRANCH NEWS

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Marjorie Back.
Hon. Secretary: Dr. Violet Russell.
Hon. Assist. Secretary: Dr. Miriam Florentin.

At the first meeting of the session, held on November 12th, 1943, at Tavistock House, Dr. Marjorie Back, Principal A.M.O., Middlesex C.C., was installed as President of the Group.

The new President introduced Dr. D. W. Winnicott, who gave an interesting talk on the significance of psychology in infant welfare work. He first spoke of the natural or intuitive understanding which most doctors possessed, especially those who chose to work with children. This he contrasted with the study of psychology. If doctors had some intuitive understanding, mothers had even more, for pregnancy and the experience of parturition tended to produce in women a special orientation to infants, or at least to their own infant, with the result that in a way mothers had fundamental knowledge of infant care. For instance, they easily believed in the importance of infant feelings to the infant, in the intensity of those feelings, and the reality of infant distress. They easily believed in the need that each infant had for one woman's care and they knew that infants needed love even more than food. We could arrive at these truths by the scientific method of collecting and sorting facts, by imagination and experiment, and by the construction, testing, and reconstruction of theory. This was psychology, and through its study we could learn how and when to support mothers in the knowledge which they possessed, along with doubts as to their right to take full responsibility for action. If these things that ordinary good mothers knew intuitively were accepted by doctors, there would be no interference with any mother-infant relationship except where absolutely essential, and a great deal of unnecessary harm would be prevented. The subject was a vast one, if looked at as a science and not as a series of intuitive flashes; and Dr. Winnicott invited infant welfare officers, most of whom were in touch with rich clinical material if they had time or inclination to make use of it, to form study groups and to seek psychological instruction.

Dr. Winnicott invited questions, and the audience of over 40 members confronted Dr. Winnicott with many practical problems connected with the psychological aspects of breast feeding, day and residential nurseries, evacuation, and the infant in hospital.

Dr. D. W. Winnicott is forming a Discussion Circle for a limited number of members of the Group interested in the psychology of infancy, on Tuesdays at 6 p.m. Will those interested please communicate with Dr. Florentin, Town Hall, Stoke Newington, N.16.

A meeting of the Group will be held on Friday, March 10th, 1944, at 8 p.m., at Tavistock House, Tavistock Square, W.C.1, when Dr. Doyne Bell will speak on a reassessment of some common paediatric problems.

On January 15th more than thirty members met at Tavistock House, London, W.C.1, to hear Mr. C. L. Gimblett, F.R.C.S., speak on "Squint," and to watch Miss Irvine, Senior Orthoptist, R.A.F., demonstrate the synoptophore.

SQUINT

Mr. Gimblett showed how the theory that squint was due to an error of refraction did not always fit in with the facts. On this basis we could understand why hypermetropes should converge, but not why myopes should diverge. Some hypermetropes with a very small error had marked squints, while others with high errors did not squint at all. Again, some squints disappeared almost simultaneously with the wearing of glasses while others were seemingly unaffected. Some factor other than the error of refraction was then operative in causing squint. In the hypermetropic eye the adductors were at an advantage, as were the abductors in the myopic eye; but all hypermetropes did not converge nor all myopes diverge. There might be another simple explanation. When the eyes had different measurements the most affected eye was not used and squinted: yet 6/6 vision in each eye could be found in the presence of a bad alternating squint.

Mr. Gimblett classified squint as follows: (1) Apparent squint: the normal optical axis, a divergence of 5 degrees, was altered in the presence of a high error of refraction. (2) Latent squint: came on only when the patient was worried or ill or frightened and tired; commonly occurred during an attack of measles or whooping cough, and recently had been observed to appear during air raids. (3) Concomitant squint, in which the angle was the same whichever eye fixed. (4) Paralytic squint, in which the angle was greater when the paralysed eye fixed. (5) Squint in a blind eye: the eye took up the position of rest in the axis of the orbit.

The adult who developed a paralytic squint was greatly troubled by diplopia and his reaction was to cover one eye. "Two eyes are better than one," said Mr. Gimblett, "except when there is diplopia."

Few children were born with a squint, and one wondered whether the child saw double when the squint developed. He probably did; and he was as bothered as the adult, but found it much easier to suppress one image. As soon as he learnt not to use one eye he was seen to squint. The older the child the more difficult he found it to suppress one image and the more difficult he was to train. It was impossible to train an adult on the synoptophore unless the squint was a latent one. The short-sighted child must wear his glasses when reading, otherwise he would not converge. The long-sighted child, on the other hand, might have to accommodate twice as much as the child with normal vision and would tend to over-converge.

Mr. Claud Worth had discovered three stages of binocular vision in the squinting child. (1) Simultaneous perception. By the use of the amblyscope the central area of suppression, in which one eye only was used, could be measured. If it was very large, as it was in the congenital alternating squint, no amount of treatment would alter it. If it was very small it might be missed by the orthoptist and thus account for some of the failures to produce a cure. (2) Fusion. This could be obtained when the area of suppression was small, but care should be taken during training that suppression was absent before fusion was developed. (3) Stereoscopic vision: that is, "amplitude of fusion."

The first stage in treatment was to make the child learn to use the bad eye. This could be done (1) by atropine—not so good for myopes; by (2) occlusion, which must be efficient and kept up night and day. Muscle imbalance must be improved. An efficient pair of glasses must be prescribed. Later, operation might be required to overcome an imbalance of muscle which could not be improved in any other way.

Mr. Gimblett described how Mr. Worth never did a tenotomy only, but also advanced the external rectus in every case and got extremely good results. He used a special needle and put nine stitches into the tendon, which was about a quarter of an inch wide. He operated when the child was between 9 and 12 years and generally under a general anaesthetic. The ideal age for the orthoptic department was 5 to 8 years.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles).
Hon. Secretary: Dr. W. C. V. Brothwood (Assistant C.M.O.H., Lancs.).

A meeting was held at Manchester on November 19th. There were present the President and 24 members.

In the absence of the author, through illness, Dr. Woolham read Dr. E. H. M. Milligan's paper on the physical and nutritional condition of children in war-time. The main points were as follows:—

In the period Jan./Feb., 1941 to Jan./Feb., 1942, the growth, weight and height, of boys aged eleven years was significantly below the pre-war rate, whereas in the periods Nov., 1941 to Nov., 1942, and Jan./Feb., 1942 to Jan./Feb., 1943, the rates for both weight and height reached the pre-war level. This pre-war level was, however, one obtaining among a population with a low dietary intake. Fatigue resistance potential, both per lb. and total, was in war-time lower than the pre-war rate, and remained lower during 1942 to Jan./Feb., 1943. There was no significant lowering of strength per lb. of body weight. The incidence of vitamin A and C deficiency was high in 1942, and the physical conditions of the deficient children were found in certain reports to be worse than the non-deficient, vitamin A deficient in weight growth, vitamin A and A+C in certain medical defects, and vitamin C in fatigue. The vitamin deficient children were also more prone to infection.

TUBERCULOSIS GROUP COMMITTEE

A meeting of the Joint Tuberculosis Council was held on November 20th, 1943, in London. The Chairman of the Council, Dr. James Watt, welcomed the appointment of Dr. H. Selby, of Leicester, and Dr. C. K. Cullen, of London, as representatives of the Tuberculosis Group of the Society and Dr. W. Sheldon as the representative of the British Paediatric Association.

Nomination of Officers for 1944.—Chairman: Dr. James Watt; Vice-Chairman: Drs. D. P. Sutherland and N. Tattersall; Hon. Treasurer: Dr. A. P. Ford (in succession to Dr. G. Jessel); Hon. Auditor: Dr. D. P. Sutherland; Hon. Secretary: Dr. Norman J. England (in succession to Dr. J. B. McDougall).

RE-ORGANISATION OF THE TUBERCULOSIS ASSOCIATION

A Report on this subject was presented to the Council by the Convener of the Committee, Dr. Norman England. Much attention was given to the re-organisation of areas and regions under which tuberculosis might be administered in the future. It was suggested that the Report of the Notification Committee should be incorporated in the final Report of the Re-organisation Committee, and much the same feeling was expressed with regard to that section of the Report dealing with thoracic surgery. Mr. J. E. H. Roberts agreed that the

findings of his Committee would be forwarded with a view to incorporation. Considerable consideration was given to the qualifications of tuberculosis officers for senior posts, and Dr. Sheldon pleaded for the special experience in dealing with children. It was decided to refer the Report back to the Committee, and Members of the Council were invited to write to the Convener and express to him their views on points already discussed and for discussion.

SHORTAGE OF SANATORIUM STAFF

The Chairman reported on the discussions between the representatives of the N.A.P.T., T.A. and J.T.C. on this question. In view, however, of the contemplated legislation by the Ministry of Labour it was felt that no action should be taken. The Ministry of Health was to submit proposals which had been agreed upon by the Ministry of Labour and the Ministry of Health to the Standing Advisory Committee for further consideration.

POST-GRADUATE CLASSES

The Convener, Dr. F. Heaf, gave a full account of the work of the Joint Educational Committee. A General Practitioners' Course had been arranged in London and further courses were contemplated for postgraduate and social workers in such centres as Norwich, Cheshire, Liverpool, Wales, and Cambridge. The Joint Committee felt that an investigation into the psychology of the tuberculous was worth considering. The Committee had agreed to provide two scholarships at the expense of the N.A.P.T. for almoners to the value of £25 each per annum. Dr. Sheldon advocated the holding of short courses dealing with tuberculosis in children.

METROPOLITAN BRANCH

President: Dr. Vynne Borland (M.O.H., Bethnal Green).
Hon. Secretary: Dr. H. L. Oldershaw (M.O.H., Hampstead).

A meeting of the Metropolitan Branch, to which members of the Maternity and Child Welfare Group had been invited, was held on December 10th, 32 members and guests being present.

The President made sympathetic reference to the great loss which the Branch had sustained in the recent death of Dr. John Macmillan.

The recommendation of the Branch Council that Dr. J. A. Scott be appointed Acting Hon. Secretary during the absence of Dr. Oldershaw on military service was unanimously agreed.

Dr. Ethel Cassie, O.B.E., M.D., gave an address on the care of the illegitimate child. An interesting discussion in which Mr. Bligh, Social Welfare Officer, L.C.C., who was a welcome guest, took part, was opened by Dr. Letitia Fairfield and Dr. Catherine Hirst.

SOUTHERN BRANCH

President: Dr. W. P. Cargill (Deputy M.O.H., Southampton).
Hon. Secretary: Dr. H. C. Maurice Williams, O.B.E. (M.O.H., Southampton).

A meeting of the Southern Branch was held at Southampton on December 10th, 1943. Seven members and one visitor were present. The minutes of the meetings held on October 1st and October 22nd, 1943, were approved as correct and signed by the Chairman.

The President, Dr. W. P. Cargill, gave a very interesting talk on seventeenth century medicine in the Hebrides. A film supplied by the Central Council for Health Education, entitled "Unwanted Guests," was shown.

WEST OF ENGLAND BRANCH

President: Dr. W. J. Doyle (M.O.H., St. Thomas R.D.C. and Exmouth U.D.C.).
Hon. Secretary: Dr. J. G. Davies (Deputy M.O.H., Bristol).

A meeting of the Branch was held at Bristol on January 5th. To this meeting several visitors had been invited, including British and American Army doctors, specialists in tuberculosis and venereal disease, and Ministry of Health doctors. The Vice-President, Dr. J. F. Davidson, was in the chair. The minutes of the last meeting were read and confirmed.

Papers were read by Majors Charles Courville and Robert Shaw, U.S. Army, on intensive arsenotherapy in syphilis, with public health aspects of V.D. control, and on tuberculosis, a public health menace. A full and interesting discussion ensued.

MIDLAND BRANCH

President: Dr. A. B. Griffin (M.O.H., Worcester City).
Hon. Secretary: Dr. H. Paul (M.O.H., Smethwick C.B.).

The third meeting of the session was held at Birmingham, on December 2nd, 1943. The President and 26 members were present. The minutes of the meeting held on November 4th, 1943, were read, confirmed and signed by the President.

Dr. Christine Grant opened a discussion on conditions and remuneration of public health officers. She believed that the M. & C.W. branch was the Cinderella of the Public Health Service. The chief reasons for this were: (1) it was mainly done by women; (2) there was an absence of drama; and (3) most medical officers of health had very little first-hand knowledge of the work. Dr. Grant thought that in large towns not only should there be a senior M.O. for M. & C.W. whose duties would be mainly administrative, but also a senior M.O. whose duties should be mainly clinical.

Dr. E. H. Wilkins dealt with the School Medical Service and outlined seven main points on which improvements could be made: (1) Better accommodation for medical inspections. (2) More time to deal with each case. (3) Greatly extended facilities for research in child health. (4) Effective integration and co-ordination of the school medical service. (5) More democratic control of the service. (6) Improved remuneration. (7) Administration by the health committee instead of the education committee.

An interesting discussion followed and a vote of thanks was accorded to the principal speakers.

The meeting then considered and passed by 19 votes to 5, the following resolution:

> Resolved that this Branch, being concerned at the serious increase in venereal diseases throughout the country, considers that the existing machinery for the control of venereal diseases is inadequate, and is of opinion that legislation embodying the principles of notification and compulsory treatment should be introduced.

NORTHERN BRANCH

President: Dr. Ian McCracken (Assistant M.O.H., Newcastle-on-Tyne).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the Northern Branch was held in Newcastle-upon-Tyne on January 8th. The President and 29 members were present.

The minutes of the meeting held on November 20th, 1943, were read, confirmed, and signed by the Chairman.

The Hon. Secretary informed members that Dr. E. M. Dunlop, Professor of Bacteriology, King's College, would read a paper to the Branch on Saturday, January 29th.

Dr. S. D. Mitchell delivered an address on child guidance. A general discussion followed, during which Dr. Cuthbert and Miss Stirling gave an account of their experience of the Sunderland Child Guidance Centre.

WELSH BRANCH

President: Dr. J. Greenwood Wilson (M.O.H., Cardiff).
Hon. Secretary: Dr. G. McKim Thomas (M.O.H., Cardiff R.D.).

A meeting of the Branch was held at Cardiff on January 20th. The President and 15 members, together with 13 guests, were present.

A paper on cardiovascular diseases, with special reference to public health, was given by Dr. G. E. Donovan (M.O.H., Llwchwr U.D.C. and Gower R.D.C.). Afterwards Dr. Donovan exhibited his electrical amplifying stethoscope and phono-electrocardioscope.

A vote of thanks to Dr. Donovan was proposed by Dr. Greenwood Wilson, who congratulated the speaker upon his apparatus and his skill in overcoming the technical difficulties in the production of it.

The Minister of Health (the Rt. Hon. H. U. Willink, M.C., K.C., M.P.) has accepted the invitation of the Council to be the Guest of Honour at the Luncheon of the Society to be held at the Connaught Rooms, Gt. Queen Street, London, W.C.2, on Friday, May 5th, 1944, at 12.30 p.m. for 1 p.m. As the accommodation is limited members are asked to give very early notice to the Acting Executive Secretary of their desire to attend, so that the Council may decide if places will be available for personal guests. The price of tickets will be 10s. 6d. (including gratuities, but excluding wines).

In the County Council Hall at Dumbarton on January 25th, members of the public health staff of Dumbarton County Council, county officials, and staffs of the county hospitals met to honour Dr. Thomas Lauder Thomson, who after 30 years' service has retired from the position of Medical Officer of Health for Dumbartonshire. Dr. S. Harvey, the new Medical Officer, presided. A cheque was presented to Dr. Lauder Thomson in recognition of his long and unstinting service.

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EDITORIAL

Protein Supplies

The National Research Council of the United States of America has published an account of the American nation's protein supply.* Attention is called to the fact that Pearl, Sherman and Stiebeling all agree that approximately 91% of dietary protein is derived from meat, dairy products, poultry, eggs, and grains, if the small amount from legumes (1·9) is included. The total amount of protein available in millions of pounds in the United States in 1940 from these sources was meat 2,125, milk 1,695, eggs 507, poultry 335, beans 306, and peas 46. The Report assumes an average daily requirement of 73 g. per head—*i.e.*, 32 pounds annually; the total of 5,014 million pounds is thus sufficient for 156 million people. A 17% increase in 1942 was anticipated, making the amount of protein available sufficient to nourish 183 million people; this, with the present estimated population of the States at 134 millions, will provide a surplus protein for export sufficient for 45 million people. The Report says that "this optimistic outlook is predicated upon the assumption that the 1942 production goals will actually be reached." "While a protein shortage certainly is not imminent," the Report continues, "this fact does not exclude the possibility that it may occur at the expiration of the war. Then the United States and Great Britain may be called upon to feed a large part of continental Europe. The demand for high protein foods, of the sort to which we and the British are accustomed, may exceed the production facilities of the two countries, particularly during the critical period of economic readjustment immediately following the cessation of hostilities."

The Report recommends that greater attention be given to the salvage of milk protein: 51% of the total milk protein in any year is at present lost, and this in 1942 equalled nearly 2,000 million pounds. The majority of the loss is due to skim milk, 82% of which remains on the farm either to be used as animal feed or to be thrown away. Smaller losses, equal to about 50 and 80 million pounds respectively, result from the use of casein in industry and the whey from cheese-making. The loss of whey lactalbumin recalls Milligan's suggestion† that the United States should agree to export dry whey to be mixed "with ground, roasted peanuts, cheese, or even soya bean and made into a slab flavoured with chocolate . . . delectable to children." There are, however, great difficulties to be overcome in salvaging either whey or skim milk, and some skim milk is unfit for human consumption and might better be used as cattle feed; the Report says "use of liberal quantities for cattle is highly desirable and may even be necessary." It is also recommended that more extensive use should be made of fish, which represents only a small percentage, approximately 2½% of the protein consumption, and the soya bean is once again extolled. Lastly, the Report recommends a greater use of peanut protein.

This small, well documented Report is of the greatest interest.

British Medicine

The work of the British Council in spreading knowledge of medical practice and research followed in British lands is perhaps not widely known in this country. For many years systematic medical propaganda has been practised throughout the world by the Central European countries, apparently financed by the big drug houses, and creating the impression that these countries were far ahead of us in medical thought and practice. In South America and some of the British Dominions there has also naturally been closer contact with medicine in the U.S.A. than here. While we should not desire to follow Teutonic methods or to use clandestinely the offices of commercial concerns for the display of our goods, our carelessness in this field no doubt has had its share in the general decline of British prestige in the years preceding the war. The British Council, to overcome this leeway, has set up a medical information service in charge of Dr. N. Howard Jones, which has already disseminated translations of original articles and abstracts throughout foreign countries and arranged an interchange of medical journals. For more than a year this service has issued the British Medical Bulletin, an admirably produced publication, each number of which is tending to specialise on a special subject. For instance, the most recent issue is devoted to penicillin, dealing exhaustively in special articles and abstracts with every aspect of this reagent, its production and use, and containing a full list of references, both British and foreign.

As one of a series of booklets, entitled "British Life and Thought," the Council has invoked the aid of Dr. Hugh Clegg to write generally on Medicine in Britain.‡ It is a

* The Nation's Protein Supply. National Research Council. Reprint and Circular Series. No. 114. August, 1942. Report of the Food and Nutrition Board. Pp. 10. From American Library, U.S. Office of War Information, American Embassy, London.

† *Med. Press*, March 11th, 1942.

‡ Published for the British Council by Longmans, Green & Co., London. 1943. 1s. net.

difficult task to deal with such a wide topic in 46 small pages, to know what to include and what to leave out, but this booklet reveals the practised editorial hand, and the result is very successful. It follows the student through the G.M.C. to his fledging, describes the Indian and colonial services, the organisation of research, industrial medicine, tropical medicine, post-graduate teaching in public health and the whole field of statutory medicine, its growth and organisation ; and ends with a quick glance at the future. All of it is good reading for any medical practitioner, and nearly the whole of the last half is about matters with which the public health service is deeply concerned. Unfortunately it is for export and very few copies are on sale in this country.—R. M. F. P.

Note on Relief

The Children's Nutrition Council, 6, East Common, Harpenden, Herts, replaces its February and March issues of the War-Time Nutrition Bulletin by a paper on relief and reconstruction in Europe by Dr. J. R. Marrack, reprinted from *Discovery*. The price of the reprint is 3d. A summary is given of the relief work carried out in Europe between 1919 and 1923, together with figures for overseas imports into Continental Europe during 1919 and 1920. "The Inter-Allied Post-War Requirements Bureau," Dr. Marrack goes on to say, "has made detailed estimates of the amounts that each country will need, on the basis of present supplies. These estimates are not limited to the goods necessary to restore the health and efficiency of the people—food, clothing and medical supplies—but include the seeds, livestock, raw materials and manufactures that will be needed to restore production." The estimates apply only to Belgium, Czechoslovakia, France, Greece, the Netherlands, Norway, Poland and Yugoslavia, but they give an idea of the scale of relief needed by Europe as a whole, so that we are better prepared to-day than in 1918 for dealing with the coming problem. Dr. Marrack pleads for a body comparable to the Supreme Economic Council that was set up in 1919, so that the placing of orders may be planned, and overlapping avoided. "The latest news," he says, "of the U.N.R.R.A. (United Nations Relief and Rehabilitation Administration) makes the need for a Council more urgent. It is now admitted that stocks are insufficient, and that relief will have to be restricted to the bare minimum necessary to keep Europe alive. Yet no method of increasing stocks at this eleventh hour is suggested, although the Department of Agriculture of the U.S.A. has stated that American people are still *wasting* enough food to feed 20 million people for a whole year." Argentina is not represented on U.N.R.R.A. The Combined Food Board, composed of representatives of the U.S.A. and Britain, still plans policy. The Combined Raw Materials Board (U.S.A. and Britain) allocates strategic materials. The Combined Production and Resources Board (U.S.A., Britain and Canada) combines war production programmes. And U.N.R.R.A. must depend on these Boards for its supplies. "The revival of Europe," as Dr. Marrack says, "will not be planned by a body representing all the nations interested but will depend on the charity of these Anglo-American Boards." But Dr. Marrack is insistent that in U.N.R.R.A. exists the nucleus of "a world authority with powers to correlate and control production and consumption," if only co-ordination can be achieved. This co-ordination is absolutely necessary if the goal considered by the United Nations Conference at Hot Springs, Virginia, in 1943—"Freedom from want in relation to food and agriculture"—is to be reached.

Sir George Elliston, M.P., has been appointed Chairman of the Board of Management of the London School of Hygiene and Tropical Medicine in succession to Sir Holburt Waring.

Prof. J. M. Mackintosh has been appointed as from October 1st, 1944, to the University Chair of Public Health tenable at the London School of Hygiene and Tropical Medicine. He was formerly Chief Medical Officer to the Department of Health for Scotland and since 1941 has been Professor of Preventive Medicine in the University of Glasgow.

FIRST REACTIONS TO THE WHITE PAPER

We print below three short articles, contributed by invitation, setting forth the first reactions to the White Paper of a Medical Officer for a County, County Borough, and Urban District.

I

County Medical Officer

From the national point of view the new proposals for a National Health Service outlined in the White Paper go a very long way to solve, at least in theory, all the anomalies, overlapping, and gaps in our present medical services.

The White Paper proposes three main sections of medical services : (1) A Central Medical Board, with its local committees administering the General Practitioner Health Service. (2) The Joint Boards administering the hospital and consultant services, including hospital maternity, tuberculosis, mental and infectious disease, and the clinical aspect of venereal disease. (3) A local health service administered by the County or County Borough. The counties will be left with little responsibility, their main duties being the (pre-school) Child Welfare Service, the School Medical Service (probably inspection only), possibly certain duties in connection with venereal disease and environmental hygiene. The responsibility for the Domiciliary Midwifery Service seems uncertain, as, although it is suggested that it remains with the County, the main obstetric services are transferred to the Joint Board. The counties will have minor duties connected with the "Health Centres," but these centres are really general practitioners' group surgeries.

In the past, County Medical Officers' duties have been described as covering "all matters affecting, or likely to affect, the public health in the county," and they have been real initiators of medical schemes and policies, and also the assessors of the effectiveness of these procedures. They have never been minor officials merely carrying out "regulations." In the new White Paper plan the heart of the preventive and curative health services (except G.P. domiciliary) will be controlled by the Joint Boards. This is probably good in principle as many counties are too small ; but would it not be as well if the remaining public health services also went to the Joint Boards ? Curative and preventive work can never really be separated, but the Public Health Service grew out of the fact that the older medical services either did not, or could not, observe and deal with many factors causing disease. Public health doctors, and not paediatricians, first tackled the problem of high infantile mortality rates ; biochemists and school medical officers, and not general practitioners, first took a vigorous interest in malnutrition. New advances are often made by driving in a wedge from a slightly different starting position. Later comes the systematic linking up, and the services are joined again.

Each Joint Board should have a close link with a University Medical School, and with the psychological and social science faculties. The Medical Officer to the Joint Board should be of the status of a professor of social medicine, and his advice should give co-ordinate direction to the medical and social medical activities of the Board.

Much more emphasis should be laid on research. Local authorities are rarely willing, or able, to spend money on this. It is to be hoped that the Joint Boards will be keen on research and that money will be available for this purpose. Each board could then rival the others in a friendly way, as universities do, to see what advances each could make. The flow of knowledge between the universities and Joint Boards would not only be towards the Joint Boards ; sometimes it would flow in the reverse direction. Many physiological findings were made outside the laboratory—*e.g.*, James Lind's and Eijkmann's observations led eventually to the discovery of vitamins.

The personal and environmental medical services are only part of the general social services of the nation. The index of their effectiveness must be the clinical condition of the people. This is ascertained by the usual vital statistics, but should be supplemented partly by morbidity statistics (to be obtained from general practitioners and hospitals). There are also other ways, one of the most important being by observation of the effect on an individual when he is fully extended in physical and mental activities. Incidentally, we are here up against a paradox in preventive medicine, as not all factors which prevent disease should be avoided—*e.g.*, there would be fewer fractures if there were no horse riding or winter sports ; but that is not an argument for abolishing either.

We are too easily satisfied when one cause for a disease has been discovered. Often there is a subsidiary cause, and the control may be possible by tackling the subsidiary cause if the main cause is beyond our reach. Few investigations are likely to pay higher dividends to health advancement than those which throw light on the beginnings of disease. The general practitioners see the early symptoms and sometimes the first signs ; this information is very valuable. Many of these early signs can be detected only by special apparatus not easily obtainable outside hospitals—*e.g.*, *x*-ray for pulmonary tuberculosis, skin thermometer for early signs in rheumatic joints, the electro-cardiogram in child rheumatism, etc. If disease is to be detected earlier the apparatus needed will become more complicated. For these and many other reasons it seems a great pity that the general practitioners will be separate from the Joint Board.

It is to be hoped that the Joint Boards will have a statistician on their staff and that some way will be found for collecting this essential clinical information from both general practitioners and hospitals and subjecting it to statistical analysis. The assessment of the ultimate effectiveness of all preventive and curative activities is absolutely essential. It is our only guide.

Where does the County Medical Officer himself stand in relation to all this ? Various suggestions on the size of the Joint Boards have been made. Probably the population will near the million mark for closely packed urban areas, but for sparsely populated rural areas possibly a half million or less in experimental areas would be more suitable. Some counties will become their own Joint Boards at once. For the others, it will be a long time before effective Joint Boards can be set up, and at first they will probably delegate all their powers back to the counties and county boroughs. With the development of the Joint Boards these powers will one by one be taken over. This must take some time. If the Joint Boards become real instruments of research in social medicine there will be plenty of opportunity for the activities of keen C.M.O.s taking part in the work of the Joint Board. Some will continue as senior administrators ; others can branch off into some specialty (fevers, paediatrics, mental health, venereal disease, etc.) in which they have always been interested.

Our training and experience have been good. The services are to be expanded, and there should be interesting work for all of us.

II

County Borough M.O.H.

The White Paper can be described as a masterpiece of truly British compromise, and because it is a compromise it deals only with main principles, conveniently relegating controversial details for later discussion by the parties concerned. It is not surprising, therefore, that nothing definite is stated about the part to be played by Medical Officers of Health and their staffs, although it is careful to explain that their role will be an even more important one in the future than it has been in the past, that the new service will make great calls upon them, and provide them with new scope and better opportunity. Thus encouraged, let us consider what effect the White Paper is likely to have on the public health department of a county borough and on the future of its medical staff, if its proposals materialise.

General Considerations

(*a*) Those of us who had any doubts or fears as to the fate of the county borough in the new order of things are now assured that at any rate for some time to come the county borough will retain its identity, as the Government propose to secure local administration over larger areas, not by establishing a directly elected body, but by the joint action of existing counties and county boroughs. But as we shall see, this more convenient and rapid method of obtaining the desired larger local government areas for health administration entails a sacrifice of the principle of integration of health services which our Society placed in the forefront of the proposals in its report on a new national service. Some health services will be administered by the joint health authority, others by the county borough. Environmental hygiene and health education, left out of the proposals, will apparently continue to be administered by the county borough.

(*b*) From Appendix E, page 81 of the White Paper, dealing with the finance of the new service, we can assume that a chief administrative medical officer will be appointed to co-ordinate all the health activities of the joint health authority, with whom the county borough Medical Officer of Health will be in subordinate relationship.

(*c*) We must be prepared to lose the greater part of our present health services, whilst the gains will be small in comparison, and some of these rather problematical at the present time. Our losses will be the general hospital service, the infectious diseases hospital service, the tuberculosis service, the mental service, the cancer scheme, and probably the venereal diseases service. Our gains will be the new health centres, which will afford a direct interest in the health of a much larger percentage of the population than at present, the home nursing service, the new dental service, and the new ophthalmic service, if these last two services are in fact entrusted wholly to local authorities as well. On the basis of expenditure only a small proportion of our present health services, varying from one-sixth to one-third, is likely to remain under the administration of the county borough, the remainder going over to the area.

(*d*) What will be the size of the new joint health authority ? A pointer in this direction might be the pronouncement of the Ministry of Health in connection with the size of cancer organisations under the Cancer Act, 1939, in process of being established in a few areas—namely, that about a million of population is necessary to provide sufficient cases to enable the specialist staffs to become expert and the radium and *x*-ray apparatus to be used to capacity. But in connection with the general hospital service a case can be made out for a smaller area—say about half a million inhabitants—comprising a large county borough with surrounding areas of population. Transport difficulties arise when the distances between the centres of population and the hospitals become too great.

Effect on Individual Services

General Hospital Service.—With most of us this has been a comparatively recent addition, the result of the appropriation of the poor law hospitals under the Local Government Act, 1929. We have spent much time and thought in co-ordinating hospitals with the general health service and bringing them up to date by the appointment of consultant services, the addition of medical and nursing staffs, and the modernisation of equipment. In some of the larger county boroughs a good deal has already been done in co-operation with the local voluntary hospitals towards establishing a co-ordinated health service within the county borough, by eliminating duplicated specialists service, and arranging for contributors to the voluntary hospital contributory scheme to be eligible for the benefits of the public authority hospital as well.

Infectious Diseases Hospital Service.—The severance of the infectious diseases hospital from direct control by the county borough Medical Officer of Health will come as a sore blow, as the establishment and development of the infectious diseases hospital formed one of the earliest activities of county borough medical officers of health. Nevertheless, the advantages of placing all infectious diseases hospitals in the area under one control and linking them up more closely with the general hospitals are obvious, and should lead to greater specialisation and economy both in accommodation and staff. Care must be taken that the present close liaison between the hospital and the epidemiological field is not impaired. The epidemiological side must remain with the county borough Medical Officer of Health, who must still be responsible for the control

of infectious diseases within the jurisdiction of his local authority. He will continue to receive the notifications from general practitioners and to arrange for the usual investigation by his staff of home conditions, the examination of contacts, etc. Divorced from his infectious diseases hospital the Medical Officer of Health will gradually cease to be considered as a consultant on infectious diseases to be called out by medical practitioners to advise on doubtful cases. This will be carried out by the superintendent of the local infectious diseases hospital under the Area scheme, the latter being included in the consultant service. The new Emergency Public Health Laboratory Service, organised on a national basis with local branch laboratories, will come in to assist both the county borough Medical Officer of Health in the control of infectious diseases and the new infectious diseases hospital service on the clinical side. Diphtheria immunisation will, of course, remain under the county borough medical officer, as also will vaccination against smallpox and other preventive measures.

Tuberculosis Service.—The transfer of this service, one of the oldest of the personal hygiene services, will be keenly felt. The main advantages resulting from the transfer will be: (1) better opportunities for specialisation by the medical staffs; (2) better distribution of sanatorium beds; (3) closer co-ordination between dispensary and sanatorium. Disadvantages will include a weakening of the link between the clinical side and the environmental conditions where the disease is contracted and spread. While the medical officers attending the dispensary will come directly under the joint health authority, the nurses attending the dispensary and visiting the homes will presumably be tuberculosis visitors or health visitors of the county borough. Notifications will still be sent to the county borough Medical Officer of Health, who will be responsible for keeping the tuberculosis register and for maintaining as close touch as possible with the clinical tuberculosis officer. The voluntary care committee is essentially a local organisation and will continue to function as such, but will, no doubt, be linked up with the joint health authority care committee scheme. The new mass radiography scheme, serving as it does a large area, will more appropriately belong to the local joint authority, but the co-operation of the county borough Medical Officer of Health will be essential in connection with the local propaganda work and organisation.

Venereal Diseases Service.—In the majority of cases this will go over with the other services as it is almost invariably centred in the local hospital, either local authority or voluntary, and its administration is therefore linked up closely with that of the hospital. In addition, venereal disease clinics very often serve wide areas.

New Health Centre Service.—There would appear to be some doubt as to the part which the Medical Officer of Health will play in connection with this new service. The White Paper takes care to state that these services will be established, equipped and *maintained* by the local authority. There is no mention of the word "administer," although this term is used with reference to the home nursing service in the same paragraph —*i.e.*, para. 4 on page 82. One can only assume that the administration of these centres is one of the many points to be settled later between the local authority and the medical profession. As the Medical Planning Commission recommended their establishment under State or local authority auspices, it is likely that most, if not all, of the administrative work will fall ultimately to the Medical Officer of Health.

There is no doubt that the health centre idea after a period of experimentation will grow and will present many problems which will require for their solution the skill of an experienced medical administrator. Advantages accruing from the establishment of health centres include the more efficient treatment of minor ailments, treatment of all classes of patients by day and night, more rapid admission of cases to hospital and greater supervision of patients in health. The success of the health centre will depend not only on the provision of efficient ancillary services—*i.e.*, nursing, clerical and receptionist—but on the team work and co-operation of the medical practitioners and the close linking up of the centre with public health clinics and with the hospital and consultants service of the joint health authority. With the passage of years and the education of the public, the health centre will become the place for periodic medical examinations, and the Medical Officer of Health will be able to collect accurate sickness statistics which should play an important part in ascertaining the earliest stages of disease.

Home Nursing Service.—Under local authority aegis the usefulness of this service can be greatly increased. It will no doubt be closely associated with the new health centre service.

Maternity and Child Welfare.—Whilst the local maternity hospitals will pass under the jurisdiction of the joint health authority, the local ante-natal, post-natal and child welfare clinics will remain with the county borough. Here again close liaison between county borough and joint health authority must be maintained—*e.g.*, in regard to the booking of maternity cases for the maternity hospitals and homes, the transfer of records, and to the referring of difficult ante-natal cases for the second opinion at the consulting ante-natal clinic conducted by the consultant obstetrician at the nearest maternity hospital. The local domiciliary midwifery service will, of course, remain with the county borough.

School Medical Service.—This service will be linked closer with the child welfare service. The exact relationship will be defined by the Education Bill at present before Parliament, but at the moment it would appear that when the comprehensive health service is ready the local education authority will be responsible, in respect of age groups 3–18 years, for medical inspection, routine and special examinations, and supervision of school environment and hygiene, and, in regard to treatment, for ensuring that those found to be in need of treatment shall receive it. Although Table I in the Appendix to the Education White Paper, July, 1943, makes increasing grants yearly to education authorities from public funds for "Medical Inspection and Treatment," the intention is that they will not set up a specific service for complete treatment facilities, but will use the comprehensive health service for the medical treatment of those covered by the Education Bill. Ultimately, much of the work of the present school clinics will be carried out at the new health centres either at ordinary clinics or at special clinics for skin diseases, ear, nose and throat conditions and eye conditions. The school dental and ophthalmic services will probably be merged ultimately into the proposed new public dental and ophthalmic services respectively, and the school orthopaedic scheme will no doubt form part of the area rehabilitation scheme, the present school remedial clinics becoming the "outpost" clinics.

Effect on Public Health Medical Staffs

The proposals of the White Paper tend to divide the profession into three groups: specialist, general practitioner, and administrative. Some of the existing county borough M.Os.H. will doubtless aspire for the higher administrative posts under the joint health authorities if made sufficiently attractive; others will remain to advise and guide their local authorities through the difficult transitional period, a period which will call for all their skill and administrative ability. Tact and aptitude to get on with their fellow practitioners will play an even more important part than before. In this the M.O.H. has served a hard apprenticeship, for during the past two or three decades, whilst the State was obliged to develop the personal health services, he was so often the buffer for receiving locally the slings and arrows of his private practitioner colleagues, who complained of "encroachment on their domain." He has therefore learned to understand their difficulties and also, in most cases, to gain their confidence and respect. Now both are being brought together by Statute to co-operate in teamwork which has great possibilities in the field of preventive medicine. The earlier years will be the most testing time, for some of the older private practitioners, strong individualists by virtue of their training and experience, may not take kindly at first to the new conditions.

A number of assistant medical officers of health, especially the younger ones, will be tempted to enter the ranks of the specialists—*e.g.*, in tuberculosis and infectious diseases—thus dissociating themselves with the public health side. Some with a flair for administration will want to specialise in that branch and to apply for the higher administrative posts; others, remaining with their county borough, may also be employed part-time with the joint health authority. Salaries and conditions of service in the administrative medical branches must be such as to attract and hold the best type of men.

To summarise the White Paper, it is clear that the Government in their endeavour to placate the various interests concerned have put forward proposals which, while bringing together the elements of some of the present health services, will have the effect of disintegrating others, despite the closest administrative linkage between the joint health authority and its constituent authorities. Perhaps the new National Health Service, however, will merely mark an interim stage towards a complete and integrated National Health Service, which is the goal of the British Medical Association and the Society of Medical Officers of Health alike.

III

M.O.H. of an Urban District Council

When the Royal Sanitary Commission, reporting in 1871, suggested there should be one local authority for all public health services in every place, that no area should be without one, nor have more than one, the purpose was to unify the services then dealing with health. These were limited to environmental hygiene. Some measure of uniformity was established for a number of years, the creation of county councils in the latter part of the century in itself bringing about no change. Since the turn of the century, with the increasing health duties imposed on county councils, the principle has, however, been departed from to a growing extent. To-day many hold what is basically the same view—that to obtain an integrated health service the responsibility for the entire arrangements must be in the hands of one administrative body. The Report of the Society of Medical Officers of Health on the National Health Service subscribes to this: "What is required is that in any local government area there should be a single authority for health purposes. Such an authority would be responsible within its area for the administration of medical, health, and allied services, including the environmental and personal health services, and be further responsible for the provision of an adequate hospital service for all the inhabitants of its area." This view is not held by all. It is not accepted as essential that the hospital service should be incorporated in the scheme and be necessarily administered by the same body responsible for the provision of what might be called domiciliary services. Some would have preferred the elevation of more boroughs to be all-purpose authorities, coupled with their obligation to combine with others for such purposes as the provision of institutions. Accepting, however, the premise of the single health authority in any area leads to the discussion of the size. As the optimum is appreciably larger than most existing local government units, how best to create these areas? The answer of the Society was "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."

Little use has been made of the powers contained in the various Local Government Acts to amend district boundaries. Vested interests have mostly been powerful enough to obstruct such radical changes as involve the dissolution of smaller districts. At the same time adherence to democratic principles, coupled with the marked antagonism to the perpetuation of any arrangement on the lines of control by Regional Commissioners as seen in the Civil Defence Services, suggests the administrative body will be one chosen by local election. The ultimate creation of larger areas of administration for many purposes is probably inevitable, and they possibly will be selected as the result of experience gained by the birth of new units for varying purposes. But several post-war developments are of too urgent a character to wait for the slow working of the machinery which would create new bodies. Temporary expedients were therefore necessary, expedients which of necessity should arouse the minimum antagonism. Appendix C of the Report gives the reasons determining the decision to create an area of administration by joint action by the Councils of existing Counties and County Boroughs. In operation, though, the proposals mean the division of medical services into hospital and allied services administered by the joint health authorities, and the non-hospital health service, administered by county and county borough councils, apart from those services not transferred from existing authorities.

Criticism will be levelled at the decision to give these powers to county councils, not so much because of the size or financial resources of the County or even because the elected body is so out of touch with the electorate, as because of their reactionary outlook: it is said that even to-day most are still struggling to free their own hospitals from old Poor Law associations. That they might be stimulated by their colleagues of the county boroughs is appreciated. It might also be hoped that central supervision, perhaps even central control, would ensure that the efficiency of the services administered by these bodies would not fall below a certain level. The Ministry of Health have so far exercised little powers on these lines; even the Board of Education, who have been more active, have to admit a regrettable delay in abolishing schools on the "black list." It is hoped that the mere designation of some of the less populated counties and county boroughs will not absolve them from compulsory amalgamation with neighbours into units of reasonable size.

With the creation of larger units, there will be little room for the so-called "minor" authorities. (The passing of these might have been accepted with better grace if the compilers of the Report had not been so out of touch with local health services as to resort to the use of such an invidious adjective.) The principle of delegation of services is a sop to those authorities who at this stage are to lose some powers, and who later will doubtless be divested of them completely, even if the authorities as such remain. It should be possible to devise a formula of delegation which, while permitting control by the larger authority, will give the minor authority the semblance of a free hand. If this is so, then the case of officials in the service of those minor authorities does not at the moment call for special consideration, though most Medical Officers of Health would doubtless prefer to be assured that their position in respect of, say, the education service will not be that of an Assistant School Medical Officer. But a very different situation will arise if any minor authority at present possessed of a wide range of health services declines to assume the responsibility of an agent. Powers and duties under the Rats and Mice (Destruction) Act which the Ministry of Food recently urged should be transferred from county councils to district councils is poor compensation for the loss of school-medical and maternity-and-child-welfare services. The lowly view of the importance of the existing Medical Officer of Health in the opinion of the compilers of the White Paper is perhaps indicated by the meagre reference made to him; the assurance that the new service might call on him to play an even more important part would seem to be something of an afterthought.

Exception might be taken to certain of the more detailed aspects of the proposals. The reasons advanced for the exclusion of the factory medical inspection and of the school medical service are not very good. Proposals comprehensive enough to warrant changes of this magnitude could surely have been made all-embracing and have included these as well as environmental hygiene. The Report reads: "The subject of health in its broadest sense involves not only the medical services but all those environmental factors—good housing, sanitation, conditions in school and at work, diet and nutrition, economic security and so on—which create the conditions of health and prepare the ground for it. All these are fundamental; all of them must receive their proper place in the wider pattern of Government policy and of post-war reconstruction; but they are not the subject of this particular paper"—nor is there any suggestion in the paper that they ever will be incorporated. If social medicine, to which reference is made, is to be anything more than another

name for to-day's activities of the Public Health Service, the conditions of the patient's home and of the patient's work place must surely be accepted as being of fundamental importance to his health. ("The health of the people depends primarily upon the social and environmental conditions in which they live and work.") If the family doctor is to be re-created and Assumption B is to be implemented, incorporating these activities with the work of the medical practitioner is probably of more importance than the point as to whether the administrative unit of the hospital services should plan the advisory clinic services. Then again, there is nothing to suggest any change in conditions of work or outlook which will lead to the state in which "the doctor must try, in short, to become the general adviser in all matters concerned with health (no less than with disease) on which a doctor is so well qualified to advise."

These are a few minor criticisms of a scheme which if put into effect affords the first step towards a unified health organisation, a step which, because of compromise, need arouse not so much antagonism as to kill it, and, following the doctrine of the inevitability of gradualness, offers hope of progress by evolution, not revolution. Based on the premise that a comprehensive health service must necessarily be administered by one health authority, the scheme compromises by making use of the locally elected councils of counties and county boroughs, either alone or in combination, leaving little but delegated powers for the minor authorities, and those probably only for a time.

The Central Council for Health Education intends holding two Summer Schools during 1944, one at Whitelands College, Bede College, Durham, from July 24th to August 3rd, and the other at Chelsea Polytechnic, London, from August 9th to 19th. The programme will cover all aspects of health education (including sex education) and should be of value to teachers, youth leaders, educational and medical administrators, nurses and health visitors, social and industrial welfare workers, etc. The mornings will be devoted to lectures which will lay the necessary foundation of basic knowledge, while the evening lectures will relate this knowledge to a wider philosophical, historical, and social context. In the afternoons there will be demonstrations and discussions arranged by the various organisations specialising in different fields of health education, and seminars for students with particular interests. Many applicants had to be rejected from the 1943 School owing to lack of accommodation. Those wishing to receive early notification of the forthcoming schools should send their name and address on a postcard to Mr. Cyril Bibby, Central Council for Health Education, Tavistock House, Tavistock Square, London, W.C.1.

The model African township being built near Nairobi, Kenya, embodies many of the latest ideas in town planning. The scheme is the first to be started since Kenya was given a grant of £500,000 for African housing. The new houses are to be built in a triangle round a village green, from which the radiating streets will give glimpses of some of Kenya's famous vistas. The green will be a focal centre for the township with a social centre, a post office, a welfare clinic, a shopping centre, and a public garden. The houses themselves will be laid out on grass plots. There are twenty different designs for the house units, but all kitchens will be built on the same plan with a raised fireplace to obviate stooping while cooking. Local woods and stone will be used to a large extent in the building of the houses. Vehicular traffic will be kept away from the houses, and children's playgrounds will be provided for in such a way that there is no danger from traffic. At one corner of the triangle there will be playing fields, and soil from the building foundations will be used to form terraces for spectators. In Tanganyika Territory a sum of £2,250 has been voted for a small experimental African housing scheme. The site will be near Dar es Salaam and will incorporate a communal Eating House.

The Unfit Made Fit is the title of an attractive and well-illustrated booklet published for the British Council by Sir Isaac Pitman & Sons, Ltd., at a price of 1s. net. The author of the text is Dr. Harold Balme, who describes simply and graphically the work of rehabilitation centres. Brief case-histories are given. Photographs show the exercises and occupational therapy used in various stages of recovery from knee injuries, fractured spine, injuries to the limbs and extremities, etc. This booklet, in the series, "Britain Advances," will be followed later by a book on mothercraft and one on factory welfare. If these are up to the standard of *The Unfit Made Fit*, they should be well worth the price of a shilling.

THE DIFFERENTIAL INFANT DEATH-RATE*

By Richard M. Titmuss

I suppose that medical officers of health are more concerned with the statistical aspects of birth and death than most other members of their profession. So, as a layman, I am a little diffident about speaking dogmatically on the problem of infant mortality. The rate at which infants die is not, however, simply and solely a technical problem for doctors only. It concerns all of us who have the interests of the community at heart. That is my only qualification for speaking to you to-day—that and a somewhat morbid and unhygienic interest in the dusty and forgotten annual reports of your predecessors.

An Unequal World

To the student, one of the most striking aspects of vital statistics is the manner in which they show that we live in a very unequal society in a tragically unequal world. Infant mortality provides society with the first major index of the reaction of a new human life to its surroundings. It is a measure of man's ability and willingness to control his environment. The characteristics of a community in all gradations, from the aboriginal of Australia to the civilised Scandinavian, begin to impress themselves as soon as the child starts its separate existence apart from its mother. This existence begins with explosive force. At no period in after-life does there occur any shock like that accompanying birth. For in the great systems of the body, in the physiological processes of respiration, circulation, heat regulation, and digestion, there is an instantaneous and drastic change, and the failure of the child to meet the new demands on him—or of the community to provide adequate protection—can result only in death. Infant mortality is indeed the price of adaptation paid by each generation when entering life, and the toll of infant deaths is to-day, just as it has always been, a broad reflection of the degree of civilisation attained by any given community.

Let me give you one example. In Stockholm, where the father's income exceeds £600 per annum the total infant death-rate is 11 per thousand births. In Bombay, the rate among families housed in one room or less, was, in 1931, 529 per 1,000 births. On the other hand, where in Bombay the family had four or more rooms the death-rate in 1936 was 98—a figure lower than that for the whole of the City of Glasgow in the same year. When, therefore, we discuss the problem of different societies and different cultures, it seems to me that facts of this class are worth a good many subjective generalisations.

The First Months of Life

The infant death-rate is, as I have said, a broad reflection of the kind of society of which we are members. This is true, not only of national units, but of social groups within an apparently homogeneous community. But I have a suspicion that in future we may have to qualify the use of this index as a measurement of social progress. I have been led to this belief by thinking about the remarkable figures attained by some American cities—for instance, Chicago. Under the leadership of Dr. Bundesen an intensive infant welfare campaign had forced the death-rate down to the striking figure of 35 in 1939. Bearing in mind the variety of racial groups and the consequent range of social and economic problems, it seems to me that, at a guess, there must be some social groups in Chicago with rates as low as 20 per 1,000 births. It is, however, difficult to find an entirely satisfactory answer to the question why Chicago compares so favourably with cities in this country like Liverpool and Glasgow containing similarly mixed racial groupings. I suggest that part of the answer may be found in the fact that in Chicago a completely *artificial* environment is provided during the first months of a child's life.

Thus the infant is at birth isolated from the social and economic environment which he has inherited through his parents. But as this protection against the hazards of bad housing, under-nutrition, ignorance, inability to purchase

* Substance of a paper read before the Metropolitan Branch.

medical skill, and other factors is slowly withdrawn as the child grows up, what happens then? Do we find that the death-rate at higher ages, say at 5 or 15, in Chicago compares more nearly with that in Liverpool or Glasgow? Or do we find that the child has been given a stronger start, a more resistant structure, to withstand the blasts of an unfavourable environment? Unfortunately, we cannot know the answers to these questions just yet, but it is clearly a subject which should receive study in the next few years.

When, however, as in this country, we find that the environment in later life is broadly the same as during uterine and early extra-uterine life, we see that initial advantages are never lost. A lower infant death-rate is followed by a lower death-rate at 1–5, at 5–14, and so on through adolescence and middle age. This biological fact can be observed if we study the consequences of a fall in the national rate during the last 100 years from 150 to 50 per 1,000 births. This remarkable achievement in the saving of infant life—an achievement paralleled, I may add, by the rest of Western civilisation—has been attributed to improving social conditions, public health measures and other factors.

Size of Family

These influences have, of course, played an important part, but one factor is generally forgotten. In 50 years the birth-rate has been cut in two. Broadly, this has halved the size of the family. In addition, therefore, to a rise in economic standards the parents themselves have materially contributed to higher levels of living by a restriction in the size of their families. Instead, therefore, of, say, four children to care for there are now only two. In terms of housing, education, clothing, nutrition, and other factors this biological phenomenon must have had important effects on the rate at which young children die. An increasing proportion of children are being planned according to the circumstances of the parents. Clearly all this must influence the chances of survival of the children already born. It is unfortunate that we cannot estimate the relative importance of the decline in the birth-rate on infant mortality. We could only do so if we knew the true infant death-rate—*i.e.*, the death-rate for first and subsequent births (live and still) according to the age of the mother and the interval between births.

Effect of Social Class

The fact that we do not know the true infant death-rate makes it difficult to assess the part played by social conditions in producing marked social class differences. The latest social class data we have is that for the 1931 census published in 1938 by the Registrar-General. As you probably know, the Registrar-General divides the whole population into five large social groups: (1) middle and upper classes; (2) intermediate comprising elements of (1) and (3); (3) skilled labour; (4) semi-skilled labour; and (5) unskilled labour. During 1930–2, when the rate for all classes was 62, the class rates were 33, 45, 58, 67 and 77. Thus Class (5) exceeded Class (1) by 133%. To what extent were these differences due to differences in the birth-rate? We cannot answer this question with any certainty, as the last and only report on fertility by social class relates to 1911. Nevertheless there is evidence of a correlation between poverty and fertility. But I believe that this correlation has weakened considerably since 1911. In 1911 the birth-rate for Classes (1) and (2) was already very low, and during the next 20 years the national birth-rate fell considerably. This fall could have been accounted for only by significant declines in fertility among Classes 3–5.

Before I turn to the question of changes in infant mortality during this period let us first break down the 1931 rates according to age at death. What this breakdown discloses is that the excess in the death-rate of Class 5 over Class 1 was 50% during the first month, 205% at 1–3 months, 287% at 3–6 months, and 439% at 6–12 months. Thus the range of inequality widens with increasing age. We can also approach this problem by dividing causes of death into two groups: (1) those that have nothing to do with the post-natal environment—to ante-natal, con-natal, and neo-natal factors, and to deficiencies in genetic equipment; and (2) causes of death which are due mainly to environmental factors. In the first group (premature births, congenital malformations, injury at birth, convulsions, congenital debility) we find that Class 5 exceeded Class 1 by 61%. In the second group (measles, whooping cough, diarrhoea and enteritis, tuberculosis, bronchitis and pneumonia and other infectious and parasitic diseases) the Class 5 excess was 453%. It has been suggested by some that this excess infant mortality is due to hereditary factors bound up with the existence of a social problem group. But it seems to me that if the physical outfit at birth of children born to Class 5 parents differed vastly from that of children born to those in Class 1, then this difference should be revealed in the first group of diseases and in the first months of life, as well as in the second group and in the last six months of the first year of life.

Need for Deeper Study

When I examined, as I did in my book, the changes in these death-rates since 1911, I found no significant alteration in the gap during the first month of life, but a widening of the range at 6–12 months. We do not, of course, know what has happened since 1931. The total national rate has declined from 62 to around 50. We cannot say whether this decline has changed the position to any marked degree. Nor do we know whether changes in the birth-rate since 1931 have also contributed to the decline.

In the field of vital statistics there are still many gaps in our knowledge: for instance, we know nothing about class differences in still-births and in pre-natal mortality. We know very little about the effects of housing conditions when the influence of other factors such as social status is held constant. National statistics have taken us part of the way towards understanding the social implications of infant mortality. Some of the lessons are clear, or should be. But it seems to me that if we are to extend our range of knowledge on the social and economic factors implicit in mortality differences we shall need more intimate studies. In other words, investigations, both field and statistical, should be undertaken to cover selected communities (both urban and rural) where it is possible to obtain data on the great range of factors bound up with family life and levels of living.

What I should like to see in the future is a statistical and intelligence department attached to every Medical Officer of Health. There is here an immense field for study on questions affecting morbidity as well as mortality—*i.e.*, housing conditions, size of family, occupational hazards, social status of wife and husband, hereditary factors, age at marriage, geographical and social mobility, birth order and age of the mother at birth, mode of infant feeding, access to medical knowledge, ventilation and heating of the home, clothing, and many other factors.

There is, I find, a wealth of sociological and medical data buried among the records of Maternity and Child Welfare and Public Health Authorities. In the main this mass of unused material is never analysed, nor is it standardised for the requirements of the statistician. Moreover, each and every local authority has its own record card. Records and returns of medical officers are not uniform, and until some standards are laid down much of the data for one community cannot be compared with that for another. I can only conclude by quoting Professor Major Greenwood, who remarked "all this light on contemporary social conditions should not be imprisoned between the covers of a blue book, but should illumine our understandings and our hearts, teaching us to work for a better England."

The Therapeutic Requirements Committee of the Medical Research Council has made the following amendments in the entries in War Memorandum No. 3: *Ascorbic Acid*: reclassified B (essential for some purposes but not for others; to be used with strict economy); it should be prescribed only in the presence of medical indications for its use; not to be used as a supplement to normal diet. *Cod-liver Oil*: reclassified A (essential or readily available). *Vitaminized Oil*: reclassified B; this preparation is in short supply and should be used only when cod-liver oil is not tolerated.

MOTHER AND CHILD WELFARE IN THE U.S.S.R.

By Professor EKATERINA KARMANOVA

Women in the U.S.S.R. enjoy equal rights with men in all spheres of political and economic life. In this connection the Soviet Constitution states :—

"The possibility of exercising these rights is ensured to women by granting them an equal right with men to work, payment for work, rest and leisure, social insurance and education, and by State protection of the interests of mother and child, pre-maternity and maternity leave with full pay, and the provision of a wide network of maternity homes, nurseries and kindergartens." The interests and health of the Soviet mother and child are protected by law. Working women receive leave before and after childbirth at the cost of the State ; they are allowed time off during working hours to nurse their infants ; they are made a grant for the acquisition of the layette, and receive a nursing allowance for a period of nine months after childbirth. Furthermore, large sums are paid out by the Government annually in grants to mothers of large families.

Each mother and child welfare centre has its social and legal department, whose function it is to advise mothers on their legal rights, to help them, if necessary, in being transferred to lighter work, in securing additional leave, grants, and better housing conditions, in placing their children in nurseries, kindergartens, etc. No distinction is made between the married and unmarried mother. As a result, prostitution is unknown in our country ; so is the abandonment of children.

The system of State protection of mother and child is such that the mother, from early pregnancy, and the child, up to the age of 16, are constantly under the care and supervision of the medical and prophylactic services.

Work at the Welfare Centres

The expectant mother reports to the women's welfare centre (or "consultation," as it is called) in her district, which takes her under its active supervision and renders her medical assistance and advice during pregnancy and after childbirth. It instructs her in the future care of her infant. The staff of each centre are in close contact with the population of their district, bring their influence to bear in discouraging abortion, and carry on educational work in health and hygiene among the women.

The centres have a staff of visiting nurses, who visit pregnant women in their homes, and see that a proper hygienic regime is observed and doctor's orders are obeyed. When a woman enters a maternity hospital all the data relating to her health are turned over to the latter by the welfare centre.

Maternity Homes

Normally, the period of stay in a maternity home is eight days. A notification of birth is sent by the home to the child welfare centre of the district, which takes the newborn child under its supervision. It instructs the mother in the proper feeding and care of her infant. Most child welfare centres have a milk kitchen or distributive centre which supplies milk and nutritive foods to its charges. For the benefit of infants whose mothers, owing to their state of health, are unable to breast-feed them, there are centres for the collection of breast-milk, which is willingly offered by mothers who have a superfluity.

Child Welfare

The child welfare centres afford every variety of medical service to sick children. Its doctors visit the children at home, and, if necessary, the child is placed in a district sanatorium. Both the mother and child welfare centres arrange courses in which mothers are instructed in the prophylaxis of children's diseases and in the proper feeding, care and upbringing of children. Working mothers may place their infant children in nurseries, near either their place of work or residence. The nurseries are of two kinds—day and all-day ; the latter, as a rule, for the children of mothers who work in the night shift. In the rural districts it has become a wide practice to arrange seasonal nurseries during the period of field work.

Older children of pre-school age may be placed in kindergartens, from which, on reaching the age of eight, they pass to ordinary school. Both in kindergarten and in school all children are under the supervision of special polyclinics, the doctors of which receive the data respecting the health history of their young charges from the child welfare centres and the kindergartens. One and the same doctor treats the child in clinic, visits him at home, and supervises his health at school, as he is also a district school medical officer. If necessary, the polyclinic doctor will arrange for a child to be sent to hospital, or to a sanatorium, or to a forest school, see that he gets special dieting, etc.

It is the duty of paediatricians to instruct both school-children and their parents in hygiene. Children of pre-school age receive their first inculcation in hygiene in the nurseries and kindergartens. Thus, from the moment of his birth until he leaves school the child is under the constant supervision of a well-organised medical service.

The Soviet Government makes generous appropriations for child welfare. In 1941 there was a total of 141,873 beds in maternity homes. In the cities, 95% of births take place in lying-in hospitals. The number of children accommodated in permanent or seasonal nurseries by January 1st, 1941, had reached 4,900,000. There are 5,803 mother and child welfare centres in the country. As a result of all these measures child mortality has dropped in Soviet times to almost half, and the decline in children's disease is equally marked.

War-time

There has been no relaxation in the State care of mother and child in the U.S.S.R. in war-time. Free dining rooms and health centres are provided for soldiers' children. Children's homes and boarding schools have been opened for war orphans. There is a wide and patriotic movement among Soviet citizens to adopt children who have lost their parents in the war. In the R.S.F.S.R. alone nurseries are accommodating 66,000 extra children since the outbreak of the war, which is necessitated by the flow into industry of women to replace their husbands, brothers, and fathers. The Soviet Government is doing all in its power to see that the country rears healthy and sturdy children.

BOOK REVIEWS

The Parents' Responsibility (for their Children). By LESLIE GEORGE HOUSDEN. 1943. London : National Association of Maternity and Child Welfare Centres. (Eyre & Spottiswoode, Ltd.) Pp. 56. Price 3s. 6d. net.

So You've Got a Baby ! By ARTHUR C. GEE. 1943. Bristol : John Wright & Sons, Ltd. London : Simpkin Marshall (1941), Ltd. Second edition. Pp. 32, price 9d. net. Postage 1d. Or 7s. 6d. per doz. Postage 7d.

Dr. Housden's plea for the education of boys and girls in parenthood is of first importance. The value of such teaching is now generally recognised : it is hardly an exaggeration to say that if properly carried out it would have a more beneficial effect on the mental and physical health of the future generation than any other activity of the maternity and child welfare scheme. To any who may yet be unconvinced this excellent thesis is recommended with confidence. It should be read by all interested in children.

Dr. Gee assumes, in the introduction to his breezy little book, that an inexperienced young mother is left without instruction in the ante-natal period, and that, after "a few hints" from her nurse, she is left alone and helpless with her baby, "scared out of her life" at the prospect of looking after it. Surely in few areas would the maternity and child welfare service have failed so utterly as this ! The most fundamental of several points on which one might criticise the author's views is his tendency to assume that it is only the "lucky women" who are able to feed their babies naturally. If it is a fact in his part of the country that mothers are weaning their infants in order to return to work on the land, one can only say that it seems a pity that arrangements cannot be made for them to take their babies with them.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

TUBERCULOSIS GROUP COMMITTEE

President : Dr. W. B. Christopherson (Tuberculosis Officer, Norfolk C.C.).

Hon. Secretary : Dr. R. L. Midgley (Medical Superintendent, Devon C.C.).

A meeting of the Tuberculosis Group Committee was held at the rooms of the Society on November 19th, 1943. The President occupied the chair, and there were 14 members present. The minutes of the previous meeting were read and signed.

The result of the postal ballot was announced, and Dr. Lissant Cox was welcomed as Council Representative. The Hon. Secretary then presented a balance sheet.

A discussion on experiences of the past two months' working of Memo. 266/T was held. Attention was drawn to the Information Bureau set up by the N.A.P.T. to which any tuberculosis officer could submit difficulties and get advice. A resolution was passed for submission to the Council "that ultimate fitness for work should not be the criterion for eligibility for allowances under Memo. 266/T, but that all cases of pulmonary tuberculosis who conform with the instructions of the tuberculosis officer should be eligible to receive allowances."

A letter from Dr. Jessel was read announcing his wish to resign from the committee so that his place as a North-Western representative could be taken by Dr. G. Lissant Cox. Many tributes to Dr. Jessel's long years of valuable service were recorded, and it was hoped that he would consent to become a co-opted member.

The following officers were nominated for 1943-44 : *President* : Dr. H. Selby ; *Vice-Presidents* : Drs. W. Christopherson and J. T. Crowe ; *Hon. Secretary* : Dr. R. L. Midgley ; *Council Representative* : Dr. G. Lissant Cox ; *Representatives on J.T.C.* : Drs. H. Selby, C. K. Cullen, and R. L. Midgley ; *Representatives on the Inter-Group Committee* : Drs. H. Selby, C. K. Cullen, and R. L. Midgley. *Co-opted Members* : Drs. P. Edwards and N. Tattersall.

The next meeting will be held on February 18th, 1944, at 9.30 a.m.

The Annual General Meeting of the Tuberculosis Group was held on November 19th, 1943, at the rooms of the Society. The President occupied the chair, and there were 15 other members present. The minutes of the last annual general meeting were read and signed. The Hon. Secretary gave an account of the year's work. The officers nominated by the Committee were elected for the year 1943-44.

EASTERN BRANCH

President : Dr. H. Roger (C.M.O., West Suffolk).

Hon. Secretary : Dr. J. W. Hunter (M.O.H. and S.M.O., Ipswich C.B.).

A meeting of the Branch was held on December 4th, 1943, on behalf of the United States Army Medical Services at the invitation of Col. Gable. The President, 14 members, and several visitors were present.

The session was spent in visiting the hospital, and much of interest, both from the administrative and clinical aspect was demonstrated to the members.

The gratitude of the Branch was expressed by the President to Col. Gable and his staff for the trouble they had taken in making the session a success.

YORKSHIRE BRANCH

President : Dr. E. C. Benn (Med. Superintendent, Seacroft Hospital, Leeds).

Hon. Secretary : Dr. J. M. Gibson (M.O.H., Huddersfield).

A meeting of the Branch was held in Leeds on December 31st, 1943. Eighteen members were present.

The minutes of the meeting held on December 3rd, 1943, were approved.

It was resolved that the Yorkshire Branch nominate Dr. J. Johnstone Jervis, M.O.H., Leeds, for the Presidency of the Society for 1944-45.

Dr. K. J. G. Milne, Resident Physician, City General Hospital, Sheffield, read a paper on the bacteriology and chemotherapy of pneumonia with special reference to cases admitted to Sheffield City General Hospital, 1938-1943. In the discussion which followed, Dr. E. C. BENN said that he had found that treatment by sulphapyridine tended to delay resolution. In his experience of well over a thousand cases he had encountered blood changes in one only. Dr. PICKUP referred to a comparison made by Dr. Milne between cases treated by sulphapyridine alone, compared with those treated with sulphapyridine plus serum. He wondered what was the result of treating cases with serum alone. Dr. Milne explained that this had not been tried out, owing to the fact that the results of typing were not available until at least 24 hours had elapsed, and he felt that it was not fair to a patient to withhold treatment for this length of time.

Dr. Milne stated that in his experience sulphapyridine was not more toxic than sulphathiazole. He always aimed at obtaining concentration within the first 24 hours, and had reserved the intra-muscular injections for only the few cases in which vomiting had been excessive. In reply to a question regarding the prophylactic use of sulphapyridine, Dr. Milne believed that this was ineffective and probably dangerous, because it is possible for a person to become sensitised by its use.

A vote of thanks was then accorded to Dr. Milne for a highly instructive paper.

NORTHERN BRANCH

President : Dr. I. McCracken (M.O.H., Durham C.C.).

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

A meeting of the Branch was held in Newcastle-upon-Tyne on March 4th. The President and 25 members were present.

The minutes of the meeting held on January 29th, 1944, were read, confirmed and signed by the Chairman.

The Chairman referred to the recent death of Dr. James Angus, Medical Officer of Health for the south-east Northumberland area, and informed the Branch that the Hon. Secretary had conveyed a message of sympathy to Mrs. Angus.

Consideration was given to the Introduction, and to Sections I, II, and III of the Government's White Paper on a National Health Service. The following Resolutions were passed unanimously by the Branch :—

(1) *Central Organisation—Ministry of Health*: It was resolved that there should be some method of concentrating the various health functions in the Ministry of Health or of co-ordinating them under the aegis of the Minister of Health.

(2) *Local Organisation—Local Health Services Council*: It was resolved that the Medical Officers of Health of the major local authorities should be, by virtue of their office, members of the Local Health Services Council.

It was agreed that the remaining sections of the report should be discussed at the next meeting of the Branch.

A preliminary meeting of those members interested in the setting up of a School Medical Service Group was held before the ordinary meeting of the Branch, on March 4th, 1944. The Chairman and four members were present.

The Hon. Secretary read a letter from Dr. Newth on reviving the School Medical Service Group of the Society and asking for suggestions from interested persons. It was agreed that the Hon. Secretary should write to all Medical Officers of Health and School Medical Officer in the area, enclosing a copy of Dr. Newth's letter, and asking any persons interested to get in touch with Dr. Newth direct.

A meeting of the Branch was held in Newcastle-upon-Tyne on January 29th. The President and 21 members were present.

The minutes of the meeting held on January 8th, 1944, were read, confirmed and signed by the Chairman.

The Hon. Secretary reported that he had received a letter from the Metropolitan Branch withdrawing their nomination of Dr. Allen Daley for the presidency of the Society. He also reported that the Yorkshire Branch asked for the support of the Northern Branch for the nomination of Prof. J. Johnstone Jervis as President of the Society. It was agreed that this matter be referred to a later meeting of the Branch.

The Hon. Secretary submitted a letter he had received from the Ministry of Labour in reply to the Branch's request that a medical officer of health might be co-opted to serve on the Advisory Committee dealing with the recruitment and distribution of nurses and midwives. The letter stated that the Ministry of Labour appreciated that medical officers of health are able to give valuable assistance on certain matters in the nursing profession and that each local advisory committee had the power to invite the appropriate medical officer to attend any individual meeting at which such matters were under discussion.

The Hon. Secretary referred to a letter received from the Hon. Secretary of the School Medical Service Group of the Society regarding the proposed revival of the Group, and asking for observations of interested persons. It was agreed that it would be advantageous if this Group were revived, and that an invitation to attend a preliminary meeting should be sent to all School Medical Officers and their assistants in the area.

Prof E. M. Dunlop, M.C., Professor of Bacteriology, King's College, Newcastle-upon-Tyne, delivered an address on the laboratory and the health services. After a general discussion, during which Professor Dunlop answered questions, Dr. Grant, on behalf of the Branch, moved a hearty vote of thanks to him for his interesting address.

A meeting of the Branch was held in Newcastle-upon-Tyne on November 20th, 1943. The Chairman and 19 members were present.

The minutes of the meeting held on October 23rd, 1943, were read, confirmed and signed by the Chairman.

The Hon. Secretary read a letter which he had received from Dr. J. W. Gray indicating his willingness to accept office as Vice-President of the Northern Branch for the session 1943-44.

The Hon. Secretary reported that he had received a letter from Dr. R. Sutherland, Medical Adviser to the Central Council for Health Education, requesting him to bring to the notice of the Branch the urgent need for part-time lecturers. Application forms for appointment as part-time lecturers were circulated to those members present.

A programme of films loaned from various sources and selected to show certain aspects of health education propaganda was then offered to the Branch. The films included *Unwanted Guests* (head lice); *Mass Radiography; Defeat Tuberculosis; Skin Deep* (skin sepsis); *Pasteurisation of Milk.*

SOUTHERN BRANCH

President: Dr. W. P. Cargill (Deputy M.O.H., Southampton).
Hon. Secretary: Dr. H. C. Maurice Williams, O.B.E. (M.O.H., Southampton).

A meeting of the Southern Branch was held at Portsmouth on February 18th. Nine members and 2 visitors were present.

The minutes of the meeting held on December 10th, 1943, were approved as correct and signed by the Chairman.

After consideration of letters from the Welsh, Yorkshire and Metropolitan Branches, it was decided that this Branch should support the nomination of Dr. J. Johnstone Jervis, M.O.H., Leeds, for the presidency of the Society for 1944-45.

Dr. Ruby Pike (M. and C.W. Officer, Portsmouth) opened a discussion on day nurseries. All present joined in the discussion, after which members inspected the Twyford Avenue and Garfield Road nurseries. The meeting passed a hearty vote of thanks to Dr. Ruby Pike for opening the discussion, to Dr. Williamson for making local arrangements for the meeting, and to the Supervisor and Matron of the nursery for an excellent tea.

HOME COUNTIES BRANCH

President: Dr. Malcolm Barker (M.O.H., East Ham C.B.).
Hon. Secretary: Dr. C. Herington (M.O.H., Dagenham M.B.).

A joint meeting of the Home Counties Branch and the London and Home Counties Branch of the Medical Superintendents' Society was held at Tavistock House South on January 14th, there being present some 21 members of the Home Counties Branch together with a large number of the Medical Superintendents' Society.

Before the joint meeting, the Home Counties Branch dealt with the following items of Branch business.

A letter was received from Col. Whitworth-Jones, Chief Casualty Officer, London Civil Defence Region, in which he invited representatives of Groups 6 and 7 on the London Region Advisory Committee of Medical Officers of Health. It was unanimously agreed to nominate the President, Dr. Barker, to represent Group 7 and Dr. G. Hamilton Hogben to represent Group 6.

A letter was read from Dr. Bullough (Essex C.C.) asking for a nomination of a Medical Officer of Health of a borough in Metropolitan Essex to join the Advisory Committee for the Co-ordination of Hospital Services in Essex. The Branch unanimously nominated Dr. C. Herington.

A letter was received from the Hon. Secretary of the School Medical Service Group in which Medical Officers of Health were requested to give facilities to their assistants to attend meetings of this Group, which is about to be reconstituted.

The Hon. Secretary reported that he had sent a letter of congratulation to the Acting Executive Secretary on the knighthood bestowed upon him. The members fully endorsed this action and expressed appreciation of the recognition thus given to Captain Elliston.

The President then welcomed the Chairman and members of the London and Home Counties Branch of the Medical Superintendents' Society. Dr. Ivor Lewis, in opening the discussion on the future relationship between the local authorities and the municipal hospitals, surveyed the present situation and drew attention to the various points of contact made by superintendents with Medical Officers of Health. He stressed the advantages and disadvantages of the present system and advocated a certain amount of autonomy by the hospitals, but at the same time recognised the necessity for one co-ordinating officer for each area covered. Dr. Lewis's remarks provoked a full and lively discussion, almost without exception constructive in character. Dr. Ferguson (Surrey C.C.) stressed the importance of adequate remuneration of clinicians in hospitals, and favoured a limited number of co-opted members of the right kind on hospital committees.

A meeting of the Branch was held at Tavistock House South on February 11th. The minutes of the meeting held on January 14th were confirmed and signed.

The President introduced Dr. J. A. Hadfield to give an address on mental health. Dr. Hadfield advocated widespread facilities for treating patients who evinced deviations from the normal. The address was warmly received, and many speakers contributed to the discussion.

MIDLAND BRANCH

President: Dr. A. B. Griffin (M.O.H., Worcester City).
Hon. Secretary: Dr. H. Paul (M.O.H., Smethwick C.B.).

The fourth meeting of the session was held at Birmingham on February 3rd. The President and 39 members were present.

Dr. Sidney Deaner gave an address on the aetiology of tuberculosis. He dealt with the problem under three headings: namely, the infecting agent, resistance, and environment. He suggested that in a "tubercularised" community, where sooner or later we all became infected, the development of a primary focus might be regarded as a normal process. But the hazard of primary infection was conditioned by exposure to repeated exogenous infections, particularly against a background of lowered resistance due to environment, and where there was familial susceptibility. Dr. Deaner considered that the immunity possessed by the individual at birth decided his fate. They must therefore help him by removing from him for institutional treatment the infecting agent, by improving his environmental conditions, and by providing him with an induced immunity if, when still unaffected, he had to be exposed to close contact to infection.

OBITUARY

JAMES ANGUS, M.B., CH.B., D.P.H.

We regret to record the recent death of Dr. James Angus, Medical Officer of Health for the south-east Northumberland area.

James Angus received his medical education at the Universities of Glasgow and Durham. He qualified M.B., Ch.B. Glasgow, in 1912, and took the D.P.H. and B.Hy. of Durham University in 1935. He was senior house-surgeon to the Glasgow Eye Infirmary before going to Northumberland. As well as being Medical Officer of Health to Morpeth Borough, Ashington, Bedlingtonshire and Newbiggin U.D.s and Morpeth R.D., he was also medical superintendent to the infectious diseases hospitals. During the last war he served in the R.A.M.C. (T.) with the rank of Captain, and received the *Croix de Guerre avec palme.*

BENJAMIN SWEETEN, J.P., M.B., C.M., D.P.H.

We regret to record the death in Skegness on March 8th of Dr. B. Sweeten.

Benjamin Sweeten was educated at Edinburgh and London, qualifying M.B., C.M. Ed., with honours, in 1889. He received the D.P.H. of Dublin University with honours in 1907. He practised in Skegness for over 44 years, and played an active part in the public life of the town and district, being a member of the Council for 20 years and its Chairman in 1930, a magistrate for 14 years, and chairman of the juvenile panel at the time of his death; he was also a governor of the Grammar School. Dr. Sweeten was on the staff of the Nottingham and Notts Convalescent Home, was Honorary Physician to the Derby Boys' Home, and a member of the Nottingham Medical Society. During the last war he served as a Major in the R.A.M.C., and was in charge of the medical side of the Colchester Military Hospital. Before going to Skegness he had been house-surgeon to the Alnwick Infirmary, and house-surgeon to the Royal Hospital, Sheffield.

Dr. Sweeten was a keen golfer and one of the oldest members of the Seacroft Golf Club. He was a widower and leaves three daughters, to whom our sympathy is extended.

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EDITORIAL

Cross-Infections in Hospitals

The day when cross-infection was considered to be largely a problem of fever hospitals has long passed. Indeed, a healthy competitive spirit appears to have arisen between surgical, children's and fever wards for early reduction of the admitted hazards of in-patient treatment. This is an excellent trend, for the problems of cross-infection differ only in detail and degree in the various ward communities of our hospitals. A great deal of this reawakening of interest in wartime is due to bacteriological research. Although clinicians may have felt inclined to contest too facile assumptions that bacterial cross-infection was the same as clinical infection, they will admit that modern bacteriological methods of investigating the patient and his environment are unfolding a much clearer picture of events than had ever been possible in the past. With this background, an M.R.C. sub-committee, with Dr. E. H. R. Harries as its chairman, has combined administrative, clinical, and bacteriological opinion to make recommendations on the control of cross-infection in hospitals. They feel these could be applied, or largely so, despite wartime difficulties. As Sir Wilson Jameson points out in his introduction, the measures advocated apply in greater or less degree to all hospital wards, including those containing "clean" cases. He asks every hospital to have a clear-cut scheme for controlling cross-infection prepared by a committee representing the medical, nursing, laboratory, and administrative staff, a practice already widely favoured in many hospitals.

The prevalence and risks of transmitted infection in closed or semi-closed child communities are only too apparent. Using a purely bacteriological index, the proportion of patients acquiring a secondary infection in high-risk communities (*e.g.*, open scarlet-fever wards) may be shown to be as high as 70%. Respiratory infections readily spread in wards and, unhappily, reserve their most dread effects for infants in the first year of life. Infants are also at high risk to transmitted gastro-intestinal infections of unknown aetiology, whereas the specific bowel infections such as typhoid and dysentery spread, although less easily, in child and certain adult communities. In the surgical field much attention has recently been focused on the risks of secondary infection of wounds unless there is a rigid ward-dressing technique. All these sources of infection in hospital wards are human in origin: the clinical case, the missed case, the incubating case, or the carrier among patients, staff, or visitors. Infecting organisms contained in secretions, excretions, or discharges are commonly spread by direct contact or intermediate vectors (the hands of patients and staff, clothes, inanimate ward objects, food and insects). To what extent infection may also be spread aerially in small suspended droplets (droplet nuclei) or by dust is less certain. Nevertheless, the degree of aerial and dust contamination demonstrable bacteriologically, particularly during ward rituals of sweeping and bed-making, is such that it cannot possibly be ignored. In discussing the all-important question of controlling cross-infection the memorandum quite naturally spreads a very wide net. As the structural ideal of 50% accommodation in single-bedded units is quite unattainable in most hospitals at present, most of the recommendations are concerned with the preventive aspect of the ward management of patients. While these are individually often of the most practical nature, the sum total of additional work involved is so great that very few hospitals could adopt more than a proportion of them with existing staff. However, a plea is made in present difficult circumstances to limit the admission to hospital of children with trivial ailments. This applies most forcibly to children under one year of age who run the special hazard of gastro-enteritis and require priority consideration for structural and nursing separation.

Active immunisation of child patients against diphtheria is recommended, and pertussis vaccination may be considered advisable for certain long-stay patients. Chemo-prophylaxis has not established itself, except possibly in the control of dysentery, but further investigation of the sulphonamides in preventing streptococcal cross-infection is justified. The sub-committee does not favour visiting in children's wards, but feels that the natural anxiety of relatives could be much allayed by easier access to the ward sister or doctor. Staff health and hygiene receive careful consideration, the important aims being (*a*) careful medical examination on joining, (*b*) active immunisation against certain diseases, (*c*) complete removal of any bars, financial or otherwise, to early reporting of even trivial illness, and (*d*) early instruction in and proper ward facilities for the important details of personal hygiene. A valuable section on labour-saving methods offers advice on using the time and abilities of even a small nucleus of skilled staff to the best advantage—*i.e.*, on tasks which really matter. There is no doubt that considerable economies could be effected in this direction in almost every department of a hospital. In the control of mediate infection the emphasis is on hand washing and the avoidance of gross manual contamination, as in the all-too-common practice of scrubbing out infants' soiled napkins in the ward or its annexes. More might have been said about similar risks involved in the dis-

posal of excreta. The development of a really efficient system of automatic washing and sterilisation of bed-pan, urinal, vomit bowl, etc., is a much required hospital reform from both the aesthetic and the infection standpoints. Facilities and encouragement for breast-feeding after admission of an infant to hospital gets the prominence it undoubtedly deserves. Many infants' lives have been needlessly jeopardised by abandoning breast-feeding just at the time when it is most required. Opinion is divided as between the merits of a central milk kitchen and separate milk rooms attached to wards. Both have advantages, and the structure and layout of the hospital will often determine the question. Whichever is adopted, nursing duties must be arranged so that staff engaged in the aseptic technique of preparing bottle feeds have no responsibility for changing and washing infants.

Ventilation, adequate bed spacing (12 feet is recommended for children's wards and maternity units as well as infectious wards), and the wearing of face masks by staff in specified circumstances are the main defences against droplet infection. Oiling of bed-clothes and floors receives cautious recommendation in the control of dust-borne infections, but it is difficult to avoid the conclusion that these procedures are too clumsy ever to be adopted on a large scale, however important they may have been in focusing attention on the dust problems of hospital. The principal offender is the blanket, and doubtless a more rational solution will be reached in the future.

General advice is proferred on ward procedure after cross-infection with some ten of the principal risks to child communities. These include gastro-enteritis in infancy, epidemic diarrhoea of the new-born, and vulvo-vaginitis—subjects often passed over in guidance of this type. Generally speaking, the emphasis is on bacteriological control of potential sources of infection in patients and staff, but some of the standards of freedom from infection appear unnecessarily stringent, even if they could be applied with the present shortage of staff.

The appendices abound with practical advice on germane subjects such as use of disinfectants (conveniently classified into three main types), concurrent disinfection, barrier and isolation nursing, wound dressing, etc. One of the most valuable is a model course of practical bacteriology for nurses. How much more sensible it would be to find time for practical tuition of this kind in the fundamentals of infection rather than to teach anatomy and physiology at a time when the health and possibly the life of a patient may depend on the junior nurse realising the purpose and need for washing her hands.

The value of this memorandum is unquestioned. It reflects the determination of hospitals to put their house in order as far as the risks of acquired infection are concerned, an objective never attained despite other great advances in our hospital system. With the proviso already mentioned that some of the reforms must wait for happier days when staff are more plentiful, there is no doubt that the free adoption of such measures as are practical now would pay a high dividend in the lives and health of children. The memorandum deserves close scrutiny from everybody in hospital work.

Classification of Diseases and Injuries

The study of social medicine, which may be expected to be greatly developed in the post-war period, necessitates some system of classification of the causes of sickness. The Medical Research Council has published a provisional scheme* for use until experience has been gained in dealing with large numbers of clinical records obtained from the hospital services. The present work arose from the need of the services for a standardised system of collecting and classifying diseases and injuries of patients admitted to hospital. Sickness and injury are closely linked to the cause of death, and the main divisions of the classification of morbidity adopted are the same as the International List of Causes of Death by which the Registrar-General tabulates mortality. Most illnesses do not lead to a fatal issue, and consequently much attention has been focused on such conditions as skin diseases and fractures, with the result that most of the main causes have numerous subdivisions—*e.g.*, the group for other skin diseases has 52 sub-headings. It has been recognised in the scheme that a mere list of causes will not result in comparable tabulation by different workers. The nomenclature of many diseases is such that even experts will take different views as to the title under which certain terms in common use are to be assigned. This difficulty can partly be overcome by the use of the summary tables in the report, but it will be necessary in most cases to refer to the Registrar-General's *Manual of the International List*, where some 10,000 of the common descriptive terms are assigned to their appropriate group numbers.

Often in hospital experience a patient is admitted suffering from more than one disability, and different decisions may be taken by different workers in selecting the cause for statistical tabulation. To overcome any ambiguity rules have been drawn up for the selection of the disease or injury to be coded. In cases of complications and associated disabilities present or arising during treatment up to four diseases may be coded for a single individual. Several examples, intentionally complex, are coded to illustrate the method to be adopted. The effects of occupation on morbidity is an important social problem, and for convenience of reference the Registrar-General's classification of occupations is included in the report.

The system of coding adopted has been designed for machine sorting and tabulation, and the terms "double punching" and "machine cards" used in the report will mean nothing to the majority of persons for whom this scheme has been prepared. The authors consider, for several reasons, that a revised edition will be necessary. Inclusion in the next edition of specimens of punched cards would give the persons coding the causes a better appreciation of the rather complicated job they are asked to undertake.

* A provisional Classification of Diseases and Injuries for Use in Compiling Morbidity Statistics. M.R.S. Special Report 248. 3s.

United States Food Consumption

In February last the U.S. Tariff Commission published a paper-covered booklet, *United States Consumption of Food in Terms of Fats, Proteins, Carbohydrates and Calories, 1939–43*, which is now issued from the U.S. Office of War Information, 1, Grosvenor Square, London (no price given). This booklet consists of an exhaustive set of tables "expressing United States production, imports, exports, and human consumption of each foodstuff in pounds of fat, protein and carbohydrates, and in numbers of calories." Vitamins and minerals are not included in the study. Between 1939 and 1942 the domestic production of fats rose by 1,831 million lb., or about 12%. The production of proteins during the same period rose by 1,578 million lb., or 16%, and of carbohydrates 3,186 lb., or 8%. The caloric value of the production of all foods went up by about 20,000 billion calories, or 13%. Only a small part of these increases showed themselves in a higher civilian consumption, the high figures being partly offset by a decrease in imports and an increase in exports. There were large increases in purchases for the armed forces. It is estimated that about 55% of the caloric content of the average diet in 1942 came from carbohydrates, about 12% from proteins, and about 33% from fats. One table shows that the per capita civilian consumption of fats was about 4 lb. more in 1942 than in 1939, a rise of 4%. The per capita civilian consumption of proteins in 1942 was about 80 lb., or approximately 5 lb. more than in 1939. The consumption of carbohydrates in 1942 was about 6 lb., or 2% more per capita than in 1939. The consumption of calories rose by about 38,600 per person, or by more than 3%. These increases are attributed to greater employment and the consequent greater buying power of the population. It is thought that consumption would have been even higher if larger supplies had been available, and if foods had not been rationed.

SOME ASPECTS OF CARDIOVASCULAR DISEASE WITH SPECIAL REFERENCE TO PUBLIC HEALTH*

By G. E. Donovan, M.Sc., M.B., B.Ch., D.P.H.

Public Health Department, Gorseinon, Swansea

Cardiovascular disease is a serious public health problem. It heads the list of deaths from principal causes (Parkinson, 1942) with a proportional mortality rate of 255 per 1,000 deaths for the year 1939, while diphtheria, on which so much attention is focused, has only a proportional mortality rate of 4 per 1,000 deaths. The most constant of all defects of school children (Chief Medical Officer, Board of Education, 1937) is organic disease of the heart, which affects 1·6 per 1,000 children seen at routine inspection. In 1934, 5·8% of all deaths of children between the ages of 10 and 15 years were due to rheumatic fever, and another 11·3 to heart disease. It is probable that 16% of all deaths occurring in this period may be attributed to acute rheumatic infection. Heart disease was found in 0·8 per cent. of male university students and 1·5% of female students attending Wisconsin University (Cole, 1941). These figures are based on the complete physical examination of all new students of the University of Wisconsin; where there is any history of rheumatism or suspicion of heart disease, clinical examinations are supplemented by electrocardiography and radiography. There were 28,000 students examined between 1931 and 1939, about two-thirds of which were men.

The Hereditary Factor

There is some evidence which supports the hypothesis that heredity is a factor in the aetiology of cardiovascular disease. A. Ciocca (1941) has examined the death certificates of a sample of life-insurance holders who died between 1937–40, together with records of their medical examination and family history obtained at the time of application. Those chosen for study out of 11,000 cases were people whose parents were dead at the time of application, the causes of death being stated in unequivocal and specific terms. Only white males were included. These criteria were satisfied by 2,109 records. It is to be noted that this group is far from being representative of the general population, and that the age at the time of application was, owing to the criteria adopted, considerably above the average. Nevertheless, there seems good reason why Ciocca's findings should be accepted. The percentage of policy-holders who died from cardiovascular diseases was 54·3 compared with 43·0 at the age of 30 and over in the country as a whole. It is significant that of the parents of those dying from cardiovascular diseases 31% of the fathers and 29% of the mothers died from the same cause, as compared with 26% and 23% respectively among the parents of the remainder. The really interesting result, however, is the difference when the parents are classified according to whether either one or both died from cardiovascular disease. He showed that when both parents died from other causes the percentage of policy-holders dying from cardiovascular diseases was 51; when the father died from this cause, 57; when it was the mother, 56; and when both parents died from cardiovascular disease the percentage was no less than 65. Ciocca points out that the recognition of hereditary constitution as a factor does not mean that selective breeding is the only sensible preventive measure. It should be a warning of the need for observation when the family history suggests that the patient is more likely than the average to be susceptible to cardiovascular disease.

Rheumatic Fever and Heart Disease

Rheumatic fever and rheumatic carditis are the most important group from the public-health point of view. Rheumatic fever may be defined as an acute infectious disease infecting the fibrous tissue of the body and characterised by the formation of tiny miliary lesions which are best seen in the myocardium and are known as Aschoff bodies. Grossly, the most spectacular lesions are found in the heart and joints.

* Paper read at a meeting of the Welsh Branch of the Society of Medical Officers of Health on January 20th, 1944.

Aetiology

The aetiology of rheumatic fever is still obscure, but certain factors are becoming increasingly realised as being of some importance. Since the pioneer researches of Poynton and Paine (1900, 1913), the part played by streptococci in the aetiology of acute rheumatism has developed into a major problem. The pendulum has swung through a wide arc in the course of the past quarter of a century. Some advocate the haemolytic streptococcal theory; others, that the organism belongs to the non-haemolytic group of streptococci. Several observers have claimed to have isolated filter-passing viruses: for instance, Signy and Amies have obtained virus-like bodies from exudates supplied by Schlesinger (1935), but their work lacks confirmation. There are those who are convinced that avitaminosis is an essential part of the picture before the disease may develop. On the other hand, there seems to be little doubt that a haemolytic streptococcus is responsible to a very large extent for many of the manifestations of the disease, probably not as a specific infecting agent, but through the action of its toxins either directly or through some previous tissue sensitisation. This is discussed in the following paragraph.

Collis (1931) found that in 17 rheumatic fever necropsies haemolytic streptococci were grown from the centre of 15 of the 17 tonsils, from 13 out of 17 cervical or mediastinal glands, and from 22 out of 42 heart valves. Green (1939, 1942) had reported similar cultures from nine rheumatic fever necropsies. Bacteriological studies have shown the epidemiological relationship between haemolytic streptococcal pharyngitis and the incidence of acute rheumatism. Apart from clinical infections, a high carrier haemolytic streptococcal rate has also been observed in rheumatic subjects: thus Green found group A streptococci in 50·5% of rheumatic throats compared with 12·5% of normal controls. There is often a reappearance, or an increase in the numbers of, haemolytic streptococci in the throats of individual cases of rheumatic fever which relapse. Rheumatic subjects display a considerably higher skin sensitivity to the injection of streptococcal extracts than normal controls. This sensitivity is not specific for any one kind of streptococcus, but occurs more frequently when the extracts are made from haemolytic streptococci. These observations apply to extracts of "endotoxins" and not to "exotoxins." Todd has shown the antigenic nature of streptococcal haemolysin and the practicability of measuring the corresponding antibody titre in human serum. It is now known that these antistreptolysin titres show a well-marked increase after infections with haemolytic streptococci. It has been found that antistreptolysin titres are also significantly raised in many cases of acute rheumatism. Recrudescence of the disease does not necessarily result in a further increase of titre.

Clinical Manifestation

The clinical picture of rheumatic fever is now well known, and will need little modification when the bacterial problem has been finally solved. Rheumatism may lick the joints, especially in childhood, but it bites the heart. It is predominantly a disease of childhood, youth, and early adult life. Parkinson states that the incidence and mortality fall most heavily upon children between the ages of 10 and 15 years. Boyd (1943) gives the peak of onset of rheumatic heart disease as being between the ages of 5 and 10 years. Cohn and Swift found the heart was attacked in 95% of their cases. The mitral valve is most often involved, according to Boyd probably in every case of rheumatic fever; then comes the aortic valve, the tricuspid less commonly, and the pulmonary very rarely. The typical myocardial lesion is the Aschoff nodule. As the results of inflammation there is a varying degree of myocardial destruction; the end result is scarring. As the Aschoff nodule usually lies along a blood vessel, so the rheumatic scar is often at the side of, or surrounds, a small artery. Ritchie (1939) states that acute vascular lesions in the coronary artery and arterioles and in the aorta and pulmonary arteries may, perhaps, be the starting point of chronic degenerative changes in those vessels. The inflammatory oedema, which is transient, interferes temporarily with the conduction bundle, and is probably responsible for the temporary functional disturbances which

electro-cardiographic studies show to be present in over 90% of cases of rheumatic fever. Pericardial lesions can occur. Rheumatism is the commonest cause of acute pericarditis. The after-effects vary from one or two spots of thickened epicardium up to calcification of the pericardium.

Incidence

The Ministry of Health (1927) report on acute rheumatism states that 2% of the elementary school population in cities and towns require observation because of manifestations of rheumatic infection. A previous report (1924) found that the annual attack rate for acute and subacute rheumatism was approximately 4·5 per 1,000, and that 2·5% of all sickness absence was due to rheumatic conditions. Davidson and Duthie (1938, 1939) suggest that the annual rate for the whole population of Scotland was 6·5 per 1,000.

Glover (1927, 1930, 1934) states that 25,000 deaths from rheumatic heart disease occur annually in England and Wales. Miller's (1926, 1928, 1934a, b, 1937) figures are 20,000, while Wilkinson (1935) quoted as high as 30,000, as low as 12,000. This is due to the fact that the International List, which is used in vital statistics, classifies deaths from cardiac disease almost entirely by anatomical lesions and aetiology is not directly considered (Paul, 1930; Hedley, 1936, 1940). Various series of cases (Grant, 1933; Wyckoff and Ling, 1926; and others) based on clinical experience are available which indicate the age distribution of the different aetiological types. The rheumatic group was approximately 80% of the total in the twenties, 65% in the thirties, 28% in the forties, and 18% in the fifties of Grant's 1,000 ex-soldiers with heart disease. Wyckoff and Ling's series of New York clinic and private patients shows that 9% of the cases between 50 and 59 years and 4% of those over 60 years were rheumatic. The average age of death in Graff and Ling's (1935) adult cases was 33; of Coombs's (1924, 1920) English series only 7% reached the age of 50. Hedley, in a large-scale investigation, found that more than 50% of the deaths occurred under 30 years and only 3% over 60. Swift (1940) found that in New York, where practitioners are requested to specify rheumatism when applicable in deaths from cardiac disease, 40% of the cases so reported in 1938 were under 30, 44% between 30 and 60.

Rheumatism thus now causes about 10% of deaths of all cardiac disease, and close on 100% of those come under 40. Combining the various manifestations of rheumatic fever, it is found that it causes approximately 2% of all deaths in England and Wales and 10% between 5 and 45, when it is second only in females to phthisis and follows phthisis and violence in males.

Morris and Titmuss (1942) state "from a consideration of the available evidence it can be hazarded that there are nearly 200,000 cases of rheumatic heart disease at all ages in this country. This probably gives juvenile rheumatism the melancholy distinction of being first among all infections as a cause of chronic illness and disablement; chronic, but punctuated with frequent acute episodes and occurring almost entirely in what should be the most useful years of life."

Social Distribution

In attempting to control widespread juvenile rheumatism there is at least one important factor to follow up—*viz.*, the class incidence. Glover suggests that juvenile rheumatism is thirty times more prevalent among the poor than the well-to-do. The B.M.A. Committee (1926), (Miller, 1926) and the M.R.C. Special Report (1927) suggest that the incidence was more selective, being higher in the artisan class than among the very poor. This observation has been variously explained by Miller (1934b), Wilkinson (1935), and Poynton (1938). It has, of course, been disputed—for instance, by Hill (1930), Glover (1934), and by the Kensington Rheumatism Scheme Reports. Morris and Titmuss (1942) do not favour the artisan's disease theory, in so far as deaths from rheumatic cardiac disease can be considered an index of juvenile rheumatism. Juvenile rheumatism tends to be a disease of the children of the poor and is limited to them to a peculiar degree—far more strictly than is, for instance, pulmonary tuberculosis.

Environmental Factors

Environment is of great importance, as shown by the investigation undertaken by the M.R.C. (Report of 1927). Four poor-law residential schools filled with about 1,800 children were examined. These came from the rheumatic stratum of the juvenile population. If these children continued to live in their former homes, it is practically certain that 2–5% of them would have developed rheumatic heart disease by the time that they had reached school-leaving age. As it was, the incidence compared very favourably with that of the public schools.

Damp has been persistently blamed; yet when other conditions are satisfactory—for instance, in public schools—there may be little or no rheumatism. Dutch experience points in the same direction. Probably the prevalence of rheumatism near rivers is more directly influenced by the condition of the house itself and of the site, as the houses of the poor tend to be built on cheap and ill-drained sites.

Climate and Seasonal Influences

The incidence of manifestations of juvenile rheumatism varies in different parts of the world, and rheumatic fever is said to be rare among children in tropical countries; nevertheless, the transportation of rheumatic children from the northern parts of the United States to a subtropical climate such as Florida has not been an unqualified success: haemolytic streptococcal infections appear to be less severe in Florida, but there were relapses and recurrence of rheumatism in the children who were living in the south. The natural climatic factors in themselves seem to be unimportant. The rates for south-east and south-west England are low, but those for South Wales are in excess of all other regions of England and Wales. At least this was so in the years before the war when figures were available. This is not due to the difference in climate.

Earlier writers assign to heredity an important part, but the experience of the poor-law residential schools shows that this is of only minor importance.

Coombs (1924, 1920) has shown that the maximum incidence is in December and January and the minimum in July, August, and September. Newsholme (1935) has demonstrated that the incidence of rheumatic fever is highest in hot, dry years. Damp cold has been implicated by numerous workers. Rowlands (1938) explains that the mutual antagonism of these associations is more apparent than real. He submits that one of the factors controlling the seasonal incidence of rheumatic fever in this country is the reciprocal acceleration of temperature and relative humidity.

Overcrowding

Mortality, on the whole, increases with the density of the population. Bruce Perry and Fraser Roberts (1937) find a statistically significant association between the density of persons per room in the various city wards of Bristol with the incidence of rheumatic heart disease. The most obvious reason would be that close association favours droplet infection, but a controlled investigation showed no significant association between overcrowding and scarlet fever. The mortality is probably a function of the poverty of the people who generally live in overcrowded conditions. The depressed rural areas return rates as high as the worst of the big towns. Correlation with mortality from juvenile rheumatism is not close.

Tonsils and Rheumatism

The reaction in recent years against wholesale tonsillectomies is based on the findings that children who had their tonsils removed are no more resistant to sore throat, otitis media, rheumatism, and nasopharyngeal infections than are children who still have their tonsils (Epidemics in School). This does not bar the possibility that, but for tonsillectomy, the former group might have had a higher incidence of these infections. The value of tonsillectomy in preventing the disease has also been examined by the B.M.A. Committee. Miller was of the opinion that tonsillectomy renders subsequent carditis less likely, and when it did occur it was of a less severe type than

in children whose tonsils had not been enucleated. Campbell and Warner (1930) found that complete removal did not prevent the onset of rheumatism later, nor did it diminish the frequency of carditis. Experiments by a number of independent workers showed that antibodies are produced in the lymph glands as a direct response to the injection of antigenic material like bacteriotoxins. Enlarged tonsils and adenoids in children can be interpreted as a reaction to the many foreign bacterial acquaintances which the child makes in early life. It is doubtful whether the tonsils themselves contribute to the production of antibodies, but they may constitute an important factor for the antibody factory. The observation that the streptococcal carrier is resistant to fresh infection may further impress the family doctor and his surgical colleagues with the need for a conservative attitude with the enlarged tonsil. These findings should not be interpreted as meaning that tonsils which are obviously diseased and the predisposing cause of infection should not be removed.

Relation to Rheumatoid Arthritis

It is interesting to speculate whether there is a relationship between rheumatic fever and rheumatoid arthritis. Every clinician can recall to mind cases where only the passage of time and the development of the characteristic sequelae enabled him to make a certain diagnosis. There are three main theories: first, that the diseases are aetiologically distinct; secondly, as Baggenstoss and Rosenberg (1941) maintain, that the two diseases are aetiologically related and may be manifestations of the same agent in differently reacting types; thirdly, that there are two types of rheumatoid arthritis, one primary and the other secondary to rheumatic fever. Post mortems were made on 25 cases of chronic infectious arthritis whose clinical records had been reviewed by a member of the arthritis unit under Hench (1941). The disease had been present for an average of seven years, the periods ranging from 3½ months to 30 years. In 14 of these 25 (56%) hearts there were lesions indistinguishable from those of rheumatic fever. As Hench points out, additional observations must be made on many more cases before final appraisal can be attempted.

Prophylaxis

Since rheumatic fever is associated with streptococcal infection, it might be thought that the sulphonamide drugs could prevent recrudescence of rheumatic fever. It is over seven years since the first attempts were begun in the United States to control the disease by giving such drugs continuously over long periods. These drugs do harm rather than good during the rheumatic attack itself; but American work suggests that if the administration is begun when the attack is over the further activity of haemolytic streptococci is suppressed and throat infections such as precede exacerbations do not occur. Caroline B. Thomas (1942) has reviewed her own experiences at the John Hopkins Hospital and those reported in five other American studies. That further attacks can be prevented all the authors have agreed. During the first four years of Thomas's study 10% of her control group had recrudescences; and of the treated group, none. Repeated throat swabbing showed the presence of haemolytic streptococci in 12% of control cases and only 4% of the treated. Administration of sulphonamides over a long period requires close observation and many estimations of haemoglobin, red and white cells, sedimentation rates, antistreptolysin titres, and drug concentration levels, as well as typing of haemolytic streptococcus from throat swabs. Toxic effects such as fever, erythematous and urticarial rashes, and leucopenia can occur while these drugs are being administered. Stowell and Button (1941) reported fatal agranulocytosis in a boy of 12 years. Probably for the present the method should be used for patients with severe rheumatic heart disease. Maybe in the future our knowledge of the relationship of streptococcal infection to rheumatic fever may give rise to a new antistreptococcal method based on biological rather than chemotherapeutical methods.

Another method of prevention which has been tried in the U.S.A. is a prolonged course of immunisation with streptococcus culture filtrate. Various workers have made reports on this aspect of treatment. Convalescent serum has also been tried in the treatment of acute rheumatic fever. Salicylates probably have little effect in reducing the incidence of rheumatic carditis.

Prognosis

Death may occur in acute and very severe cases, but these are rare. A first attack is rarely fatal. When the infection is less acute, the subsequent clinical course is slow; recovery may be complete and the heart may return to normal. Relapses are very common, and may occur even after many years, during which recovery has seemed complete. Frequently there are exacerbations six or ten years later. Prognosis is difficult in view of the very chronic nature of the infection and the great tendency to relapse. Coombs's figures give some idea of what the ultimate state of the heart may be when the infection is encountered for the first time.

He contrasted a series of active cases, including severe ones, with a series labelled "doubtful" or "suspicious." In the first group 5·1% died in the first year, 11·2% died in the first five years, 21·4% died in the first ten years. In the second group only 6·5% had succumbed by the end of the first ten years. On following up a group of 300 mixed cases, slight and severe for ten to 15 years, 115 were found to have lost the physical signs of the disease. Taking those cases who had definite signs only, 25% lost all their physical signs of cardiac disease. He concludes that if recovery will occur, it will do so in the first two years at most. Of his 300 children seen in the early stage, 50 would fail to reach the age of 20; 115 would have no signs (40 because they had been incorrectly labelled as rheumatic); the other 135 would be reduced to 82 at the age of 40; only 60 would be surviving at the age of 50, and the large majority of these would be incapacitated. Probably complete recovery would not occur in well-defined rheumatic carditis. Recovery can take place in patients with minimum valvular lesions, where physical signs are due to muscle lesions only. Ventricular enlargement and the associated mitral incompetence may clear up in these cases. Coombs sums up as follows: A ten-years-old child seen early in moderate infection had one chance in three or four of complete recovery. If the signs will disappear they will do so within a year of the onset. About one-third pass the age of 50 of those who pass out of the first year alive but damaged. The main factor in influencing the prognosis is complete rest for months as soon as the disease is diagnosed. These figures would not probably be so depressing if adequate means were available for proper prolonged care in the first attack.

Administrative Control

There is a close analogy between tuberculosis and rheumatism. The time has come when we should pay the same attention to the rheumatic as is now paid to the tuberculosis group. That juvenile rheumatism is a preventible disease is suggested by the gradual and progressive reduction of the incidence of damage in London elementary school children (Bach, Hill, Preston and Thornton, 1939) from 1·9% in 1927, when the L.C.C. scheme was started, to 0·7% in 1937. In London the first substantial reduction occurred four years after the inception of the scheme. It is desirable that rheumatic fever and rheumatic carditis should be notifiable; this would facilitate the prompt ascertainment of suspected cases. Acute rheumatism has been made notifiable in certain areas. It has been suggested that if an individual of the susceptible age group develops a sore throat he or she should be visited by a health visitor—that is, within one month (the latent period for the development of rheumatic fever); there would be great difficulty in carrying this out.

A scheme for the prevention of acute rheumatism and rheumatic carditis should include the following: prompt notification of suspected cases; accurate diagnosis; in-patient hospital accommodation for patients in the acute stage (this should be provided by the health authority and should be immediately available without a waiting-list delay); convalescent institution, where in addition to treatment appropriate education could be provided; special day schools for children whose hearts have been permanently damaged; supervision and after-care for children who have returned to ordinary schools. A register should be kept by the school medical officer of all the children in the area suffering from the principal manifestations of rheumatism, and he should propagandise the parents and teachers so that they are informed of the signific-

ance of the disease, its early symptoms, and the factors which give rise to it. Rheumatism supervisory centres should be set up for the examination of suspects, re-inspection of cases, circulation of propaganda, registration, and the follow-up and after-care of cases.

The L.C.C. have provided 2·5 beds per 1,000 children in average attendance. The number of children actually submitted to these beds in 1938 represented 5·1 per 1,000 in average attendance. Of all the children discharged, 2·9% were permanently unfit, 18·4% were partially incapacitated, and 78·4% were regarded as fit to resume normal life. (*Annual Report*, Chief Medical Officer, Board of Education, 1935, pp. 102–111.)

As juvenile rheumatism is intimately related to an unsatisfactory environment, much can be done by Medical Officers of Health and general practitioners.

Cardiovascular Syphilis

Cardiovascular syphilis is important, especially now, when there is such an increase in venereal disease, which will show its ill-effects in the years to come. The cardiovascular lesions are usually found in males between the ages of 30 and 55. It is seldom diagnosed within five years of the primary lesion, although the aorta is probably infected early in the disease. The secondary stage of syphilis is a septicaemia, and it is during this phase that the spirochaetes attack the heart and the aorta. Active lesions can almost always be found at necropsy, no matter how vigorous the treatment has been. Most pathologists now agree that for practical purposes cardiac syphilis is syphilitic aoritis and that gumma of the myocardium is a rare condition.

Syphilitic infection occurs usually in the twenties. The theory that syphilitic aortitis does not develop until 15 to 20 years after the appearance of the initial chancre has been proved erroneous. It may well begin within six weeks of the initial infection, and a case is quoted by A. E. Parsonnet (1940) and A. Bernstein in which a saccular aneurysm of the sinus of Valsalva was found at necropsy in a man who acquired his initial infection only 18 months before death.

Uncomplicated aortitis is one of the most difficult lesions to detect. Maynard (1940) attempts to make the diagnosis earlier by giving the following criteria: a definite history of syphilitic infection, the absence of any evidence of any other disease which might dilate the aorta, a patient aged 40 or less, radiological evidence of dilation of the aorta, a hollow accentuated aortic second sound, a systolic murmur in the aortic area. O'Farrell (1940) points out that the second of these criteria is often the most important, and that the great difficulty is the exclusion of the dilated aorta of arteriosclerosis. The increased density of the aorta is detectable on screening in many syphilitic cases. Aneurysm of the aorta is as a rule easier to diagnose, especially if radiology is employed. Syphilitic aortitis is a serious disease and usually comes under observation when far advanced. The average duration of life from the diagnosis according to Lewis (1934) is about six years in patients under treatment, though quite a number live ten years or more. A considerable number die suddenly.

Cardiovascular syphilis is easier to prevent than to cure. It is essential to treat every syphilitic efficiently at the time of primary infection. As an added precaution, all people who have had such an infection should have their hearts examined clinically and radiologically, once or twice every year.

Summary

1. The statistics relating to cardiovascular disease are given.

2. Evidence supports the hypothesis that heredity is a factor in the aetiology of cardiovascular disease.

3. Rheumatic heart disease is the most important group from the public-health aspect. Various factors such as the haemolytic streptococcus, overcrowding, poverty, climate, etc., are analysed. The value of tonsillectomy, sulphonamides, etc., are dealt with. A scheme for the prevention of acute rheumatism and rheumatic carditis is discussed.

4. For practical purposes, cardiac syphilis is syphilitic aortitis. This disease can best be prevented by earlier diagnosis and by treating every syphilitic efficiently at the time of primary infection. It is suggested that it is advisable to *x*-ray periodically patients whose history indicates that they are liable to this disease.

In conclusion, I wish to thank Prof. R. M. F. Picken, Mansel Talbot Professor of Preventive Medicine, for his advice and criticism

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The Royal Yugoslav Embassy in London has issued through its Information Department a reprint of a lecture delivered by Dr. Sekulich in London on November 4th, 1943, entitled "Health, Past, Present and Future." Dr. Milosh Sekulich is Chief Physician to the Municipal Hospital of Belgrade. He outlines medical conditions in Yugoslavia immediately after the first world war and insists upon the importance of social medicine and on the collaboration necessary between preventive and curative medicine. After a few words about legislation and a number of statistics, he goes on to tell of the destruction in Yugoslavia which began in April, 1941, when Germany, Italy and their satellites broke the army's resistance. This leads him to his main theme, the task of reconstruction, a subject upon which he has many wise observations to make. No price is given for this interesting little booklet, but inquiries for further information may be addressed to the English Section, Yugoslav Information Department, 64, Kingston House, London, S.W.7.

Col. L. W. Harrison, specialist adviser on venereal diseases to the Ministry of Health, has written for the Ministry a *Venereal Disease Guide for Practitioners*. It is intended primarily for the assistance of practitioners appointed by local authorities under the provisions of Circular 2226 to undertake the examination and treatment of patients at their own surgeries, but the Ministry is prepared to supply copies of the Guide to Medical Officers of Health for distribution to any other practitioners who ask for them. Subjects dealt with in the 20-page booklet are: equipment, sterilization of solutions and instruments, collection of specimens, interpretation of reports on serum tests, treatment of gonorrhoea, chancroid, syphilis, tests of cure, etc.

TUBERCULOSIS AND HOUSING*

By H. J. PETERS, M.B., B.S., B.HY., D.P.H.,
M.O.H., Borough of Leigh, Lancs

During the past 20 years tuberculosis has been responsible for well over half a million deaths and has damaged the lives of twice that number of people. The majority of its victims are among the younger and economically more important section of the community. The National Association for the Prevention of Tuberculosis (N.A.P.T.) has pointed out that about 1,500 persons between the ages of 15 and 50 die from the disease each month. The social importance of a malady with such a mortality is self evident. In this paper it is proposed to touch upon the relationship between tuberculosis and housing.

Historical

Though tuberculosis is known to have been a principal cause of mortality for the past two thousand years, it was not until comparatively recent times that its true nature was finally proved. Galen believed it was of an infectious character. In England, however, as late as the latter part of the nineteenth century, physicians held the view that pulmonary tuberculosis was due to a so-called tuberculous diathesis and was not infectious. Nevertheless, it is of interest to note that J. D. Rolleston, discussing popular views on tuberculosis, reveals that in some country parts of England lay people thought it was infectious at a time when the medical profession held other views. We perhaps find it a little difficult to place ourselves in the position of the medical men of the last century who, for the most part, regarded it as non-infectious. Laennec was very doubtful of its contagiousness. Austin Flint, in his *Practice of Medicine* (1873) states: "The doctrine of the contagiousness of the disease [tuberculosis] has now as hitherto its advocates, but the general belief of the profession is in its non-communicability." A few years before this pronouncement Villemin had demonstrated in a series of careful experiments that tuberculosis was a specific infection, produced by an inoculable agent. In 1882, Koch by his discovery of the tubercle bacillus, demonstrated the exact nature of the inoculable agent and opened the door to a new conception of the disease. The old assumption that it was non-infectious had without doubt retarded progress in its control. In many cases patients were treated in airless bedrooms, and the unaffected remaining members of the family were protected from the supposedly bad effect of fresh air and remained huddled together in stuffy rooms in front of large fires. One is not surprised that in the Victorian era it was by no means rare for the majority of the members of a family to die in rapid succession. Hence the term "consumption." Even the Brompton Hospital, which opened in 1841, was fitted with double windows so that the outside air might be excluded. As a direct result of Koch's discovery, the pessimistic outlook of the nineteenth century in regard to tuberculosis changed to one of optimism. Five years after the demonstration of the tubercle bacillus, Sir Robert Philips, who recognised the disease as a vast social problem, opened the first tuberculosis dispensary in Edinburgh. In 1899 the Brompton Hospital decided to admit air to its wards, and fresh air as well as new light was thrown into the battle against tuberculosis.

Effect of Bad Housing

Once it had been accepted that pulmonary tuberculosis was an infectious disease it became reasonable to suggest that bad housing, because of overcrowding and intimate personal contact of the occupiers, might result in an increased incidence of phthisis. London consists of boroughs of varying density of population. Brownlee found that during the period 1907–11 the standard death-rate from all causes for all ages and both sexes increased from borough to borough as density of population increased, and that the standard death-rate from phthisis for all ages and both sexes showed a similar increase. He also demonstrated that, as the hygiene of London as a whole had improved from 1850 to 1870, so had the death-rate from phthisis, and he asserted that it had decreased no more than could be explained by this general improvement in hygiene. Chalmers (1912) showed that in Glasgow the death-rate from phthisis among the population occupying one- or two-roomed houses was much higher than among people occupying three- or four-roomed houses. In Edinburgh, Williamson (1915) revealed that the number of cases of phthisis increased as the housing accommodation became more limited. He wrote: "Pulmonary tuberculosis is a disease in which 70% or 80% of cases occur in houses of three rooms and under; the number of cases is larger in two-room houses than in three, and larger in houses of one room than in those with two." The Registrar-General, in his Statistical Review for 1932, sets out in tabular form the effect of overcrowding on phthisis mortality. This shows very clearly that during 1930–32 the death-rate from respiratory tuberculosis rose progressively in the county boroughs and administrative counties as the mean density of population increased. It may be said the incidence of pulmonary tuberculosis is higher in all countries among single- and two-room dwellers than among those who are better housed.

The importance of close personal contact is reflected in conjugal tuberculosis and in the comparatively high incidence of the disease in the Merchant Navy, attributed to crowded sleeping quarters. In a Board of Trade report in 1932 the death-rate from respiratory tuberculosis among British seamen of all ages was given as 2·37 per 1,000. In England and Wales, as one passes from rural to urban areas, the mortality from tuberculosis increases, though, as Prof. M. Greenwood has stressed, this does not occur universally, and in those rural areas where the phthisis mortality is greater than in the corresponding urban areas the overcrowding of sleeping rooms in the country has been held responsible.

It is obvious that overcrowding and tuberculosis go hand in hand. Overcrowding, however, is usually associated with a number of other factors, among which are poverty and undernutrition, and it is difficult to assess the individual importance of these factors. Commenting on certain occupational mortality statistics, Brownlee remarked that, unless the greatest care was exercised in drawing deductions, their interpretation was not less dangerous than the interpretation of the Holy Scriptures. It is equally difficult to try to evaluate the significance of the component parts of overcrowding. The attempt has been made by several epidemiologists. Bradbury, as a result of the inquiry he carried out on Tyneside at the instigation of the N.A.P.T., concluded that on account of the almost constant association of other unfavourable factors with overcrowding it was almost impossible to provide statistical proof that overcrowding alone is related to tuberculosis. He considered, nevertheless, that he had enough evidence to show that overcrowding was an important factor in the prevalence of tuberculosis in the areas dealt with by him. Payling and Wright (1939), in a recent investigation, observed: "It would appear that differences in housing inadequacy implying differences in closeness of personal contact are playing an important part in determining the present differences in the levels of phthisical mortality between one county borough and another," and inferred that the different rates of phthisis mortality in the various county boroughs in recent times could be partly accounted for by differences in housing conditions. They obtained statistics for the incidence of persons on poor relief, the proportion of males in the lower economic grades (Stock's Social Index), and the number of persons living under sub-standard housing conditions (more than two persons per room), and so separated the monetary and the housing components of poverty. A relationship was then demonstrated between these three social measures and respiratory tuberculosis. It was strongest for housing and weakest for poor-law incidence. Summarising their findings, they state that in the various county boroughs housing accommodation of high density is a factor of great importance in producing high phthisis mortality, whereas the evidence for the importance of sub-optimal nutrition is slender for county boroughs but stronger for the London boroughs. D.-Mair (1910), in a report to the Local Government Board, demon-

*A slightly shortened version of an address to the North-Western Tuberculosis Society.

strated that the mortality from pulmonary tuberculosis showed an excess of 12% in back-to-back houses built in rows over back-to-back houses built in blocks of four so as to admit of side ventilation. His figures were corrected for age and sex distribution and covered a period of ten years.

There is evidence of a relationship between overcrowding and the failure of decline in the phthisis mortality in young adults. The Registrar-General, in his Statistical Review for the year 1932, expressed the phthisis mortality rates for 1930–32 as percentages of the corresponding rates for the same areas in 1911. The failure of the young adult rates to improve since 1911 was confined to those towns and counties with high rates of overcrowding in 1931. Failure of improvement in rates for young males aged 15–25 years occurred only in towns with over 1·15 persons per room, and for young females aged 15–25 years it occurred only in towns and counties with over ·85 persons per room. Young females in this respect were more sensitive than young males. Payling and Wright recently pointed out that, when a group of 24 ill-housed boroughs was divided into two sub-groups according to whether the boroughs had shown substantial or slight improvements in their housing conditions since 1891, the rate of improvement in mortality from respiratory tuberculosis among young men and women had been significantly greater in the former sub-group than in the latter.

The importance of housing in relation to health and the prevention of tuberculosis is not to be questioned. Whereas great strides have been made in many aspects of public health work the improvement in housing has been comparatively slow. During the 20 years between this war and the last nearly 4,000,000 houses were built—1,000,000 by local authorities and the remainder by private enterprise. Such a rate of building will be too slow for the needs of the future. The aim should be to provide the community with adequate housing in healthy surroundings as quickly as possible.

Efficient Ventilation

Some aspects of the design of dwelling houses—for example, the size and number of the bedrooms—are of particular importance in relation to tuberculosis. A. Newsholme, writing in 1920, said: "Pulmonary tuberculosis is especially a 'bedroom disease.'" Each bedroom should be at least 100 feet square, and the child requires as much air space as the adult. There should be enough bedrooms for the needs of a family, and the living room should not be used as a bedroom. In assessing housing accommodation, infants under one year should be taken into account. According to the last Housing Act, infants under one year were to be neglected, and a child between the age of one and ten years reckoned as half a unit. This Act also allows a room of only 50 square feet to be used as a bedroom.

As is pointed out in a recent memorandum of the Royal College of Physicians, many of the present official standards for housing are inadequate. For efficient ventilation each room should have a minimum height of 8½ feet. The housing estate and the individual house should be so planned as to obtain a maximum of fresh air and sunshine. Koch demonstrated many years ago that tubercle bacilli are rapidly killed by exposure to direct sunlight. More recently it has been shown in Los Angeles that tubercle bacilli survive for as long as two or three months when kept in darkness at room temperature, but usually for less than four days when exposed to the ordinary light of the room. In these experiments the tubercle bacilli were at no time exposed to direct sunlight, but were placed near an unglazed north window, and the efficacy of diffuse daylight in killing tubercle bacilli was demonstrated. It was concluded that window glass would hinder the bacterial action of daylight. Hence windows should be of maximum size and open as widely as possible. Their size, shape, and position should have regard to health considerations and be determined primarily by sanitary needs. In 1907 Cornet demonstrated living tubercle bacilli in 30% of samples of dust obtained from houses containing a phthisical adult. His findings have been repeatedly confirmed and illustrate the need for constructing a house so that it may be easily cleaned. A piped supply of hot water to the bath, kitchen sink, and wash-basin, is a necessity, as is freedom from any form of dampness.

Ill Effects of Higher Rents

The maintenance of optimum nutrition plays an important part in resistance to tuberculosis. It is of little use removing populations to new housing estates if an increased rent leaves the occupiers with insufficient money for food. M'Gonigle, in 1933, showed that the death-rate in a new housing estate in Stockton was higher over a period of five years than in an adjacent slum area of the same town. The death-rate in the slum area had actually shown a decrease during the same period. After considering many possible causes, he attributed this to the increased rent, which left too little money for food. The recent report of the Birmingham Social Survey Committee reveals that families moving to new estates usually have higher costs to meet, which in turn means less expenditure on food and a reduction in the nutritive value of the diet. New houses must therefore be provided at rents which are economically practicable for the people who are to occupy them. Large houses should be reserved for persons with large families and small houses for those with either no family or only one child. In each case the rent should be the same; otherwise, in the absence of family allowances, the person with a large family has to add to his already increased expenses the higher rent of a house large enough to accommodate his family. Additional expenditure often incurred by families moving to new housing estates is that due to the increased cost of transport and the purchase of furniture. The latter can be minimised by the provision of built-in furniture. Transport, gas and electricity are necessities, and their cost should be kept as low as possible. Estates should be planned so that excessively long journeys to work are avoided. Such journeys, especially under bad conditions of travel, add to the day's exertion and may have a bad effect upon health. The cost of food can be reduced, and the quality of the family diet improved, by planning each house with a garden at the back so that vegetables may be grown. There should be a refrigerator in a well-ventilated food-store capable of holding such quantities of food as will enable the housewife to buy at economical prices. Frequently housewives are compelled to buy food in small quantities at very uneconomical prices because they lack adequate storage facilities.

Rehousing the Tuberculous

In certain areas local authorities have taken a special interest in the rehousing of tuberculous families. Sheffield was a pioneer in this matter and many authorities have taken it as a model. Some authorities only rehouse families containing an infectious case of respiratory tuberculosis; others are prepared to consider cases which at the time have a negative sputum, and some will rehouse families irrespective of whether the disease is respiratory or non-respiratory. According to the financial status of the patient the Public Health Committee may pay varying proportions of the rent. In return the patient is expected to submit to medical supervision and carry out recommended treatment. In Sheffield and other towns certain requirements relating to the occupation of a separate bed and bedroom by the patient, the non-acceptance of lodgers, the attendance of the patient and other members of the family at the Tuberculosis Dispensary, and freedom of access to the house for health visitors, are embodied in the tenancy agreement. On the other hand, some authorities have an understanding with the tenant that the house is let on condition that the patient and other members of the family fulfil similar requirements, though they are not included in the agreement. This policy of rehousing tuberculous families deserves to become general.

For the full implementation of a policy of rehousing there should be close co-operation between housing and health committees and between these and the Tuberculosis Care Committee. Good or bad design in a house or in the general plan of a housing estate may greatly affect the health of a community. In municipal boroughs and urban areas closer liaison between the Care Committee of the county and the Health Committees of all authorities in the administrative

area of the county would be useful. The Housing Act of 1936 has standards for assessing housing accommodation which are too low to solve the problem of overcrowding as it affects a tuberculous family. Unless a patient lives in a clearance or a redevelopment area or in a very unfit house he cannot be rehoused under the Act. At present Exchequer grants are available only in respect of houses built for the relief of overcrowding within the terms of the 1936 Housing Act. A local authority which builds houses solely for the rehousing of tuberculous families receives no grant. Exchequer grants should be available for rehousing the tuberculous and defraying the expenses of a Public Health Committee in assisting a tuberculous family to pay the new rent. Such a policy would encourage local authorities to do more for the tuberculous families in their areas. In the rehousing of families with an infectious case anything in the nature of creating a colony for the tuberculous should be avoided. If the Housing Committee adopts the principle that houses should comply with optimum health requirements there should be no need to adopt a special design for dwellings for tuberculous families.

Tuberculosis and the Children

Young children in a household where one of the parents suffers from pulmonary tuberculosis presents administrative difficulties. These are enhanced when the affected parent is the mother. The Grancher system for the boarding out of such children is perhaps an impracticable ideal. Not only is family life disrupted, but several people may have to be kept in an institution, whereas if the affected parent entered an institution only one person would require to be so kept. Each case should be decided on its merits, but the guiding principle must be to endeavour to persuade the parent to be treated in a hospital or sanatorium. When the mother is ill a specially trained home help may be engaged to look after the house and the children during her absence. Or relatives may agree to take the children while the mother is receiving treatment; or they may be placed in an open-air school, a residential nursery, a special institution, or with foster parents. Home helps and foster parents should be properly trained and paid, and not be persons who take up the work merely because they have obtained no other. Every effort should be made to ensure that the housing is such that the child may have every chance of avoiding massive infection. The provision of good housing with through-and-through ventilation, and the isolation of patients in bedrooms or on verandahs, was one of the reasons to which Varrier-Jones ascribed his success in preventing tuberculosis in the children of the Papworth Colony.

In the case of a pregnant woman with pulmonary tuberculosis the infant should be separated from its mother at birth, as a period of exposure of two weeks or less may be sufficient for an infant to contract fatal tuberculosis. A routine *x*-ray examination of the chest would form a useful addition to the ante-natal care of the pregnant woman. Anyone having the charge of young children—for example, in a household or war-time nursery—should be free from pulmonary tuberculosis. The exposure of an infant to massive infection before it has had an opportunity to gain any immunity from repeated minimal doses is dangerous. It has been estimated that probably 40% of children who show a positive tuberculin reaction before the age of two years die of acute tuberculosis before they have reached the age of five. Myers (1938) found that children who had a positive tuberculin test in early childhood were five times more liable to develop the re-infective type of tuberculosis at adolescence.

Dangers of Free Infection

An infectious patient without treatment not only spoils his own chance of recovery but is a constant source of danger to the other members of the household. Open cases should therefore be removed to hospital or sanatorium as soon as possible. Often when patients attend the dispensary for the first time the disease is so advanced that reasonable hope of cure no longer exists. Mann (1943) found there was an average delay of over nine months between the occurrence of suggestive symptoms and admission to a sanatorium. Of this period 3½ months represented delay in obtaining medical advice; 3¼ months, delay in reference of the patient to the dispensary by the medical practitioner; and the remaining time, the delay that occurred before treatment in a sanatorium. B. C. Thompson, in an investigation covering more than 400 patients, demonstrated considerable delay in obtaining a diagnosis: nearly one-half of the patients complained of being ill for six months. In the annual report of the King Edward VII Welsh National Memorial Association for 1940–41, D. A. Powell says that about 50% of the patients seen at the dispensaries had a positive sputum when first examined and nearly 60% of these were advanced cases. Much can be done to remedy this position by education of the patient, his relatives and friends, and the general public. Local authorities should use more freely their powers regarding health propaganda under Section 179 of the Public Health Act. No patient should leave a sanatorium without knowing enough of his disease to enable him to take measures to protect his family and the general public from infection; the risk of infecting children should be stressed. The general public should understand that tuberculosis is a curable disease, that treatment in the early stages immeasurably improves the chance of recovery, and that 70% of patients attending a dispensary are found not to be suffering from tuberculosis. Perhaps patients would be more willing to attend a dispensary if, as is the practice in some parts of London, it formed a portion of the out-patient department of a large hospital.

The families of patients undergoing treatment should receive adequate financial assistance so that the patient may be encouraged to enter an institution and remain there long enough. W. H. Frost and others have stressed that if we are to require the isolation of open cases of tuberculosis as a means of protecting the community, the latter must relieve the patient's family of financial distress during the period of treatment. The segregation of open cases is most important, and sufficient beds should be available so that infectious cases are not kept waiting for admission. Advanced open cases should be prevailed upon to remain in hospital. The examination of contacts is a useful way of protecting the other members of a household, and the importance of pulmonary tuberculosis in elderly persons should not be lost sight of. The assumption must not be made that the chronic cough which such people may have had for many years is due to bronchitis or some other condition equally harmless from the epidemiological point of view.

Importance of Living Standards

Prevention is better than the treatment of known cases. The usefulness and extent of preventive measures varies from one area to another: to ensure uniformity prevention should be on a national basis and be a statutory requirement. Some authorities are too poor and lack the outlook required. One of the best methods of prevention is to provide adequate housing for everyone. No public health service can be of greater value than this. To obtain the maximum benefit from suitable housing, poverty should be eliminated. As Prof. Greenwood has remarked: "It is . . . foolish to believe that any other prophylaxis of this particular crowd disease (tuberculosis) is so important as raising the economic level and increasing the *commoda vitae* of the crowd." It is not good finance to spend large sums treating a patient in a sanatorium and then allow him to return to unsatisfactory home conditions.

Tuberculosis has been recognised for many years as a social as well as a medical problem, and the recent creation by the Nuffield Hospitals Trust of a Professorship of Social Medicine at Oxford indicates that the relation of social factors to health and disease is receiving the recognition it deserves. In social medicine we possess a prophylactic weapon of the most powerful character. Nothing is more likely to promote the health of the nation than the general availability of the means to procure a sufficiency of food and clothing and to live and work in a satisfactory environment. Disraeli, speaking a few years before the passing of the Public Health Act of 1875, expressed the opinion that the health of the people was the most important question for a statesman, and it is to be hoped that, armed with the new knowledge of social medicine, no government will rest till all that can be done for the health of the nation has

been done. When reconstruction begins, it is estimated that 4,000,000 new houses will be needed, and the attempt will probably be made to build these at twice the pre-war rate of building. Such a programme will require careful thought. A pleasant environment can make for happiness of mind, and because of the influence of mind on body add its quota to the promotion of health. Therefore, when what is architecturally acceptable does not conflict with health requirements or considerations of reasonable economy, due regard should be paid to aesthetic values in house design and town planning. Otherwise, as an art critic has recently put it, the result may be a world fit for the London School of Economics to live in.

BOOK REVIEW

Illustrations of Regional Anatomy. (Edinburgh: E. & S. Livingstone.) By E. B. Jamieson, M.D. 1942. Sections I–V, 4th edition. Sections VI and VII, 3rd edition. Bound volume, 318 plates, 60s. net. Post 9d. Single sections at various prices.

When Vesalius was still only 28 his *De humani corporis fabrica* was issued at Basle in June, 1543, the same year in which appeared Copernicus' *On the Revolutions of the Celestial Spheres*. Both books marked the end of one epoch and the beginning of another. Both also had one other thing in common: they dealt with movement, Copernicus with movement of the heavenly bodies, and Vesalius with the movement of the human frame. If we compare the illustrations of *De Fabrica* with those, say, in the textbooks of anatomy by Gray or Cunningham, we see at once how far attention to minute detail which plagues our anatomy schools has prevented the student from looking at the body in the same way as did that master of anatomy 401 years ago. Vesalius examined the muscle in motion. The modern student painfully memorises the points of origin and insertion, and the static relationship with bones, joints, nerves and arteries, to be memorised only with difficulty and usually with the aid of some absurd jingle. The emphasis, in fact, is upon the anatomy of the dead and not upon the anatomy of the living.

These reflections are stirred by the sight of the seven sections of *Illustrations of Regional Anatomy* now issued for the fourth time (Sections VI and VII for the third time). The anatomy of each region is depicted in various stages of dissection in a variety of clean and brilliant colours that add an unexpected fascination to the study of the static body. The author is to be congratulated on the admirable choice he has made of the specimens to be illustrated and on the colours used to pick out the salient features. His seven volumes should be invaluable to those who want from time to time to restore their fading memories of anatomy, and the student will find in them a refreshing if unrealistic contrast to the formalinised corpses stretched out on the tables of the anatomy dissecting room.

ADMINISTRATIVE CONTROL OF SCARLET FEVER

The following Memorandum on scarlet fever has been issued by the Essex Epidemiological Committee (Chairman, Dr. W. A. Bullough) for the guidance of Medical Officers of Health, medical officers in charge of hospitals, and general practitioners in the Administrative County of Essex.

It is generally agreed that scarlet fever has become so benign as to make largely unnecessary its administrative control as previously exercised. It is recognised also that this condition is only one of the many manifestations of infection with Group A haemolytic streptococci, and that there is no justification for isolating in hospital individuals suffering from streptococcal sore throat associated with a rash, whilst ignoring those with a similar sore throat and no rash. To do so does not protect the community; but it is impracticable to remove to hospital all those suffering from streptococcal sore throat, and it follows that the needs of the particular patient should decide whether or no he should be given hospital accommodation.

Cross-infection, which is largely responsible for the complications of scarlet fever, does not occur if the patient is nursed at home, and this is one of the main reasons for advocating home treatment of this disease wherever possible. Although the welfare of the patient is the first consideration, other aspects of the problem cannot be ignored, and one of these is the possibility of the spread of infection by milk or foods which are consumed uncooked, whilst another is the risk of infecting a woman in the later stages of pregnancy. Where, therefore, a case of scarlet fever occurs in a household a member of which is a food handler, or where there is a woman approaching confinement, it would be inadvisable to have the patient nursed at home. It is therefore recommended that admission (of cases of scarlet fever) to hospital should be determined by (1) the severity of the disease; (2) the home-nursing facilities; (3) the employment of another member of the household in the preparation or distribution of food for public consumption; (4) the approaching confinement, say within one month, of any female in the patient's home.

It is highly desirable that the public should be informed of the altered view now taken by the medical profession of scarlet fever, and it is felt that this can best be done by the family doctor.

CORRESPONDENCE

Executive Functions of the Proposed Joint Authority

To the Editor of Public Health

Sir,—In your April issue you publish three comments on the White Paper. Both the comments of the C.M.O.H. and the County Borough M.O.H. assume that the new Joint Authority will have wide executive functions and will administer the various health activities which it is their duty to co-ordinate. I am bound to admit that this is also the view of every M.O.H. with whom I have discussed the problem. This, however, is not my reading of the White Paper, although it is so cleverly written that many interpretations can be read into it. I would submit the following points.

Your correspondents call it a joint *health* authority; but the White Paper only calls it a Joint Authority, and nowhere are its health functions emphasised. The need for larger administrative areas for the hospital service is stressed, and this is admitted, but only is it stressed for hospital services: "Within the general framework of the approved plan, the provision and administration of most of the local services will normally rest with the individual county or county borough councils and the Joint Authority will be concerned only to watch that the general area arrangement proves to be the right one when put into actual operations." Stronger still are the words: "They [*i.e.*, the Joint Authorities] will usually administer themselves only those branches of the service which demand direct administration over the larger area as a whole and not those which can suitably be administered (when once a unified plan is settled) on a more localised basis."

Government papers are usually very carefully phrased, and the essential word here is "demand." Surely it is clear that the Joint authority will only administer those services which demand the large unit. I will give but one illustration. Tuberculosis control is essentially a broad public health problem, and bed provision is but one part, and essentially a subsidiary part, of its control. While the control over the necessary amount of bed provision would pass to the Joint Authority, that would be all that should pass, and, as mentioned, this is the subsidiary part. Nothing *demands* that anything else should be taken over. The Tuberculosis Officers would remain as whole-time servants of their own authorities to co-operate with their M.O.H. in preventive and other measures. The only difference would be that they should be appointed as consultants on the staffs of the various hospitals where they work, as part of a unified scheme. Much the same can be said for other public health services.

Obviously the hospital services, with their complement of consultants, are intended to be managed by the Joint Authorities, but for the rest of it they are planning and not executive bodies. If this is the intention, as I conceive it is from the wording in the White Paper, then there will be no need for the Joint Authority to be directed by a super-M.O.H., but a co-ordinating executive officer with a different kind of administrative outlook is all that is required, and the component M.Os. H. will remain in charge of their own preventive medicine problems. This view is in accord with the wording in Appendix E, which refers to the need for administrative and technical staff for co-ordinating all the health activities of their area: co-ordinating, not running, health activities.

Obviously the question of the executive functions of the Joint Authority is of supreme importance to the future of public health administration, and I think steps should be taken by our Society to obtain a clear definition from the Ministry as to their proposals. This will show whether my views are a correct interpretation, but if correct or not, they are, in my opinion, the way the proposals should work in areas large enough to be dealt with that way, and if not large enough, areas should be combined to make them so. I hope others share my interpretation.—I am, etc.,

William G. Savage.

Taunton.

Infectious Diseases in Day Nurseries

To the Editor of Public Health

Sir,—In March of last year the Borough Medical Officers' Committee, a committee consisting of all the M.Os. H. of the cities and boroughs in the Administrative County of London, drew up the rules set out below for the guidance of its members in administering war-time day nurseries. The Committee feel that publication of the rules might be of value to other medical officers of health.

If a child in a war-time day nursery develops one of the following diseases—*viz.*, measles, german measles, chicken pox, scarlet fever, diphtheria, whooping-cough, mumps, enteritis—we recommend that:

1. There is no need to close the nursery.
2. Some responsible person should always inspect the children on arrival in the morning; but during the incubation period following the discovery of a case a very careful inspection should be made, with particular reference to the disease in question, and any suspect should be excluded.
3. The matron should take an early opportunity to tell the parents that a child in the nursery has contracted an infection; but this information should not be communicated in such a way as to indicate that the matron is of the opinion that other children should be kept away.
4. In view of the primary object of the war nursery—namely, to secure an increase in the war effort—vacancies in the nursery may be filled by new children; but before a child is accepted the parents should be told that there has recently been a case of infection in the nursery.

We considered other notifiable and unnotifiable communicable diseases, but came to the conclusion that it would be unwise to lay down general rules, because action to be taken should be left to the decision of the individual M.O.H. as the circumstances indicate.—I am, etc.,

J. A. Struthers.

Holborn.

OBITUARY

W. E. Bennett, L.R.C.P., L.R.C.S. (Edin.)

We regret to record the death in his 85th year of Dr. W. E. Bennett, who was for 50 years Medical Officer of Health for Otley.

William Edward Bennett received his medical education at Leeds University, and qualified L.R.C.P., L.R.C.S. (Edin.), L.R.F.P.S. (Glas.) in 1886. He was a native of Otley, and his concern for the welfare of the town and its inhabitants was deep and sincere. An almost martial appearance hid a kindly heart which made him an understanding and conscientious family doctor. He retired from the post of M.O.H. at the age of 60, but so absorbed was he in his work that for the next ten years he spent six months out of every twelve serving as ship surgeon. Later he took up hospital work, and was honorary anaesthetist to the Hospital for Women and Children, Leeds, and anaesthetist to the Emergency Hospital, Knaresborough. In 1940, at the age of 80 and having been passed fit for duty, he was appointed to a hospital in the E.M.S. A large number of patients will miss a man who for so many years had come to be well known and loved in Otley and the surrounding district.

A. B. Dunne, J.P., M.B., Ch.B., D.P.H.

We regret to record the death at Barnby Dun, near Doncaster, on March 27th, of Dr. A. B. Dunne.

Arthur Briggs Dunne took his B.A. at Cambridge in 1891, but did not begin his medical studies until several years later. He qualified M.R.C.S., L.R.C.P. in 1901, took M.B., Ch.B. of Cambridge in 1902, and the D.P.H. a year later. He won the McGill scholarship in surgery at Leeds, and was called to the Bar by Lincoln's Inn. During the South African War he was a civil surgeon with the S.A. Field Force, and after his return to England he became senior resident medical officer to the City of Liverpool Isolation and Smallpox Hospital. After serving for a time as senior school medical officer to the City of Nottingham, he was appointed in 1911 M.O.H. to the Doncaster Rural Council and also to the Bentley Urban District. To these posts he added in 1915 that of M.O.H. for the Adwick-le-Street Urban District. In 1920 he was appointed a West Riding magistrate. Dr. Dunne retired from his public health posts five years ago.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

YORKSHIRE BRANCH

President: Dr. E. C. Benn (Med. Superintendent, Seacroft Hospital, Leeds).

Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

A meeting of the Branch was held in Leeds on February 4th, and 28 members and one guest were present. The minutes of the meeting held on December 31st were approved.

It was resolved that the Secretary place on record the loss sustained by the Society by the death of Dr. G. H. Pearce, and express to his widow their sympathy in her bereavement.

It was decided that Dr. R. L. Thornley, who had recently retired from the position of M.O.H. of the East Riding C.C. should be recommended to life membership of the Society.

After hearing a letter from Dr. A. A. E. Newth, Hon. Secretary of the School Medical Services Group, it was agreed that the formation of a School Medical Services Group be approved, and that details in connection with the formation of the scheme, and its operation locally, be referred to Drs. Atkinson, Cohen, Nathan, and Stockwell. It was resolved also that Dr. Stockwell act as convener for any meetings of this special sub-committee.

It was resolved that Dr. J. F. Galloway be appointed to fill the vacancy caused by the death of Dr. G. H. Pearce on the B.M.A. Branch Council. Information was received that the following had been accepted as members of the Society, and would be attached to the Yorkshire Branch: Mr. A. B. Shields, L.D.S., Senior Dental Officer, Public Health Department, Huddersfield; Dr. R. C. Wofinden, Acting Deputy M.O.H., Rotherham; Dr. H. J. Twomey, Assistant S.M.O., Public Health Department, Huddersfield; and Dr. M. M. Bodoano, A.M.O.H., Public Health Department, Huddersfield.

A paper on glandular fever was then read by Dr. A. L. Taylor, M.O.H., Rothwell and Stanley Urban Districts. Dr. Taylor said that the disease, protean in its manifestations, had been recognised in various forms as long as 50 or 60 years ago. Tidy and his co-workers classified the condition in 1921 and subsequently. The classification was vague, because there was no constant clinical syndrome in glandular fever. Instead there was a large group of signs and symptoms, any or several of which might be present in any case, but none of which was constantly to be found in all.

Among the commoner manifestations were malaise (sometimes existing for several days before other symptoms or signs appeared); moderate pyrexia (usually about 102°–103°, at first continuous, then remittent, then intermittent, and finally settling after a period varying from three or four days to as many weeks); vomiting or nausea; and headache and pain in the limbs. Then might follow enlargement and tenderness of the glands, especially those in the posterior triangles of the neck. The enlargement might at first not be palpable, and the only finding be pain, stiffness, and tenderness at the back of the neck. Nuchal rigidity occasionally occurred. When palpable, the glands were firm, fleshy, discrete, tense, and tender, and usually only moderately big. Other groups of glands might be involved, though less constantly: the axillary, inguinal, supraclavicular, epitrochlear, tracheo-bronchial, and mesenteric groups in roughly that order of frequency. Sometimes no glandular enlargement was demonstrable, or only a solitary gland might be affected. Histological examination showed dilatation of the sinusoids, with marked hyperplasia of the reticulo-endothelial mononuclear cells.

Dr. Taylor gave the foregoing as descriptive of what is called the "glandular type" of the disease, in which glandular involvement tended to be early and marked; but in addition to this he described two other types. In the "anginose type" a feature was the formation of pseudo-membrane on the fauces—often extensive, and usually occurring after a relatively long prodromal period. Foetor was sometimes present. In both the glandular and anginose types splenomegaly was said to be present in about half the cases. Finally there was a febrile type: a pyrexia prolonged for some weeks, sometimes accompanied by rashes, the commonest being macular, maculo-papular, or morbilliform; glandular enlargement night be late or absent; prostration was marked; and splenomegaly was rare.

Dr. Taylor pointed out that diagnosis on clinical grounds alone was frequently difficult. A typical feature was a lymphocytosis: the total white-cell count might be as high as 10,000–15,000 per c.mm. with mononuclears (mostly large lymphocytes), constituting up to 50% or 60% or even more of the whole. That an agranulocytosis sometimes occurred was of importance in relation to sulphonamide therapy. Paul and Bunnell in 1932 found that the serum of patients suffering from glandular fever agglutinated washed sheep cells in various dilutions, and postulated the formation in the serum of heterophile antibodies. Titres considered significant were of the order of 1 in 64 and upwards. The Paul-Bunnell test was not always positive, especially early in the disease, but a positive finding was strong diagnostic evidence.

The pseudo-membrane of the anginose type might simulate diphtheria or Vincent's angina, especially as Vincent's organism was sometimes present in anginose mononucleosis. Tracheo-bronchial involvement might cause pain in the chest and cough. Pain and stiffness at the back of the neck, together with malaise, pyrexia, and headache, might suggest cerebro-spinal fever. Enlarged mesenteric glands might cause abdominal pains, which, together with nausea or vomiting and pyrexia, might suggest an acute appendix. Dr. Taylor also pointed out that acute leukaemia and Hodgkin's disease must be excluded. In the former anaemia co-existed with abnormal red cells and a high lymphocyte count; in the latter the glands, though enlarged, were not tender and there was no lymphocytosis. The maculo-papular rash might simulate the rash of typhoid fever and call for a Widal test. Measles was excluded by the absence of Koplik's spots and by the fact that in glandular fever the rash was relatively sparse on the face. Rubella, with enlargement of the sub-occipital gland, might be difficult to exclude, but in this type of glandular fever other groups of glands might be involved, the prodromal pyrexia was longer than in rubella, and the patient was much more ill.

Epidemics had occurred, notably in 1920 and in 1930 in this country, but the majority of cases were sporadic. A recent investigation of an outbreak in an E.M.S. Hospital suggested that for every clinical case there were many sub-clinical infections, or infections so mild as to escape diagnosis. The outbreak occurred among a group of people in hospital, mainly in the 25–40 age-group. Blood tests were done on all patients with clinical symptoms and on those with none, and it was found that, although the number of clinical cases originally admitted to the hospital was only five, 98% of the patients and staff examined, totalling 296 persons, showed blood changes and serological tests typical of infectious mononucleosis, although, of these, 165 had no clinical manifestations whatever, and of the remainder, very many would have been unrecognised as clinical cases had not the disease been suspected.

As to aetiology the consensus favoured a virus. Recently, a bacillus similar to that causing an epizootic in rodents and designated *Listeria monocytogenes*, has been cultured from the blood of a patient with glandular fever but most workers believed that, while this bacillus might occasionally be the infective agent, a virus was more likely.

As to treatment, rest in bed was essential, relapses being the rule if convalescence was hurried. Sulphonamide therapy appeared to be useless, and might be dangerous if there were agranulocytosis. Attacks were often followed by a long period of debility.

Dr. Taylor concluded with a description of a number of cases that had come under his personal observation. *In the discussion* Dr. J. Tudor Lewis observed that occasionally a Wassermann reaction was positive and might confuse the diagnosis, especially as the signs and symptoms of glandular fever in some instances closely resembles the secondary stage of syphilis. Dr. W. N. Pickles referred to the close resemblance between glandular fever and epidemic hepatitis: the blood picture in both diseases was similar, and he wondered if the two diseases were produced by the same type of infection.

MIDLAND BRANCH

President: Dr. A. B. Griffin (M.O.H., Worcester City).
Hon. Secretary: Dr. H. Paul (M.O.H., Smethwick C.B.)

The fifth meeting of the session was held at Birmingham on March 2nd. The President, 34 members, and 1 visitor were present.

The Branch unanimously agreed to support the nomination of Dr. Jervis for the presidency of the Society for the coming year.

Prof. H. P. Gilding opened a discussion on nutrition. He said the basal metabolic rate in man averaged about 40 calories per square metre of body surface per hour, but this might drop to as low as 28, and in the case of children be as high as 60. In addition to this the energy requirements of the body called for a further amount of about 200-400 calories in the case of the sedentary worker, to about 2,000-3,000 in the case of a navvy. A Canadian lumberman took as much as 5,000 calories, much of it as fat. A recent inquiry showed that nurses in London hospitals were receiving only about two-thirds of the required calories. It had been estimated that the average person in this country was now using about 2,400-2,500 calories a day, and this seemed to be sufficient. Prof. Gilding then went on to describe in some detail the action and sources of the vitamins, and the action of iron, calcium, and other salts in the physiology of the body.

Miss Warren Smith, Dietitian to the Birmingham Public Health Department, described the methods of assessing the food values of the diets at hospitals and day nurseries, and gave specimens of the menus which were in use in Birmingham. She discussed the values of each of the items, and the methods of buying, preparation, and delivery of the food.

An interesting discussion took place in which ten members took part. A vote of thanks to the speakers was passed.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles M.B.).
Hon. Secretary: Dr. W. C. V. Brothwood (Deputy C.M.O.H., Lancashire).

A meeting was held at Preston on February 25th. The President and 32 members were present.

After dealing with routine matters, the Branch heard a paper on investigations into crime, by Mr. J. B. Firth, D.Sc. Dr. Firth showed how hospital authorities could often help by carefully preserving clothing and other articles from persons brought to hospital after accidents or street brawls resulting in injuries (manslaughter, attempted murder, etc.). He described the medical aspects of several types of murder, illustrating the various points by lantern slides. Injuries produced by (*a*) military rifle, (*b*) sporting shotgun at close range, were illustrated. In one case of double murder by shooting, after which the murderer committed suicide by taking barbiturate, difficulties created by lack of preservation of essential material by the hospital authorities were described. A brutal attack on a man in bed, followed by setting fire to the bed, resulted in death not due to physical injuries but to asphyxia—carbon monoxide poisoning. A murder brought about by forcibly holding under water in a shallow stream was strongly supported by lung sections which showed diatoms and tiny wood fragments from the stream. The lecturer stressed the importance at necropsies of directing attention in the first place to those portions of the body injured. For example, in those cases where the injuries are primarily to head and neck these parts should be examined first. Necropsies consequent on some criminal incident should, where possible, be carried out by an experienced pathologist.

A vote of thanks was accorded to Mr. Firth for his interesting address.

NORTHERN BRANCH

President: Dr. I. McCracken (M.O.H., Durham C.C.).
Hon. Secretary: Dr. J. A. Charles (M.O.H., Newcastle-upon-Tyne).

A meeting of the Branch was held in Newcastle-upon-Tyne on March 18th. The Chairman and 24 members were present. The minutes of the meeting held on March 4th were read, confirmed and signed by the Chairman.

The Chairman welcomed Dr. Marion Bainbridge on resuming her association with the Northern Branch.

Resuming its discussion on the White Paper, the Branch dealt with Section IV: Hospital and Consultant Services. The following Resolutions were passed unanimously by the Branch: That the whole of the health services of the country should be managed by a central *ad hoc* corporation. That Medical Officers of Health of the major local authorities should be administratively and executively connected with the hospital services of the Joint Board in regard to tuberculosis, infectious diseases, and maternity and child welfare.

METROPOLITAN BOROUGH OF ST. PANCRAS
TEMPORARY APPOINTMENT OF M.O.H.

The St. Pancras Borough Council invite applications for the temporary appointment of Medical Officer of Health for the Borough at a salary of £1,200 per annum, increasing by £50 annually to £1,400 per annum, subject to approved service. The salary will be subject to any cost of living bonus applicable to the position which may be adopted by the Council from time to time.

The appointment will be subject to (*a*) the approval of the Minister of Health, (*b*) the satisfactory passing of a medical examination by the Council's doctor, and (*c*) the provisions of the Local Government Superannuation Act, 1937. The person appointed will be required to devote the whole of his time to the duties of the office and to perform all the duties imposed upon him by statute and by any orders, regulations or directions made from time to time by the Minister of Health and by any by-laws or instructions of the Council applicable to the office.

Application must be made on the prescribed form, which contains further particulars of the appointment, and can be obtained by sending a stamped addressed foolscap envelope to the undersigned. The form should be returned duly completed, and accompanied by copies of not more than three recent testimonials, and endorsed "Medical Officer of Health." Last date for receipt of applications—May 26th, 1944.

Canvassing, directly or indirectly, will disqualify a candidate.

R. C. E. AUSTIN,
Town Clerk.

St. Pancras Town Hall,
Euston Road, N.W.1.
May, 1944.

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Telephone: Euston 3923. *Telegrams*: *Epidauros, Westcent.*

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EDITORIAL

Venereal Diseases in Sweden

We gladly publish in this issue a very full report on the principles and practice of the law in relation to venereal diseases in Sweden which has been sent to us by Dr. Hallgren, of Gothenburg. While it is common knowledge that a system of notification has been in force in Sweden since 1918, it has not hitherto been easy to ascertain its exact form. From the details given by Dr. Hallgren it is evident that the procedure laid down in Defence Regulation 33B is a short step toward the Swedish system, and that further legislation in Great Britain, if any were contemplated, would be likely to move in the same direction. The Swedish authorities seem to be satisfied that anonymous notification gives reasonably complete information as to the incidence of venereal diseases in their country, and the high proportion (about 30%) of traceable contacts outside of the large towns is evidence of its practical value. Even in the big seaports the reporting of contacts in more than a fifth of the cases is far from being of negligible importance, although the failures to trace contacts in Stockholm are relatively frequent. The figures contained in Dr. Hallgren's tables are of great interest. Although they reveal a substantial increase in war-time, it will be observed that the incidence of syphilis in Sweden in 1943, which was three times as high as in 1940 and 1941, was still lower than it had been from 1927 to 1931. Gonorrhoea, on the other hand, was more prevalent than it had been since 1919. This state of affairs has caused some members of the medical profession to advocate a return to the practice of routine examination of prostitutes, a policy which Dr. Hallgren appears to think unlikely to obtain legal sanction.

The several forms referred to in Dr. Hallgren's article, and translated by him into English, may be consulted at the office of the Society of Medical Officers of Health.

The Nation's Drinking Water

The Government's White Paper on A National Water Policy marks another step forward in the evolutionary progress towards an adequate and pure water supply for everyone. No new and sweeping suggestions are introduced, nor does it condemn all the useful work done in the past and try to substitute a new and untried system; but the proposals contained therein are made with a view to improving the present system and removing defects. The object is the shaping of a national water policy which will ensure an organised and economical use of our water resources and an efficient administration of supply services. The proposals are based on three principles, which, briefly stated, are, first, there should be adequate control, but changes to take place only where it will lead to greater efficiency and reduced cost; secondly, responsibility for water supply to rest centrally in Health Ministers and, peripherally, in responsible local authorities and statutory undertakings; thirdly, sectional interests to be subordinate to national interests, but with a right for all whose activities are affected by water development schemes to be heard by the Minister or by Parliament. At present the responsibilities and powers of the Minister of Health with regard to water supplies are vague and ill-defined. There is a general obligation under the Public Health Acts for local authorities to make certain that a sufficient supply of pure and wholesome water is within reasonable distance of every householder, but there is no specific provision for a piped supply to be carried into the houses.

Better standards of living lead to an increased consumption of water. Spreading urbanisation not only increases demand, but diminishes the supply available locally, because water which previously soaked into the ground is drained off impervious surfaces into drains and rivers. It was once contemplated that the rivers Thames and Lee would have to be abandoned as sources of London's water supply in favour of the pure water from the lakes in Wales and the North. But to-day it is possible to purify rivers to a greater extent than was once believed possible, so that London continues to rely on the Thames and the Lee for 90% of its supply, and analyses show the final drinking water to be one of the purest in the world.

The Minister of Health will consider developmental proposals from water undertakers and will assess them in the light of the national interest. He will consult with other interested departments, particularly with that of Town and Country Planning, and may hold local inquiries. The private Bill under which many water authorities obtain powers to-day is to be abolished and in its place there will be a system of Ministerial Orders. The Government has realised, however, that there are certain wider topics, such as compulsory amalgamation and compulsory purchases of water rights, which should be placed before Parliament for its sanction. The Central Advisory Water Committee has done much valuable work since its inception in 1937, and it is proposed to make it a Statutory Committee, not only to advise the Minister on questions referred to it, but to make to the Government "representations on any question within its field of work on which it thinks it right to express an opinion."

Surveys of the efficiency of water supply services are to be carried out regularly by the Ministerial staff; this will require considerable augmentation of staff and will do much to unify methods of treatment and analysis throughout the

country. Inland water surveys, it is suggested, should be resumed as soon as circumstances permit, for such records of both surface and underground supplies collected over a period of years will be of immense value in such matters as the determination of compensation water and the assessment and distribution of resources. The Regional Water Committees rely entirely on the goodwill of the individual undertakers, but it is now proposed to give them powers to require water authorities to supply information and statistics of their undertakings. Local organisation will be improved by reduction in the number of undertakings, and it is proposed to give the Minister of Health power to require the amalgamation of water authorities and the transfer of bulk supplies from one to another, and to alter the limits of supply of an undertaker. Amalgamations are desirable in the pooling of financial resources to create adequate reserves of water for use in times of drought, and to afford skilled supervision of purification processes and skilled analysis for control.

The good work promoted by the Act of 1934 has stimulated the Government to instigate a further extension of piped supplies by presenting a Bill in the present Session. The 1934 Act proposed an expenditure of £1,000,000 and led to the carrying out of works up to £6,000,000. In the present Bill it is proposed that a total of £15,000,000 be spent, so that we can hope for a corresponding increase in the total works finally accomplished. In this further extension of piped supplies in rural areas there is provision for corresponding drainage and sewerage facilities. It is most important that these two essential services should be provided at the same time, for the setting up of the former without reference to the latter may lead to trouble in creating further nuisance and may extend to actual pollution of water supplies.

With regard to River Boards, the Government have accepted the recommendation of the Third Report of the Central Advisory Water Committee that 29 River Boards should be set up to take over the powers of the existing authorities, which number some 1,600. Their tasks will be the control of rivers with regard to land drainage, prevention of pollution, and control of fisheries.

This country has ample water for its requirements and it is not a question of the apportioning of an inadequate supply. The problem is how to organise and distribute our resources to the best advantage. Little does the housewife realise what lies behind the regular delivery of water when she turns on the kitchen tap and for what little cost, for, to quote the introduction to the White Paper, . . . the occupier of the average small house can be supplied with all the water his household requires for a whole week for the cost of a single glass of beer.

The speed of air travel has made it necessary to consider new safeguards against the incursion into this country of major epidemic diseases, such as smallpox or typhus, since it is now possible for a person who may have contracted such a disease abroad to arrive here by air and proceed to his destination before expiry of the incubation period and before the manifestation of symptoms. No such case has yet come to notice, but the Ministry of Health has adopted precautionary measures. In future a person arriving by air in this country will be given a card containing a warning notice that if he falls ill within 21 days after arrival he should immediately consult a doctor and hand to the doctor the card in question. This bears a notice that the holder, being a recent arrival by air, may be suffering from some acute notifiable disease, and asks the doctor, if such a disease is found or suspected, at once to notify the appropriate M.O.H. Certain particulars are entered on the card before it is handed to the arriving air passenger, and these enable machinery at once to be set in motion for bringing contacts who were fellow passengers on the same aircraft under medical surveillance if the case notified is one of smallpox, typhus, plague or cholera.

The President of the Board of Education (Mr. R. A. Butler, M.P.) will address the School Medical Service Group of the Society of Medical Officers of Health in the Lecture Theatre of the London School of Hygiene on Friday, July 21st, 1944, at 3 p.m. His subject will be "The Place of the School Medical Service in the Educational Services of the Future." The annual general meeting of the Group will be held at about 4 p.m., immediately following Mr. Butler's address. All members of the Society will be welcome on this occasion.

LEGISLATIVE MEASURES AGAINST THE SPREAD OF VENEREAL DISEASES IN SWEDEN

By ROLF J. M. HALLGREN, D.M., D.P.H.,
Medical Officer of Health,
Gothenburg, Sweden

Venereal disease was, judging by old documents, widespread throughout Sweden during the seventeenth and eighteenth centuries. Apparently appalling conditions prevailed not only in the towns but also in rural areas. The phenomenon has been the object of recurrent analysis in order to estimate its causes. The opinions expressed in various reviews seem to point in the direction of blaming certain migratory categories of the population, such as pedlars, Jews, soldiers, sailors, etc. Conforming to this view strong measures were taken by the local authorities as early as the eighteenth century. In principle they aimed at providing free hospital treatment for the afflicted, and in addition made arrangements for mass medical examinations in suspected areas, or of persons engaged in trades entailing a vagrant life, as well as of lewd women. The inadequacy of hospital space and the reluctance of the people to avail themselves of existing facilities, however, deprived the actions of much of their efficiency.

In 1812 a royal decree was promulgated replacing the different local rules. Later the supervision of prostitutes was tightened up, especially in the big cities. Promiscuous women were registered and medically examined at short intervals. In addition they were enjoined to conform to certain police regulations.

Animated by growing humanitarian sentiment, public opinion at the beginning of the present century began to take exception to the unfairness of singling out the unfortunate victims of a vicious social system for compulsory supervision entailing an intolerable interference with the personal liberty of the individual, while leaving their customers and equals in immorality unmolested. In 1903 a motion by a private Member was carried in the Diet requesting the appointment of a committee of experts to consider the question of intensifying and humanising the efforts in combating venereal disease. After seven years the experts, having accomplished their task, presented a comprehensive survey of the whole question, together with suggestions for new legislation on the subject. The findings of the committee were submitted subsequently to criticism by the Royal Medical Board, the different county governments, the Medical Association, and a number of other public bodies. Their various comments, properly digested and co-ordinated, were considered by the two experts charged with the revision of the scheme. Not until 1917, however, did the proposed Bill attain its definite shape. As a result of the alarming spread of venereal disease during the first world war, the final parliamentary stage was curtailed substantially. The Bill was carried by both Houses and became law in 1918, earlier legislation in this field being thereby abrogated. This, the Venereal Diseases (Prevention) Act, is still in force. During 25 years considerable experience of its practical application has been gained. Minor amendments have been added from time to time in order to meet the requirements of medical progress in the fields of diagnosis and treatment.

The increased returns registered during the last two years —obviously a constant concomitant of war—have demonstrated the limitations and shortcomings of the legal instrument and caused our medical authorities to suggest improvements, which are at present being considered by the Government. They will be reviewed briefly at the end of this report.

Principles of the Existing Law

The 1918 Venereal Diseases (Prevention) Act was conceived on the following broad principles.

1. Equality before the law. Discriminate action against certain categories of the population is no longer countenanced, prostitution as an officially recognised institution being abolished. All members of society who contract V.D. are subject to the same regulations and are entitled to the benefits of free treatment irrespective of economic standing.

2. In accordance, as far as possible, with recognised procedure in combating epidemic fevers, venereal disease is compulsorily notifiable by any medical man first making the diagnosis. The physician is also enjoined to try to ascertain the identity of the person suspected of having transmitted the disease and to take the steps prescribed in order to effect an examination of the said person. Finally, obviously unreliable individuals who have proved themselves unfit for ambulatory treatment by not carrying out prescribed cures or by exposing people to infection can be compelled to go into a hospital.

3. Facilities for free examination and treatment at the expense of the State are provided for anybody afflicted with or who suspect that they may have contracted venereal disease, it being incumbent on the patient taking advantage of this privilege to submit to treatment during the period of infectiousness.

4. In order to enable the authorities to apply coercion to recalcitrants police assistance can be called in, and the deliberate exposure to or transmission of infection is made a criminal offence punishable under penal law.

Review of the V.D. (Prevention) Act, 1918

Section 1.—Enumeration of diseases covered by the Act (syphilis, gonorrhoea and soft chancre). Lymphogranuloma inguinale included later. The Act applies to the diseases mentioned only during the infectious stage.

(In commenting on the Act the Medical Board has laid down rules to be followed when deciding whether a patient should be considered to be entitled to free treatment. Naturally it is especially in cases of syphilis that a judgment might be difficult. As a rule, three years of lege artis treatment is considered to be sufficient to ensure a cure. Women, however, are entitled to further free treatment if becoming pregnant or during lactation in order to protect the child.)

Section 2.—The responsibility of putting the Act into operation is entrusted to the Medical Officer of Health.

Section 3.—Any person having contracted V.D. is compelled to submit to treatment by a qualified physician and must conform to given directions for treatment.

Section 4.—Anybody suspecting venereal infection is entitled to free examination by certain specified medical officers. If actually infected, the patient is entitled to free treatment by the medical officer. Also, he is provided with the necessary medicine and utensils free of charge. Any certificates concerning the result of examinations or treatment required by the Act have to be issued free of charge. Should hospital treatment be necessary, the patient will be admitted to the general hospitals without paying.

Section 5.—Free treatment is carried out by the medical officers appointed by the State or communal authorities. (The whole country is divided up into medical districts, rural or urban.) Towns with a population exceeding 20,000 inhabitants are enjoined to establish clinics, and expenses incurred for this purpose are refunded by the State. Clinics should be conveniently located and operated in such a manner as not to divulge the nature of the disease for which advice is sought. To this end it is usual to treat other ailments at the V.D. clinics and in particular skin diseases. If possible the physician in charge of a clinic should possess special qualifications as a venereologist.

Section 6.—Medical officers referred to in Section 4 are remunerated according to a fixed, detailed scale, including also fees for such items as serological examinations.

Section 7.—Should there be reason to surmise that V.D. has gained ground among the population in an isolated locality at a considerable distance from the District Medical Officer's (D.M.O.) station the county government may order the D.M.O. to proceed to the place and tender such advice to the afflicted population as is mentioned in Section 4. Travelling expenses incurred for such journeys are met by the State.

Section 8.—Any practitioner making a diagnosis of V.D. is enjoined to inform the patient as to the nature of the disease and of its contagiousness. The patient is to be given a pamphlet dealing with the duties incumbent on him or her according to this Act (Form VI). It is specifically stated in it that marriage must not be contracted by any person suffering from V.D. The penalties incurred by causing the disease to be spread are also emphasised. The patient has to sign a receipt for the pamphlet (Form VII). Should special reasons, such as the state of the health of the patient, make it imperative not to divulge the nature of the disease, it might at the physician's discretion be kept undisclosed. In case of juveniles (under 15 years of age) the doctor has to inform the parents or guardians about the nature of the disease and give directions about what should be observed in order to prevent its spread.

Section 9.—If a practitioner who has become aware of a case of V.D. in the way prescribed in Section 8 finds that the patient fails to conform to the precepts laid down in the pamphlet, or discontinues treatment without producing a certificate to the effect that another physician has taken over, he is oblig[redacted] to the M.O.H., giving the patient's name and address (Form IX). Before acting as prescribed above the practitioner is advised to try to persuade the patient in writing to resume treatment (Form VIII).

Section 10.—Should the practitioner receive information about a V.D. patient in his care intending to contract marriage the circumstance has likewise to be reported to the M.O.H. (Form X).

Section 11.—A practitioner diagnosing a case of V.D., as dealt with in Section 8, is obliged to investigate under what circumstances and by whom the infection has been transmitted. Within 24 hours the M.O.H. has to be notified in writing about the nature of the disease as well as of the sex, age, and domicile of the patient, whose name, however, must not be given. The report should also give the elicited information regarding the transmission of the disease, including the name and address of the alleged source of infection (Form I).

Section 12.—The public prosecutor charging a person with certain offences such as rape, incest, deliberate propagation of V.D., or outrage upon morality is obliged to forward the name and address of the accused to the M.O.H.

Section 13.—Reports or notifications according to the rules laid down in Sections 9, 11 and 12 received by the M.O.H. but concerning a person living in another county or city have to be forwarded to the M.O.H. for that area. Should the person reported be a private in the armed forces the notification is forwarded to the corresponding military surgeon.

Section 14.—The M.O.H. upon receiving a report according to Section 12, or such information regarding an alleged source of infection as is mentioned in Section 11, has to write to the person referred to enjoining him or her to visit a doctor for examination (Form XI), and to produce a certificate on the findings within a specified short space of time (Form XIII).

(Great circumspection is expected from the M.O.H. in handling these matters. He is supposed to form an opinion regarding the plausibility of the notification, and conferences with the notifying practitioner are recommended in doubtful cases before acting. Letters containing orders to notified persons are sent in ordinary, plain, discreet envelopes. To mail such communications "On His Majesty's Service" is not allowed.)

Section 15.—In case the examination ordered according to Section 14 has resulted in V.D. being diagnosed in an infective stage the M.O.H. orders the patient to submit to treatment by a registered medical practitioner and to produce a certificate to that effect at short notice (Form XIV; Form XV). If ambulatory treatment is considered to entail risks of propagating the disease the M.O.H. will issue an order enjoining the patient to go into a hospital (Form XVI; Form XVII).

Section 16.—On receiving a report according to Section 9 (discontinuation of treatment) the M.O.H. takes such action as is stated in Section 15, *i.e.*, orders the patient to resume treatment and to produce a certificate of having obeyed this order (Form XVIII).

Section 17.—Notices according to Section 10 (contemplated marriage by V.D. case) are immediately sent by the M.O.H. to the Parish Registrar and steps are taken to forbid the banns.

Section 19.—Orders referred to in Sections 14, 15, and 16 have to be made in writing and should contain information regarding the consequences of non-concurrence as stated in Section 21 (calling in of the police).

Section 20.—The M.O.H. communicates to the practitioner conducting the treatment his decision to issue orders to persons notified under Sections 14, 15 and 16 (Form XIX).

Sections 21, 22.—Should a person notified according to Sections 14, 15 and 16 fail to conform to the M.O.H.'s orders the matter is referred to the public health authority (as a rule the county government), which enforces compliance, if necessary employing police assistance. In urgent cases the M.O.H. is empowered to requisition police assistance himself, his decision to be submitted immediately for approval by the county government.

Section 25.—Emphasises the necessity for discretion. Records, files, orders, letters, etc., are to be kept locked away and must not be accessible to unauthorised persons. Doctors and nursing personnel are forbidden to disclose any information received.

Section 26.—Deals with the procedure for appeal against the decisions of public health authorities or county governments. Until set aside by a higher tribunal (the Crown) orders given by local authorities have to be adopted.

Section 27.—The King decides on methods to be adopted in educating the public regarding the nature and infectiousness of V.D., available preventive appliances, and the obligation incumbent on everybody affected immediately to seek medical advice.

Sections 28, 29.—Officials or medical officers neglecting any of the responsibilities implied by the Act will be prosecuted for negligence in the discharge of official function. Any practitioner neglecting his duties under Sections 8, 9, 10 and 11 is liable to a maximum fine of 200 crowns. Legal proceedings under this heading are to be instituted by the Public Prosecutor.

Legal Corollaries to the Act

Penal Code Chapter 14, Section 21.—Anybody cognizant of or suspecting that he may be suffering from V.D. who exposes another person to the risk of infection, by sexual intercourse or indecent behaviour not attributable to sexual intercourse, will be condemned to prison, or, where extenuating circumstances can be proved, will be fined a minimum of five days' earnings. Should the disease actually be transmitted the punishment can be raised to a maximum of two years' hard labour.

The Medical Profession's (Qualification) Act, Section 6 : 2.—Anybody not being a qualified medical practitioner who accepts a fee for treating cases of V.D., tuberculosis, cancer or epidemic fevers, or who undertakes hypnotic treatments or employs a general anaesthetic, will be fined from 50 to 1,000 crowns. If such activities are carried on professionally the punishment may be raised to imprisonment not exceeding one year.

Registration, Reports and Statistics

The M.O.H. has to keep a diary in which all items coming under the headings of the Act have to be entered (Form XX). Fortnightly reports on returns have to be made to the Royal Medical Board (Form III). Yearly reports are made on age and sex distribution (Form IV). A yearly survey is drawn up giving the localities in which infections have been acquired (Form V). A yearly detailed survey is required of the M.O.H. as to the practical exercise of his duties—*i.e.*, number of notifications under the different headings and action taken in consequence (Form XXI). Returns of the M.Os. H.s' fortnightly and yearly reports are published by the Royal Medical Board.

The Present Position

It is obvious from the preceding account of Swedish V.D. legislation that it ensures the accumulation of reliable statistical data. Figures not only give frequency and distribution according to geography, sex and age, but also indicate the success met with in tracing sources of infection. No other group of diseases is so accurately charted in its variations and social repercussions. The importance of such intimate knowledge when judging the effects of our measures or when planning improvements can hardly be over-estimated.

The situation during the years between the two world wars has invited analysis by different authors, including Dahlberg ("Venereal Diseases in Sweden," 1913 to 1937. *Amer. J. Hyg.*, 1941, 33, No. 2, Sec. A). Little need be added to his searching scrutiny of conditions during the years 1913 to 1937, and his prognostication has largely proved correct.

TABLE I

NOTIFIED CASES OF VENEREAL DISEASE IN SWEDEN, 1918-43

Year	Gonorrhoea	Syphilis acq.	Soft Chancre
1918	16,626	4,256	3,163
1919	20,651	6,303	3,327
1920	14,894	3,560	1,245
1921	12,646	2,479	879
1922	11,053	1,480	509
1923	10,337	1,087	295
1924	10,197	853	215
1925	11,444	698	249
1926	12,911	937	227
1927	12,654	1,212	227
1928	13,402	1,162	214
1929	14,085	1,000	226
1930	14,408	1,116	181
1931	12,903	1,189	118
1932	12,306	811	106
1933	11,274	543	96
1934	11,594	447	106
1935	11,175	421	116
1936	12,039	381	69
1937	11,871	297	93
1938	12,541	343	84
1939	12,115	405	107
1940	10,006	352	54
1941	10,545	273	28
1942	13,747	425	35
1943	19,841	936	—

Table I gives figures up to the year 1943. The syphilis graph continued its general downward tendency until 1941, disturbed by occasionally irregular yearly variations. On the whole gonorrhoea remained constant during the first few years after 1937. In 1940 the gonorrhoea returns dropped to the lowest figure so far registered. This phenomenon, coinciding with the introduction of improved diagnostic and therapeutic methods (cultivation of gonococci and the general employment of sulphonamide drugs), raised expectations that a turning point had been reached at last in the fight against gonorrhoea. These hopes were soon to be cruelly shattered. The downward trend was followed by a substantial rise in 1942, as a precursor of the soaring figures of last year (19,841 cases), which were very nearly double the returns for 1940. The increase in syphilis morbidity in 1943 is still more pronounced, the number of cases being three times as great as in 1940. As could be expected, the four biggest cities are primarily responsible for the increase, and are also prominent as the localities where the diseases have been contracted (Table II).

TABLE II

NOTIFICATIONS OF GONORRHOEA IN OUR FOUR LARGEST CITIES COMPARED WITH NOTIFICATION FOR THE WHOLE COUNTRY

Year	N.	Stockholm		Gothenburg		Malmö		Norrköping	
		n.	%	n.	%	n.	%	n.	%
1938	12,541	4,142	33·0	1,130	9·01	447	3·56	219	1·75
1939	12,115	3,912	32·3	997	8·23	445	3·67	261	2·15
1940	10,006	3,539	35·4	1,030	10·29	457	4·57	240	2·40

N = Total number of infected cases in the whole country.
n = Number of cases infected in each of the four largest cities.
% = Percentage of total number of cases in the whole country.

Comparison of conditions now with those in the last war shows conspicuous similarities (Table III). Obviously, war conditions and their moral and social repercussions have a bearing on the spread of V.D. An alarming observation, however, is the greater proportion of women infected now than during a corresponding period of the last war (Table IV).

TABLE III

SEX AND GEOGRAPHICAL DISTRIBUTION OF GONORRHOEA DURING 1912-20 AND 1937-42

Year	The Whole Country			Stockholm		Gothenburg		Malmö		Norrköping	
	Total	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.
1912	2,682	1,564	1,118	571	823	206	76			-	-
1913	10,271	8,238	2,033	4,085	1,292	1,025	215	527	90	-	-
1914	10,676	8,616	2,060	4,594	1,298	822	203	706	149	-	-
1915	10,968	8,805	2,163	4,706	1,502	887	146	728	130	-	-
1916	11,982	9,461	2,521	4,945	1,785	1,290	161	745	139	-	-
1917	12,554	9,759	2,795	5,043	1,852	1,358	265	936	191	-	-
1918	16,626	13,182	3,444	6,377	2,109	1,803	284	1,170	234	-	-
1919	20,651	15,259	5,392	5,418	1,939	1,757	527	1,064	220	279	196
1920	14,894	11,440	3,454	4,006	1,275	1,361	288	777	120	205	158
1937	11,871	8,406	3,465	2,830	1,300	651	268	305	217	127	47
1938	12,541	8,836	3,705	2,769	1,373	805	325	303	144	160	59
1939	12,115	8,518	3,597	2,638	1,274	714	283	301	144	173	88
1940	10,006	7,186	2,820	2,494	1,045	762	268	328	129	160	80
1941	10,545	7,574	2,971	2,479	975	767	287	374	168	150	71
1942	13,747	9,986	3,761	3,215	1,336	1,020	356	581	224	169	90

M. = Men. W. = Women.

TABLE IV

SEX DISTRIBUTION OF CASES OF GONORRHOEA DURING THE YEARS 1913-20, AND 1937-42

Period	Year	Percentage Women of Men			
		Sweden	Stockholm	Gothenburg	Malmö
I	1913	24·7	31·6	21·0	17·1
	1914	23·9	28·3	21·7	21·1
	1915	24·6	31·9	14·8	17·9
	1916	26·6	36·1	12·5	18·7
	1917	28·6	36·7	19·5	20·4
	1918	26·1	33·1	15·8	20·0
	1919	35·3	35·8	30·0	20·7
	1920	30·2	31·8	21·2	15·4
II	1937	41·2	45·9	41·2	71·1
	1938	41·9	49·6	40·4	47·5
	1939	42·2	48·3	39·6	47·8
	1940	39·2	41·9	35·2	39·3
	1941	39·2	41·0	37·4	45·0
	1942	37·7	41·6	35·2	38·6
		I / II	I / II	I / II	I / II
	Max.	35·3 / 42·2	36·7 / 49·6	30·0 / 41·2	21·1 / 71·1
	Min.	23·9 / 37·7	28·3 / 41·0	12·5 / 35·2	15·4 / 38·6
	Aver.	27·5 / 40·2	33·2 / 44·7	19·9 / 38·2	19·0 / 48·1

This indicates a tendency among modern young women to consent to casual sexual intercourse, thus swelling the ranks of promiscuous females who, to avoid circumlocution, may be technically characterised as prostitutes. Parallel to the increased V.D. morbidity runs a tendency to over-indulgence in alcohol, which suggests a causal connection.

The search for sources of infection is encountering considerable difficulties, naturally more pronounced in the big cities with their unstable populations and looser morality (Table V). Only between one-third and one-fourth of the infected are able to give information as to the identity of the person who transmitted the disease, and a substantial proportion of the alleged sources of infection cannot be traced. The great number of undivulged sources forms a social quagmire which maintains the infection and yields recurrent crops of fresh cases. Unless we resort to radical measures in tackling the problem of draining this social bog we cannot hope to improve the situation. The hunt for dangerous sources of infection must be intensified by employing the facilities provided by the powers vested in the authorities charged with the supervision of juveniles, the destitute and inebriates, even though a campaign on these lines might imply a modification of the basic principles on which the V.D. Act rests.

TABLE V

FREQUENCY OF NOTIFIED SOURCES OF INFECTION AND NUMBER OF THOSE NOT TRACED

Year	Number of Notified Cases, Section 11	Number of Reported Sources of Infection	% Sources of Infection of Notified Cases	Number of Reported Sources of Infection Who could Not be Traced	% "Untraceables" of the Reported Sources of Infection
			Stockholm		
1937	3,920	936	23·88	161	17·20
1938	4,000	1,108	27·70	156	14·08
1939	3,827	958	25·03	118	12·32
1940	3,394	760	22·39	113	14·87
1941	3,468	796	22·95	95	11·93
			Gothenburg + Malmö + Norrköping		
1937	2,301	402	17·47	34	8·46
1938	2,416	422	17·47	41	9·72
1939	2,416	455	18·83	27	5·93
1940	2,116	433	20·46	32	7·39
1941	2,195	610	27·79	36	5·90
			The Rest of the Country		
1937	7,378	2,159	29·26	156	7·23
1938	7,880	2,423	30·75	185	7·64
1939	7,542	2,508	33·25	190	7·58
1940	6,019	2,067	34·34	165	7·98
1941	6,267	2,284	36·44	185	8·10

The Royal Medical Board has made the following recommendations for tightening up the procedure for dealing with the medical as well as well as the social aspects of the V.D. problem :

1. Extension of facilities for treatment by multiplying clinics and enlarging their staffs.
2. Appointing of social workers at the clinics in the big cities, who under the direction of the M.O.H. will be employed in investigating sources of infection.
3. Increased use to be made of the powers conferred on the authorities by the V.D. Act to enforce isolation in hospital of recalcitrant persons.
4. Creating centres for free prophylactic treatment of males suspecting themselves of having been exposed to infection, the intention being to keep these clinics open during the small hours of the morning.
5. Facilitating access to appliances and utensils designed to prevent infection.
6. Instigation of a widespread educational campaign employing the wireless, the Press, the platform and the film.
7. Speeding up of compulsory instruction in sex physiology and ethics in the schools.
8. Establishing close co-operation between the medical and social authorities.

The above items are not likely to meet with any serious opposition. Opinion in responsible legislative circles, on the other hand, will be less liable to countenance suggestions put forward by certain representatives of the medical profession for prohibition of spirits at restaurants where dancing is allowed and for the routine examination of disorderly persons.

INTERDEPARTMENTAL COMMITTEE ON DENTISTRY

The following Memorandum, as approved by the Council of the Society of Medical Officers of Health, on September 17th, 1943, was submitted to the Interdepartmental Committee by Dr. R. H. H. Jolly, Dr. J. A. Charles, Dr. Hugh Paul, Mr. C. E. Wilshaw, L.D.S., Mr. J. F. Pilbeam and Mr. A. Gordon Taylor.

The main headings, in bold type, have been shortened.

Public dentistry originated in the Poor Law Schools towards the close of the last century, and owed its conception primarily to the diligence and public-spirited action of members of the dental profession, among whom such pioneers as Fisher, Spokes, Pedley, Cumine, Fisk and others actually laid the foundations of the present school dental service. In this early development, and also in the ensuing years, no professional organisation played a more significant part than the School Dentists' Society, founded in 1898, and merged into the Society of Medical Officers of Health to become its Dental Officers' Group in 1921.

Provision of a Satisfactory Dental Service

1. Prior to the war the number of dentists was sufficient to meet the demand made by the adult population, but inadequate to meet the real needs of the people. The general population either could not afford complete dental treatment or were not sufficiently convinced of its value to themselves to set aside money for this purpose. The effort to grant assistance and encouragement by means of an additional benefit of National Health Insurance has generally been admitted to have had very limited success. On the other hand, experience has indicated that where there is no financial obstacle to dental treatment, such as in the school and maternity and child welfare dental services, the demand for treatment seems ultimately to be limited only by the inadequacy of the particular service to meet it.

2. The school and maternity and child welfare medical and dental services have indicated that arrangements for methodical inspection and treatment can be best organised when based on health centres established by local authorities and staffed by salaried personnel. In view of these facts, and as the public is becoming increasingly more ready to avail itself of these services, it appears that a comprehensive dental service should be based on health centres set up by area authorities employing whole-time salaried staff.

3. The present and future of the dental services must be considered in the planning of health centres.

4. Area authorities should plan for dental surgeries at such centres, so that ultimately there could be one dental practitioner for every 1,500 persons availing themselves fully of the service as routine patients.

5. A dental officer should supervise and administer the dental service, and he should work under the general administrative supervision of the medical officer of health as head of the health department. The dental officer should at all times have the status and privileges of the head of a department.

6. At the commencement the area authority would continue with its full- and part-time dental staff as at present and that staff would continue with the school, maternity and child welfare, and other dental services of the authority.

7. All residents are entitled to casual dental treatment at the health centre as far as the service provided permits.

8. All residents may, however, become routine patients by electing to do so. A routine patient would select his own dentist from those attached to the health centre. A routine patient would undertake to attend annually by appointment, or according to instructions by the dental officer, for inspection (or, if under 18 years of age, twice annually), and have all recommended treatment carried out. Routine patients would attend for treatment by appointment. Residents who make their choice of available practitioners at the outset could apply to become routine patients at the commencement of the scheme. A routine patient who fails in his undertaking would (subject to review by the supervising officer) revert to the casual class.

9. Casual patients would attend without appointment and be seen by whichsoever dentist was on casual duty at the time.

10. When a dentist retired or left the district his patients would be free to select any available dentist and not necessarily the dentist newly appointed.

STAFFING

11. All practitioners in the area would be invited to participate in the scheme at first as part-time personnel and the sessions allocated accordingly.

12. Each practitioner would start treating casuals until 150 patients selected him as their dentist under the State Dental Service. This would be regarded as full duty for one session per week, and so on with each successive 150 routine patients, until a total of 1,500 patients is reached, by which time the dentist would have relinquished private practice and be in full-time salaried State Dental Service. Adjustments would be made for groups of less than 150 in order that patients and practitioners would not be deprived of full benefits.

13. The present staff of area authorities would be equally eligible for selection by routine patients, and as each group of 150 patients was acquired, the dentist concerned would be relieved of one weekly session of his usual work. The number of dentists employed and the proportion of their time given to casual or routine treatment would depend on local response.

ASSISTANCE AND FACILITIES

14. A dental attendant, who would be trained at a special course, would be attached to each surgery. An attendant's duties would be to assist the practitioner, have charge of equipment and be responsible for the record cards of each practitioner using her surgery. Clerks would undertake general clerical work.

15. Facilities for dental *x*-rays and pathological and histological examinations to be available to each health centre. A dental laboratory with whole-time salaried staff to be established in each health centre so that prosthetic work could be supervised by the individual dentist responsible for the case.

16. In rural districts it would at first be necessary for villagers to attend a health centre at, say, the market town, where separate days could be arranged to deal with different districts. When patients had made their choice of medical and dental practitioners and thereby indicated the percentage that elected to be routine, then it would be practicable for smaller centres to be set up which the different practitioners would visit for the requisite number of sessions per year to examine and treat all the routine cases. Mobile dental units would complete the service.

17. Dental treatment in hospitals and institutions raises no special difficulty.

18. The possibility of adopting an area as an experimental area, or of experimenting with a representative section within an area, should be explored in order to acquire working data.

19. In areas where teaching hospitals are established, arrangements should be made to link up the work of the hospitals and centres.

REVIEW

This scheme can be worked as an integral part of a national health service. It can be built up as it becomes acceptable both to patients and practitioners and therefore ensures an easy transition from the present mixed service to full-time salaried dental service.

The scope of all active clinicians remains as wide as possible, which is essential if the interest vital to sound work at the chairside is to be maintained.

Entrance to the Dental Profession

20. Area authorities would be required to anticipate future development by stating their probable requirements of staff, so that the central authority in conjunction with the dental board and teaching hospitals would arrange for the training of the requisite number of students.

21. The Board of Education through the medium of secondary schools should encourage entrance into the dental profession. Generous State scholarships should be granted to specially selected suitable candidates so that lack of means does not prevent desirable persons making dentistry their career.

22. Conditions of service, holidays and salaries must be improved, and should be reasonably comparable with those for other professions which may seem more attractive in the character of the work entailed. To this end the present members of the profession must be rendered content, as a dissatisfied profession is a strong deterrent to potential members. All dental posts in a national health service should have an optional retiring age of 60 years, with provision for "added years" so that such dental officers may have full pensions.

23. The higher clinical appointments should carry equal status and remuneration with those of an administrative nature.

24. The qualifying examination should be made a standard one throughout the kingdom. It is necessary to reorganise the teaching of dentistry on the following lines: dental schools should be evenly distributed about the country and closely associated with medical schools. They should be of a convenient size so that teaching can be conducted by a staff consisting mainly of whole-time teachers and assistant teachers appointed principally on the grounds of their teaching abilities. Part-time visiting teachers should be appointed for a limited period. Dental schools should have powers to select students and to discard those who show little promise or keenness. The curriculum should be revised so that interest is maintained throughout the whole course. Teaching should be as intensive as possible, but it must be remembered that a professional education tends to narrow the outlook of the student and efforts should be made to broaden his outlook outside in the realm of the arts, sports, and current affairs. As well as competence in every aspect of dentistry, the newly-qualified dental surgeon should take and enjoy his place as a citizen. Postgraduate refresher courses should be instituted and made obligatory.

Existing Legislation: Government of the Dental Profession

25. The existing Dentists Act 1921 is adequate. The present powers of the Dental Board and its control of members of the profession is satisfactory. No form of dental treatment should be entrusted to persons other than registered dental or medical practitioners, and this Society strongly deprecates any suggestion that there should be two standards of qualification.

Research into Dental Disease

RESEARCH

26. A central board in control of research should be established which would allocate special pieces of research to selected trained research workers.

PREVENTION

27. Facts already known to delay the onset of dental disease such as correct feeding of infants and sound oral hygiene should be made widely known through schools, radio, films and posters. General and local dental health propaganda should proceed in accordance with the establishment of services to meet the demands created.

FOOD AND DRUGS (MILK AND DAIRIES) BILL, 1944

The Sanitary Inspectors' Association draw attention to a Memorandum issued by them in August, 1943, relating to the White Paper issued by the Government on Milk Policy, and to the Food and Drugs (Milk and Dairies) Bill, 1944. The Association considers that the present is not an opportune time to deal with matters of this kind, which affect the constitution, powers and duties of local government. They believe that the whole matter should be dealt with in its entirety and deferred until the cessation of hostilities.

If the Bill becomes law, the Ministry of Agriculture's Veterinary Inspectors would be responsible for the inspection of dairy farms to secure compliance with the provisions of Milk and Dairies Regulations relating to milk production. The Association does not consider the qualifications of a veterinary surgeon are such as to enable him to deal with matters of building construction, drainage and sanitation, sewage disposal and water supply matters normally within the province of the sanitary inspector. Apart from this, however, the veterinary profession itself has drawn attention to the acute shortage of veterinary surgeons, as a result of which it is impossible for the Ministry's inspectors to carry out more than one clinical inspection a year in respect of cattle whose milk is heat treated, and twice a year where the milk is consumed raw. Notwithstanding these facts, it is proposed to burden still further the veterinary inspectors by making them responsible for the work previously carried out by sanitary inspectors.

The Bill proposes that the Minister of Agriculture shall have power to refuse or cancel registration of a milk producer, if he thinks that the provisions of Milk and Dairies Regulations will not be or are not being complied with. Although the farmer is entitled to make representations to the Minister, there is no right of appeal against the Minister's final decision. This seems to deny to the farmer the elementary rights of natural justice. Local authorities have never had the power to refuse or cancel the registration of a dairy farmer. They were compelled to register premises for the production of milk, notwithstanding that they knew they were totally unsuitable for the purpose and without any necessary apparatus for carrying out dairy farming. The Bill proposes to extend the powers of local authorities to refuse or cancel the registration of purveyors of milk if they can prove that the public health is or is likely to be endangered, and there is a right of appeal against the decision of the authority to a court of summary jurisdiction. It will be seen therefore that the difficulties and disabilities under which local authorities have laboured are being removed so far as the staff of the Ministry of Agriculture are concerned, but are still retained in respect of local authorities and their officers. (The above is an abridgment of a statement issued by the Sanitary Inspectors' Association which accompanied their memorandum.)

The Minister of Health has appointed Dr. J. A. Charles to be a Deputy Chief Medical Officer in the Ministry of Health. He will take up his duties on May 15th. Dr. Charles has been M.O.H., Newcastle-upon-Tyne, since 1932, and is a member of the Minister of Health's Medical Advisory Committee.

CORRESPONDENCE

A NATIONAL HEALTH SERVICE

To the Editor of PUBLIC HEALTH

SIR,—The first point which should be remembered in discussing this matter is that there are certain very definite and material advantages to the general public which are bound to arise from the application of some such scheme. Such advantages and improvements are so difficult to obtain that we must take no risk of the public loosing them, even though we as a profession object to one or more of the actual proposals made by the Minister. In any case, with the improvements suggested below we shall be able, by continuous vigilance and constructive criticism, to grow a reasonable plant from this rather unreasonable seedling.

It is difficult to understand why the first essay in nationalisation —and please note that this is being produced by a predominantly conservative administration, the declared foe of all nationalisation— should be of a profession in which there is really less "vested interest," and the abuses and inefficiency therewith associated, than in most other professions, trades, industries, or businesses. It seems that this step may have been taken because there was no well-organised vested interest to use its influence on our behalf. Before we accept any such scheme we might reasonably enquire whether nationalisation of other interests—which are more in need of it—are in prospect. To take a very notable example: why at this juncture was the chance not taken to nationalise and so control the drugs monopolies and the patent medicine racket? And is there any real doubt that social security is an absolutely essential prerequisite for the success of any enlightened medical policy, which is, after all, only another way of saying a policy for positive health. Resolute action must be taken by the medical profession so that, in the event of failure to achieve some national medical plan, the politicians shall not be able to take shelter from an irate public behind our profession: *i.e.*, we must see that the public understands our attitude and that this attitude is not deliberately misrepresented as political prejudice, avarice, or something similar.

This scheme seems to aim only at controlling the freer part of the profession—those not subject to any civil service control—and this certainly looks suspicious, and it cannot be said that this scheme *rationalises*, because it will actually increase the number of Ministries and agencies involved in medical matters. Thus one of the main arguments in favour of nationalisation cannot be advanced in favour of this particular manoeuvre. Therefore, if we must have nationalisation at this juncture, why not have the benefits of it as well?—*i.e.*, put all medical services under such an improved administrative structure as is suggested below, and so do away with the present chaotic multiplicity. Now it seems highly probable that the Government are determined to put forward this scheme for enactment, so I think we should accept it if the Minister will accept the following improvements.

1. As the suggested administrative structure is undemocratic and likely to stifle enterprise or progress, there should be a Central Medical Advisory Council democratically elected by the profession and its auxiliaries; this Council must have the right of reporting to the public and the House irrespective of the Minister's wishes. These rights of separate report and propaganda would make sure that public opinion was kept enlightened so that the legislature would be forced to encourage progress. They would also be a useful check on excessive bureaucracy.

2. In the local areas the responsibility for either *acting* or *not acting* must rest with elected lay people, who should be advised by a council similar to the central one and with similar powers, whose chairman could serve on the lay council for liaison purposes. Medical representation should not be asked for on these councils because it would be rather undemocratic—such representatives would not be elected by the public—and I think only elected members should have the responsibility of legislation.

3. As many branches of medicine as possible should be brought into this Health Service, including industrial medicine and the branches of the profession controlled by other Ministries.

If we back the scheme subject to the above improvements, we shall encourage progress and not reaction, we shall assist the laying of a foundation on which a useful structure can be built, and the politicians will not be able to accuse the profession of sabotaging social legislation. Thus we should secure a reasonable price for our loss of economic independence.—I am, etc.,

WM. P. FORREST,
Medical Officer of Health for the Mansfield Woodhouse U.D.C. and Warsop U.D.C.

CHILD WELFARE SERVICES

To the Editor of PUBLIC HEALTH

SIR,—On the recommendation of its Maternity and Child Welfare Committee, the Wednesbury Borough Council have passed the following resolution and have directed that it shall be forwarded to the Minister of Health:—

"The Council views with apprehension the suggestion of the Government that child welfare services shall be administered only by county and county borough councils.

As a child welfare authority of long standing it is of the opinion that these services require—for their effective and full administration—local direction. They are intimately connected with the housing and sanitary conditions of each area: the child is a member of a family. The Borough of Wednesbury is proud of its record as a child welfare authority: its infantile mortality rate in 1942 was below that of England and Wales as a whole—no mean achievement for an industrial area which once had an infantile mortality rate of 250 per 1,000. The Council is furthermore of the opinion that the Medical Officer of a Borough should always be the chief officer of its child welfare and school medical services; only thus can beneficial local care and government be exercised.

Maybe there are other non-county borough and district councils of the same mind.—I am, etc.,

A. H. KYNASTON,
Medical Officer of Health and School Medical Officer.

Wednesbury.

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BOOK REVIEW

Pasteurisation. By HARRY HILL, F.R.SAN.I., A.M.I.S.E., F.S.I.A., Sanitary Inspector, Borough of Southgate. x + 152 pp. London: H. K. Lewis & Co. 1943. Price 10s. net.

The first three chapters deal with the case for pasteurisation. The views of the author are quite sound and he presents the case competently, but hardly succeeds in setting out the facts with their full weight. For example, discussing the evidence that tuberculosis is conveyed by raw milk, he quotes opinions but does not explain that the convincing and essential fact is the recovery of the bovine type of tubercle bacillus from so many human cases, which not only clinches the argument but supplies definite information as to the extent of bovine infections. On the subject of the effect of pasteurisation on the nutritive qualities of milk mention only is made that numerous experiments have shown no unfavourable differences without any account of these convincing experiments or even giving the references to them. On mastitis he conveys the impression that infection of a cow's udder with haemolytic streptococci may not cause clinical mastitis, and that this serves as a point of difference from bovine mastitis, which is hardly correct. Staphylococci in milk in relation to food poisoning is not mentioned; otherwise human infections are adequately covered.

The remaining seven chapters deal with the control of pasteurisation, and these sections are well done and are fairly complete. Their titles indicate their scope—plant design, in-bottle pasteurisation, the short-time process, other processing methods, bottles, bottle fillers and washers, cleaning operations and control measures. The author properly pays much attention to lay-out and plant design. The various faults which may be found in pasteurisation plant are explained, but these sections and the book generally would have been greatly improved by illustrations of plants and particularly of possible defects. The H.T.S.T. process is described, and while it is pointed out that the safety margin lies within narrow limits the great practical difficulty of checking the working, and especially the correct time interval, should have been emphasised and the best procedure discussed.

The author deals competently with bottles and their filling and washing. Amongst other things, he points out the defects of cardboard discs for closing bottles, but he does not make clear that, while they are illegal as the only covering for accredited or T.T. milk, they are not illegal for pasteurised milk.

Chapter X deals with control measures, and while fairly complete it might have been still further amplified, as the subject is so important. He stresses the importance of checking all indicating thermometers and all automatic temperature recorders. The inter-relationship between inspections and laboratory control should have been amplified, and some mention might have been made of the laboratory pasteurisation test in connection with thermophilic and thermoduric organisms. In the section on lay-out no mention is made of the

importance of suitable traps to collect all waste milk, such as from splashings from weighing tanks, both to save milk and to avoid it being discharged into the drainage system.

Most of these points are comparatively small, and on the inspection and control side the author has written a very clear and comprehensive account which should be of great assistance to all who have to inspect dairies or milk depots which pasteurise milk.

OBITUARY

THOMAS EVANS, M.B., D.P.H.

It is with deep regret that we record the death on May 1st of Dr. Tom Evans, late Medical Officer of Health for Swansea.

Thomas Evans was born in Cardiganshire in 1873 and was educated at the local Council School at Ciliau Aeron and later at the College School, Lampeter, to which he had won a scholarship. He proceeded to Llanarth Grammar School, to University College Aberystwyth, and then to University College Hospital, London, where he won gold medals in clinical medicine and for medical jurisprudence, and a silver medal for hygiene and public health. In 1899 he graduated M.B., B.S., London. He became house physician at U.C.H., where he also spent some time in the bacteriological department. He received the D.P.H. in 1909. For a year or two he was first assistant to the Croydon Fever Hospital, and then returned to Wales to take up the post of Assistant School Medical Officer, Glamorganshire. For one year he was M.O.H., Pembrokeshire, and then was appointed to Swansea, where he remained until his retirement, after 28 years' service, in March, 1939.

During these years his activities were many and varied. He represented the Welsh Branch of the Society on the Executive Council. He gave important evidence before the "Tuberculosis Inquiry" about the prevalence of this disease in Wales. He was at one time Chairman of the Swansea Division of the B.M.A. His tenure of office was a time of great activity and progress in the city's health services. Previously there had been one voluntary infant welfare clinic run by Lady Mond. Under Dr. Evans's guidance this small venture was expanded into a complete scheme of maternity and child welfare clinics. School clinics were also established. The first maternity hospital, Craig House—the result of a gift of £2,000 from the American Red Cross (Children's Jewel Fund) in appreciation of the work for maternity and child welfare done in Swansea—was opened in 1919. Another maternity hospital, Rheanfa, was opened in 1926. An isolation hospital was built at Sketty, previous to which accommodation had been contained in a series of corrugated iron buildings on the sea-shore, although in 1918 the Gower R.D.C. Hospital (Fairwood Hospital) was incorporated in the borough. Dr. Evans advocated a scheme whereby municipal midwives would be able to call on a sister midwife, one of whom would be available in each district for first call in difficult cases. Owing to lack of suitable applicants, only one sister midwife was eventually employed, but the city has now a complete scheme of municipal midwives. It may be mentioned that Dr. Evans represented Wales on the special committee appointed by the Minister of Health to report on domiciliary midwifery work. Dr. Evans was instrumental in establishing a residential training home for high-grade mental defectives, an industrial centre for men, and an occupation centre for women. A child guidance clinic was established in 1936. On several occasions Dr. Evans gave evidence before a Committee of the House of Commons in connection with the extension of the Borough Boundary, and the promotion of local Bills for the improvement of the public health.

We are indebted to a colleague for the following appreciation:

"The death of Dr. Tom Evans is a personal loss to his old colleagues who were associated with him in the Welsh Branch and the Council of the Society. His attractive personality, his candid but friendly criticism, his transparent honesty of purpose, and his energetic and devoted public service will be remembered by them with admiration and regret. On retirement he found interest and delight in farming, which had for long been his chief interest outside his profession. At the farm where he had spent his childhood he now bred shorthorns, gave an example as a milk producer, and joined in all the local organizations concerned with agricultural education and progress. He became President of the National Farmers' Union for his county last year. A comparatively short illness ended a long, useful, and active life. *Beatus ille.*"

The British Council has been permitted to print a small edition of *British Medical Bulletin* for sale in the United Kingdom. Applications for annual subscriptions or for single parts should be addressed to BMB, 3, Hanover Street, London, W.1.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

MR. WILLINK'S SPEECH AT ANNUAL LUNCHEON

The first social function which the Society of Medical Officers of Health has held for some years took the form of a luncheon at the Connaught Rooms on May 5th, presided over by Dr. R. H. Jolly, and attended by more than 150 members and guests. The principal guests were Mr. H. U. Willink, K.C., M.P., Minister of Health, and Mrs. Willink, Sir John Maude and Sir Wilson Jameson, respectively secretary and chief medical officer of the Ministry, Mr. Somerville Hastings, Chairman of the L.C.C., and representatives of the County Councils Association, the Association of Municipal Corporations, the Urban and the Rural District Councils Associations, and the Metropolitan Boroughs Standing Joint Committee.

Dr. JOLLY, in proposing the health of the Minister, reminded the company that when the Society was first founded in 1856 it consisted almost entirely of Medical Officers of Health, but for a long time now it had thrown open its membership to all medical and dental officers of local authorities and of the central government, and at the present time it included a large number of members engaged in child-welfare work, school medical work, and the fever hospital and tuberculosis services.

"The members of the public health services carry out their work very quietly and unobtrusively. They do not air their grievances or anxieties very largely in the medical or lay Press, but a certain number of our members, particularly in maternity and child welfare and school medical work, are wondering what is to become of the preventive and educational structure which has so well been built up by them during the last 25 years and is now firmly established and deservedly popular. We are conscious of a vague shape ahead not indeed a black cloud, but a White Paper—which we fear may threaten our existence."

Mr. WILLINK began by paying a tribute to the public health services. Although new to his present post, he had served for three years as a Special Commissioner in the Greater London area, where he had the pleasure of meeting between 70 and 80 Medical Officers of Health, whom he found extraordinarily co-operative and helpful. He saw the heavy and increasing burdens laid upon them—an intensified housing problem, the problem of the shelters, the general supervision of casualty services, the development of war-time nurseries, and so forth. He spoke in particular of his association with Dr. Allen Daly and Dr. Andrew Topping, and his pleasure on hearing of the appointment of the latter as Chief Medical Officer for the European region under U.N.R.R.A.

It was greatly to the credit of the public health services that maternal and infant mortality rates during the war years had fallen. Provisional rates showed a fall in maternal mortality from 2·47 per 1,000 births in 1942 to 2·29 in 1943. For infant mortality the final corrected figure for 1943 was likely, for the first time in the records, to be below 50. Stillbirths, which as recently as 1940 were 39 per 1,000, had fallen in the first quarter of 1944 to 29. Deaths from diphtheria had fallen progressively:—

1941	(first quarter)	841
1942	"	627
1943	"	498
1944	"	285

These figures showed the most pronounced fall within the ages—1 to 15—affected by immunisation. On the other side of the picture tuberculosis and venereal disease showed an increasing incidence, the crude death-rate for respiratory tuberculosis in 1943 being 537 per million as compared with 506 in 1942. But this was far below the figure—1,322—for 1918, the corresponding year of the last war.

The Minister next spoke of the Government's national health proposals. The proposals invited criticism, and the invitation had been accepted. There would be no legislation in a hurry; it was desired to obtain all criticisms of a constructive character. The brevity of the reference to Medical Officers of Health in the White Paper did not indicate any lack of appreciation of their importance in the new service. So far as the general nature of the proposals was concerned, he thought it was in line with the proposals of the Society. This was so in respect to universality of service, treatment available without charge at time of treatment, larger areas especially for hospital service, full use of voluntary hospitals, establishment of health centres, closer contact between preventive and curative medicine, central and local professional consultative bodies. There were three main differences: (1) The Society suggested one central department to absorb all governmental health functions. The view of the Government was that certain medical functions must attach to other Government departments. (2) The Society suggested a one-purpose health authority for every area. This would mean a recasting of the local government system—a prolonged undertaking for which the new health service could not wait. (3) The Society called for a whole-time salaried service for all branches of medical practice. Upon this most controversial of all proposals, Mr. Willink said, he would be very unwise to embark on the present occasion. He added that he appreciated the anxieties which Medical Officers of Health felt, but he knew they would set on the other side the immense additions to the scale and importance of the work of Medical Officers of Health which the new proposals would bring about.

Mr. Willink, in a personal word, expressed his gratification at the appointment of Dr. J. A. Charles, M.O.H., Newcastle, as an additional deputy chief medical officer of the Ministry, and also tendered his congratulations to Prof. R. M. F. Picken on becoming President-Elect of the Society.

BRANCH NEWS

YORKSHIRE BRANCH

President: Dr. E. C. Benn (Medical Superintendent, Seacroft Hospital, Leeds).

Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

A meeting of the Branch was held in Leeds on February 25th; 24 members were present. The minutes of the meeting on February 4th were approved.

The Secretary submitted a letter from the Acting Executive Secretary on the question of capitation or other payments to Groups for expenses necessarily entailed in the work of the Groups. It was resolved that the Secretary inform the Acting Executive Secretary that the Yorkshire Branch feel that 2s. 6d. per member per annum is the minimum they could accept to carry through the normal work of the Branch.

Milk.—Dr. J. A. Fraser (C.M.O., Yorks North Riding) pointed out that if M.O.s H. had clearly defined powers to deal with the milk of a herd, or a mixed lot of milk, by means of compulsory direction to a pasteurising plant, it would reinforce the powers conferred in Section 25 of the Food and Drugs Act 1938, which only seemed to deal with "the milk of any cow." It was resolved that the Council of the Society be requested to take steps to have Section 25 of the Food and Drugs Act 1938, modified to include the following:

> That when a sample of milk from a single producer has been found to be tuberculous by animal inoculation, or otherwise, the M.O.H. of the county or sanitary district in which the milk was produced shall have power to direct that all milk produced on the premises of that producer, and intended for human consumption, shall be efficiently pasteurised, such direction to remain in force until a producer submits a certificate from the Veterinary Inspector of the Ministry of Agriculture, certifying (*a*) that the tuberculous animal(s) has (or have) been removed from the herd; or (*b*) that he is satisfied that the milk now being produced has ceased to be infective."

Position of M.O.H.—Dr. E. D. Irvine (M.O.H., Shipley U.D.C.) referred to the unsatisfactory position of M.O.s of county districts, as indicated in the proposals in the Education Bill, and in the White Paper dealing with medical services. The changes envisaged indicated a loss of status which was keenly resented. In the Education Bill it was mentioned that delegation of powers to assist Part III Authorities would be possible, but the application was most illusory. Medical officers would have no immediate approach to the councils responsible, and would, moreover, have very little say in the direction of their medical services. Dr. W. J. Frain pointed out that the proposals outlined made District Medical Officers, in effect, Assistant Medical Officers to the County. This, he felt, would have a damaging effect on the future recruitment of public health medical officers. Dr. J. J. Buchan agreed that efficient Part III Authorities were not being given sufficient consideration, and might suffer under the new proposals. The Yorkshire Branch might make representation to the Board of Education. It was resolved that the Council of the Society be requested to take all practical steps and make appropriate representation to the Board of Education so as to safeguard the interests of the school medical service and its officers in the areas of efficient Part III Authorities.

Home Helps.—Dr. Irvine said there was a great need for home helps outside of the maternity and child welfare service. He pointed out this need to his council recently, and had applied to the Ministry for permission to introduce such a scheme in Shipley, but this had been refused. There were no statutory powers at present to employ home helps, other than under the Maternity and Child Welfare Acts. It was resolved that the Council of the Society make representation to the Ministry of Health for power to be obtained permitting the employment of home helps, at the discretion of the medical officer of health, in cases of any kind of sickness or infirmity on terms similar to those whereby home helps are at present employed in maternity and child welfare work.

School Towels.—Dr. Payne brought to notice the limited supply of towels permitted at present by the Board of Education in elementary schools. The Board Circular 1556G limited the supply of towels and tea-cloths to 5 square yards of material per 100 pupils. Dr. Payne thought that as a result of this very limited supply the spread of contagious diseases in schools was extending. It was resolved that the attention of the Council of the Society be called to the inadequate allowance of towels at present permitted in schools, with the request that representation be made to the Board of Education to increase this allowance.

A meeting of the Branch was held in Leeds on March 31st. Thirty-four members were present. The minutes of the meeting held on February 25th were approved.

The President referred to the death of Dr. W. Steven which occurred on October 15th, 1943, and it was resolved that the sympathy of the Yorkshire Branch be expressed with the late Dr. Steven's family in their loss.

The Hon. Secretary reported that midwives employed by the West Riding C.C. were being paid £30 per annum above the scale recommended in the Rushcliffe Report. A supervisor employed by the Council had explained that this was because midwives were expected to do relief duty. Several members expressed the view that representation should be made to the County Council, pointing out that the salary given should not exceed that outlined in the Rushcliffe Report, and that any additional allowances given, on account of relief work, should be by way of expenses. It was resolved that the Hon. Secretary communicate with the County M.O. on this subject.

THE WHITE PAPER

Dr. J. J. Buchan said that the White Paper presented the proposals of the Government for constructive criticism. The Paper concerned itself chiefly with curative medicine, its reference to preventive medicine and the improvement of the health of the people being meagre. There was much play on the word "comprehensive," but the Report used the word in a limited sense. The growth and practice of preventive medicine had hardly ever depended upon central effort. The central bureau, whether a General Board of Health, the Privy Council, Local Government Board, or Ministry of Health, had always been slow to initiate change and had often been dependent upon experiments and ideas originating elsewhere. The history of the past hundred years showed how essential it was for local authorities and others to maintain freedom in medical and health matters.

Proposals for the general administrative structure were of interest to medical officers of health. The White Paper recommended the formation of Joint Authorities, which seemed likely to be unsatisfactory organisations. The control of the electorate over Joint Authorities was so indirect that there was a serious danger of these authorities losing touch with local opinion and local needs. However anxious these Joint Authorities might be to meet local circumstances, the feeling would inevitably arise that they were practically independent of the local authorities from which their members were drawn. The White Paper, he said, did not apparently put forward this scheme of Joint Authorities as a long-term policy, but the complications bound to ensue from such a course were too profound to justify its acceptance without protest. Dr. Buchan feared that the Joint Authority would lead to a severe disintegration of medical work in the country, and to a dissipation of effort with results in no way commensurable with the work involved.

Dr. J. Wood Wilson asked whether the area of the Joint Authority was to be settled by the Minister before planning began, or to be considered later in connection with the draft area plan submitted to the Minister by the local authorities. The impression he got was that very large amalgamations of existing districts were intended. Analysing the proposed transfers of various services, Dr. Wood Wilson concluded that there would be considerable losses and but few gains to the counties. One "gain" was in respect of the general practitioner service, where county councils would "be responsible for providing, equipping, and maintaining such Health Centres as

may be approved by the Minister, and in such cases to be joined in the doctor's contract with the Central Medical Board." There was no doubt that G.P.s viewed with alarm this wedding of local authorities to health centres and general practice. They feared that this was a forerunner of a larger system of employment under such bodies. As regards "losses" to the counties, Dr. Wood Wilson thought that there would have to be opening up of hospitals to a large area of population, without consideration of place of residence within limited boundaries. This would involve bringing into the scheme all special hospitals as well as general hospitals. The co-operation of voluntary hospitals would be required, although these hospitals were vociferous in their condemnation of the terms offered by the White Paper.

The deflection of institutional provision for maternity cases from welfare authorities to the Joint Authorities, followed the broad principle of the Report, and would leave county councils with the environmental services relating to ante- and post-natal clinics, domiciliary midwifery, and the health visiting service. One big change which affected county councils as distinct from county boroughs concerned the responsibility of those environmental services under the area plan. The smaller welfare authorities would automatically cease to exist under the proposals, their functions being taken over by the county council; and the larger welfare authorities such as municipal boroughs and large urban districts, unless designated an "exempted authority" under the new Education Bill would also be required to cede their functions to the county council. Two other deflections concerning county councils as a whole were the transfer of isolation hospitals and mental hospitals to the Joint Authorities. The loss of isolation hospitals would be a grievous one to many district authorities which had prided themselves on the efficiency of their local arrangements, and usually had whole-hearted support from the ratepayers in their endeavours to keep children suffering from infectious diseases near their homes.

Dr. J. A. Fraser, who was unable to be present, made some comments in a letter. He considered that the main idea running through the White Paper should be supported and would be a tremendous step forward. He thought, however, that the principle of an *ad hoc* joint authority was most regrettable, but apparently unavoidable until local government reform took place. It seemed to him unfortunate that the fate of maternity and child welfare services depended on the present Education Bill. It was regrettable that certain medical services would still remain outside the Ministry of Health, for example, the Home Office and Ministry of Supply.

There was a tendency to make doctors think too much in terms of hospitals and not sufficiently in terms of health.

Dr. Fraser noted that medical officers of health had a mere paragraph in the Report, and that public assistance was barely mentioned. There would be a great reduction in the work of the Public Health Department of most county councils. They would lose control of all hospitals (general, special, fever, maternity, mental) and sanatoria, including laboratories in such institutions, tuberculosis dispensaries with their staffs, cancer diagnostic centres, mental out-patient clinics, and possibly *ad hoc* venereal diseases clinics. Infirmaries and sick wards in mixed public assistance institutions would have to be separated from the parts of the institution for the non-sick. Difficulties might arise where existing officers (medical, nursing and others) carried out duties for services which would pass to the new Joint Authority—*e.g.*, tuberculosis officers doing other medical duties, tuberculosis nurses who were also health visitors and/or school nurses.

Dr. J. J. Jervis referred to the unsatisfactory position of the M.O.H., as outlined in the White Paper. He considered that the proposals would, if carried out, result in a duplication of staff which would be wasteful. Dr. J. F. Galloway said that the White Paper was desirable in principle and should not be opposed even though it might mean some degree of sacrifice on the part of medical officers of health.

COUNTY BOROUGH GROUP

President: Dr. J. A. Charles (M.O.H., Newcastle-on-Tyne).
Hon. Secretary: Dr. Gordon Lilico (M.O.H., Derby).

A special meeting of the County Borough Group of the Society was held at Tavistock Square, London, on March 31st, to discuss the White Paper on a national health service. The President was in the chair, and 30 members were present.

Dr. Charles took the meeting through the summary, paragraph by paragraph, and the secretary was instructed to send the following resolutions for the consideration of the Society:

(1) That this meeting is of opinion that the Central Health Services Council should be constituted by election from the medical and allied professions, with a minority of members nominated by the Minister of Health.

(2) That this meeting is of opinion that the Central Medical Board should be constituted by nomination by the Minister of Health, with a substantial minority of its members elected from the medical profession.

(3) That the Central and Local Health Services Committees and other advisory bodies should contain members who have had practical experience in the Public Health Service.

(4) That the practical work of joint authorities and their constituent authorities should be integrated through the medical staff serving both bodies.

(5) That the chief executive officer of the Joint Authority should be a medical officer with administrative experience and qualifications.

(6) That in the formulation of any comprehensive scheme for a National Health Service, the personal health service of the local authority, the hospital service, and the environmental health services should be closely integrated.

(7) That in the legislation resulting from the consideration of the White Paper provision should be made for adequate compensation to be payable to any member of the existing Public Health Services who may suffer loss of remuneration consequent on alteration of his duties, and that such provision should include for superannuation purposes the addition of years of service in respect of the student period.

TUBERCULOSIS GROUP COMMITTEE

President: Dr. W. B. Christopherson (Tuberculosis Officer, Norfolk C.C.)
Hon. Secretary: Dr. R. L. Midgley (Medical Superintendent, Devon C.C.).

Meetings were held on February 18th and March 24th. The President occupied the chair at both meetings.

A motion that Dr. Lissant Cox be congratulated on his recent honour was carried with acclamation.

The minutes of the previous meeting were read and signed. Council had sent the following resolution to the Ministry of Health: "That ultimate fitness for work should not be the criterion for eligibility for financial allowances on the scale laid down in Memo. 266/T. but that all cases of pulmonary tuberculosis who conform with the instructions of the Tuberculosis Officer should be eligible to receive allowances." A reply had been received from the Ministry stating that this scheme was a war-time emergency one, and that cases outside it would ultimately be provided for in general social security developments. The Committee felt this to be an unsatisfactory answer in that it failed to take into account that, unless the chronic open cases could be better controlled, the preventive side of tuberculosis work was largely vitiated.

Dr. Lissant Cox presented a draft scheme of training for tuberculosis medical officers. This was discussed at length, many useful alterations and additions being made.

The Committee debated the White Paper on a National Health Service. The following resolutions were formulated:

1. We note that the tuberculosis service is to be transferred from the administration of the local authorities to that of the new Joint Boards. In so far as closer co-operation with the hospitals will tend to improve the service we welcome the change, but we are anxious that the special features of tuberculosis as a disease, which make it essentially a public health problem, shall not be overlooked. In particular we refer to those general environmental and domiciliary measures, social care work and financial matters, which are essential parts of a good tuberculosis scheme, and which either remain under the local authorities or are relegated in the White Paper to some future general security scheme.

2. We urge that tuberculosis specialists should be employed to organise and administer the tuberculosis scheme of the new Joint Boards.

3. We hope that the Joint Boards in administering both the hospital and the tuberculosis services will regard sanatoria as integral parts of the latter and not merely a part of the former.

4. As the Joint Boards are to control the consultant and tuberculosis services we presume that tuberculosis officers and sanatorium superintendents will be classed as consultants as regards conditions of service and remuneration.

SCHOOL MEDICAL SERVICE GROUP

Acting President: Dr. J. D. Kershaw (M.O.H. and S.M.O., Accrington).
Hon. Secretary: Dr. A. A. E. Newth (S.M.O., Nottingham).

A meeting of the Group was held at Tavistock House, London, on March 3rd, preceded by a meeting of the Temporary Committee. The chair was taken in the first instance by Dr. R. H. H. Jolly, President of the Society; 31 members were present.

The Hon. Secretary reported on the interest aroused by the revival of the Group, and said that there were already 216 members. He appealed to those present to make the movement known to those who had not yet joined.

The meeting unanimously nominated Dr. J. D. Kershaw, of Accrington, for election as President of the Group at the annual general meeting to be held in June or July. Until then he was invited to be Acting President. Dr. Jolly then vacated the chair in his favour.

A letter was read from Dr. Milligan, M.O.H., Glossop, asking for co-operation in carrying out research work on the physical condition of children. This evoked an interesting discussion which had to be suspended owing to shortage of time. Those interested were asked to communicate direct with Dr. Milligan.

The Hon. Secretary was instructed to consider the possibility of forming a committee on anthropometrical and physiological standards for children. He would be glad to hear from those interested in this subject.

Dr. Jolly read a short paper on the Education Bill and the White Paper, with an able summary of their main points and of the more contentious clauses. The threatened separation of inspection from treatment was strongly deprecated, although it was recognised that it would be illogical for the family doctor to treat some of the family in the home, and the S.M.O. to treat others in a clinic. The educational value of regular inspections in the school was great, and it would be a pity to lose the close contact with the teacher. A "Children's Specialist Service" was advocated by others, and it was suggested that, if medical inspections were to be carried out in health centres or grouped practices, the School Medical Officer—acting as child specialist—would provide a valuable liaison between the family doctor and the school. Others thought that the White Paper foreshadowed a new outlook on health for which neither the general practitioner nor the teaching staff of the hospitals were prepared. In considering the Government's long-term policy, they should not forget that certain drastic changes were likely to be introduced very shortly. It was noted with great satisfaction that Mr. Butler, the President of the Board of Education, had announced in the House that he had no intention of curtailing the work of the School Medical Officer, but he wished the service to be still more effective.

MIDLAND BRANCH

President: Dr. A. B. Griffin (M.O.H., Worcester City).
Hon. Secretary: Dr. H. Paul (M.O.H., Smethwick C.B.).

A special meeting of the Branch was held at Birmingham on March 16th, when Drs. Newsholme and Wyndham Parker opened a discussion on the Government's proposals for a national health service. The meeting was later adjourned till April 6th, when Dr. Walton continued the discussion.

Dr. Newsholme approved the intention to allow self-government to the body of private practitioners and disapproved the cold-shouldering of voluntary hospitals. His criticism centred on the new Joint Authorities, and on the misleading description of them as being merely the constituent councils acting together. They were, rather, to be independent and powerful authorities, with duties likely to bring them into conflict with their constituent councils, and in any case taking over a number of important functions from the latter. To provide, as the linchpin to the scheme, a set of new and untried authorities with extensive functions, and to give them supervisory authority over well-tried existing authorities, seemed foolhardy in the extreme.

Dr. Wyndham Parker said the White Paper on first reading appeared a realistic and well-reasoned factual statement to meet major objections advanced by doctors, local authorities, and voluntary hospitals, and yet appeared to meet Assumption B of the Beveridge Report. The doctors did not like the constitution of the Central Medical Board; further, they feared the power of direction and that the health centre was the thin end of the wedge of a State medical service. The voluntary hospitals had fears for the future with regard to finance, and also considered that they might have inadequate representation on advisory bodies and have none on executive committees.

What size was the Joint Board to cover? The popular view was that there would be about 40 for the whole country. If these boards were to assess, plan, and administer the bulk of the services, they would require good staffs with really outstanding men at the head. The effect on the small county councils and county borough councils would be that all the hospitals would go, and the clinics with cancer, mental disease, tuberculosis, orthopaedic, and, he thought, venereal diseases. Maternity and child welfare in part might remain, but institutional midwifery would go, and clearly it was desirable that ante-natal work should be closely associated. Child welfare clinics could with advantage be closely associated with children's hospitals, the paediatrician also acting as part-time welfare officer.

The repercussions would be serious on the recruitment of men for the public health services, and the future prospects of the junior members was very uncertain.

Dr. Walton referred to important recommendations of the Society's report which had but little mention in the White Paper: *e.g.*, need for comprehensive ministerial control of all health services (para. 3), a single local authority for health purposes (para. 6), hospital services as a necessary part of the health service (paras. 15 and 34). The question of professional standing and of direct professional representation would be of utmost concern to all doctors in the future reorganisation.

SOUTHERN BRANCH

President: Dr. W. P. Cargill (Deputy M.O.H., Southampton).
Hon. Secretary: Dr. H. C. Maurice Williams, O.B.E. (M.O.H., Southampton).

A meeting of the Branch was held at Southampton on March 17th, and 18 members and one visitor were present. The minutes of the meeting held on February 18th were approved as correct and signed by the Chairman.

A discussion on the Government White Paper on a National Health Service was opened by Dr. A. B. Williamson, M.O.H., Portsmouth, who described the proposed scheme as a compromise, and regretted the absence of any reference to the training of suitable students, irrespective of their means. Dr. Williamson compared the White Paper with the B.M.A. principles, and welcomed the proposals for combination and co-ordination of hospital services. Dr. Chesney suggested a local authority specifically elected for health matters. Dr. Cronk pointed out that there was no provision in the proposals for health education.

The Branch agreed that one of the duties of the proposed Joint Authorities should be to plan health education. It was also agreed that the Government should at an early date signify to the profession that they would give adequate compensation for loss of practice.

A meeting of the Branch was held at Southampton on April 5th. Sixteen members were present. The minutes of the meeting held on March 17th were approved as correct and signed by the Chairman.

After discussion of the Government White Paper, it was unanimously agreed that the following recommendations and observations should be forwarded to the Council of the Society. (1) The present opportunity should be taken to bring together within one Central Government Department, with health as its sole function, the medical and health functions of the various Government Departments. (2) In any one area there should be a single authority for health purposes. (3) It should definitely be laid on the Joint Authority as one of its main duties actively to promote good health in every possible way among all sections of the community. (4) There should be a fair representation on the Local Health Services Councils of all persons and bodies whose opinions on the promotion of health and the prevention and treatment of disease and injury will be of value, provided that the majority of the members belong to the medical and allied professions. (5) The proposals relating to the school medical service are unsatisfactory, as it appears that local education authorities may appoint medical officers for school medical inspections only, whereas it is most desirable that the school medical service should be closely integrated with the other health services. (6) The term "Health Centre" should be restricted to centres at which facilities for preventive as well as diagnostic and curative medicine are provided, and these centres should be established at the earliest opportunity in preference to communal surgeries. (7) The Government should at an early date signify to the profession that they will give adequate compensation for loss of status, office, or practice.

EASTERN BRANCH

President: Dr. D. Wainwright (M.O.H., Great Yarmouth C.B.).
Hon. Secretary: Dr. J. W. Hunter (M.O.H., Ipswich C.B.).

A meeting of the Eastern Branch of the Society was held on March 18th. Fifteen members were present, and Dr. Wainwright was in the chair.

A discussion took place on the White Paper. Many interesting points were brought forward, and it was decided to have a further meeting in April.

Dr. Wainwright was again in the chair at the meeting at Scole on April 15th. Twenty-five members and guests were present, including Sir Cecil Oakes, C.B.E., Clerk to the East Suffolk County Council. The minutes of the last meeting were read and signed by the Chairman.

After discussion of the White Paper it was decided to forward the following resolutions:

1. That an allocated function of the Central Health Services Council should be to initiate advice on any matters within their expert province as is laid down for the Local Health Services Council.

2. That the designation of the Central Medical Board should be "National Medical Board," not to conflict with other bodies now operating with the same initials.

3. That the Central Health Services Council should be constituted by election from the medical and allied professions, with a minority of members nominated by the Minister of Health.

4. That the Chief Executive Officer of the Joint Authority should be primarily an administrator, preferably a medical officer with administrative experience and qualifications.

5. That both Central and Local Health Services Committees and other advisory bodies should contain members who have had practical experience in the Public Health Service.

6. That the various services involved in a comprehensive scheme for a National Health Service should be closely integrated through the medical staff serving various authorities and services.

7. That there should be a system of suitable advisory panels to operate at all stages of the service where professional appointments have to be made.

8. That in the legislation resulting from the consideration of the White Paper provision should be made for adequate compensation to be payable to any member of the existing Public Health Services who may suffer loss of remuneration consequent on alteration of his duties, and that such provision should include, for superannuation purposes, the addition of years of service in respect of the student period.

WELSH BRANCH

President: Dr. J. Greenwood Wilson (M.O.H., Cardiff).

Hon. Secretary: Dr. G. McKim Thomas (M.O.H., Cardiff R.D.).

A meeting of the Branch was held at Cardiff on March 18th. The President, 16 members and 13 visitors were present. Dr. W. H. Bradley, Medical Officer, Ministry of Health, spoke to the meeting about recent clinical and field investigations into jaundice, and afterwards, upon the request of the President, talked about epidemic nausea and vomiting. There was a full discussion, followed by a vote of thanks to the speaker.

MIDLAND MATERNITY AND CHILD WELFARE SUB-GROUP

A clinical meeting of this group was held in the Cancer Department of the Queen Elizabeth Hospital, Selly Oak, on March 18th. Dr. Findlay presided. Twenty-six members were present.

Mr. Baron Rose, chairman of the Cancer Research Committee, a member of the Radium Commission and honorary surgeon to the Queen Elizabeth Hospital, gave an interesting address on cancer research. Clinical research, he said, was being carried out at the University and all the results were co-ordinated and correlated by the Cancer Research Committee. The Cancer Act of 1940 was in the process of becoming law, and in the Midlands alone there would be 5,000-6,000 cases annually to be dealt with. At present the Committee were working out a plan for implementing this Act and were experiencing difficulty in finding the necessary accommodation. Many patients seen for the first time were found to be inoperable, mainly because the patient had been too frightened to seek advice, or because the case had been wrongly diagnosed.

Treatment was by surgery, radiotherapy, or both. Cases for surgical treatment were selected by the surgeon in consultation with the radio-therapist and possibly a physician.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles).

Hon. Secretary: Dr. W. C. V. Brothwood (Deputy C.M.O.H., Lancashire).

A meeting took place at Manchester on March 24th. The President and 62 members and visitors were present.

Dr. C. Metcalfe Brown opened a discussion on the White Paper. After a number of speakers had taken part, the matter was referred for consideration to a Committee of eleven. On April 13th the President and 40 members considered the report of the Committee, after which the Branch's observations were formulated as follows.

The Branch in general welcomes proposals for the establishment of a comprehensive service, but views some of those contained in the White Paper with grave concern.

1. The administrative arrangements envisaged are such that they can be properly administered only by whole-time medical officers who have present experience of administration in the public health service of local authorities. Further, whatever system of administration is established, it is of paramount importance that the chief executive officer shall be such a medical officer. The Branch notes with concern the absence of any adequate acknowledgment of the part which has been played by medical officers of health and other public health medical officers in building up the health services of the country. They are disquieted by the vague and meagre reference to the future status of these officers. In particular, they deplore the absence of any clear expression of intention to utilise the experience gained by them in directing and controlling medical services.

2. The proven benefits of preventive medicine are such that it is a matter for regret that no adequate reference is made to it. In all branches of medicine which have been confided to the public health services—*e.g.*, infectious diseases, tuberculosis, the prevention of infantile mortality, and the provision of hospitals—very great progress has been made, a fact which is amply attested by statistics.

3. The Branch considers that the school medical service and the child welfare service should be merged centrally and locally in a unified child health service, the local administration of which should lie with local public health authorities, acting through their whole-time public health medical officers. In no other way can the integration of the environmental and curative services be achieved. In the Branch's opinion, it is a fundamental administrative defect that the White Paper proposals will effect a breach between the hospital and consultant services on the one hand, and the domiciliary maternity and child health services on the other.

4. The Branch considers that the industrial health services should be integrated with the new health services.

5. It is the Branch's view that medical officers of infectious diseases hospitals and public health laboratories should work in close association not only with each other, but also with others who may be engaged in field work.

6. The Branch considers that by whatever means the public health authority establishes a domiciliary nursing service, whether it be directly or indirectly, control of the service should be exercised by the medical officer of health.

7. With regard to administrative areas, the Branch considers that for the purposes of planning and formulation of general policy large areas with adequate financial resources are necessary, but that it is equally important that for the maintenance of local interest and efficiency of administration there should be a large measure of delegated powers to existing authorities, and that in the exercise of these powers they should be advised by medical officers who are responsible for the detailed administration of the districts concerned, so that the whole of the medical services can be co-ordinated. In suitable cases within the existing county areas, executive powers in respect of certain medical and health services, including school medical and maternity and child welfare, should be exercised by county districts or by suitable combinations of such districts. Further, suitable public health services not dealt with by the White Paper should be administered by those county districts or combination of county districts which are referred to in the previous paragraph.

The Branch also considered a memorandum prepared by the Medical Officer of County Districts in the North-West, and expressed themselves as being in general agreement with the opinions expressed.

The Illuminating Engineering Society, 32, Victoria Street, London, S.W.1, is preparing a series of pamphlets on lighting reconstruction. The first three of these have just been issued at a price of 1s. each, 9s. a dozen, or £3 per hundred. They are designed to be of use to Government departments, local authorities, borough engineers, architects, and others concerned with the lighting of public and private buildings. The pamphlet, *Principles of Good Lighting* deals in non-technical language with the broad principles of illumination and with such faults as glare and abrupt contrasts. *The Lighting of Public Buildings* briefly reviews the problems of lighting long corridors, public halls, picture galleries and museums, libraries, places of amusement such as swimming baths and skating rinks, and hospitals. Floodlighting is also dealt with. The third pamphlet, *The Lighting of Schools* considers the problems of lighting classrooms and lecture theatres. The problem of partially sighted children is discussed, and a table given of values of illumination considered to be adequate for the various parts of a school building. The pamphlets are short and necessarily lacking in detail, but they give a basis of right principle upon which planners can work.

The Royal Institute of International Affairs has issued at the price of 1s. a 35-page pamphlet entitled *A Reading List for Relief Workers*. This is a useful bibliography arranged under the general headings of "Health and Hygiene," "Nutrition, Food and Agriculture," "Welfare of Children and Young People," and "Displaced Persons" (*i.e.*, the refugee and the occupational). There is a general list of reading matter relating to relief during and after the last war and, as a background to the present conditions, suggested books on Belgium, Czechoslovakia, France, Greece, Italy, the Netherlands, Norway, Poland, and Yugoslavia. The booklet may be obtained from Chatham House, St. James's Square, London, S.W.1.

Subscription 31s. 6d. per annum, post free, in advance.
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EDITORIAL

Infectious Diseases of Childhood during the War

The mass evacuation of children from congested industrial towns to rural and less crowded areas at the beginning of the war formed a unique experiment in epidemiology. Many epidemiologists predicted that the influx of town children—who had been subject to a more intense exposure to infection with a lower age of attack, and who consequently had a higher average immunity than the native children in the rural areas—would lead to the creation of new epidemic centres among the less salted children in the reception areas. Consequently it was anticipated that the common infectious diseases of childhood, which may be regarded as endemic in the large towns, would have an unusual incidence in the reception areas. These fears proved to be unfounded, as there was no large rise in the incidence of infectious diseases; but there was a differential incidence in the evacuation, neutral, and reception areas.

A very interesting analysis of the experience of diphtheria, scarlet fever, measles and whooping-cough in these areas during 1939-40 was made by Dr. Percy Stocks*. Diphtheria and scarlet fever were notifiable before the war, and alterations in the course of these diseases could be determined; but measles and whooping-cough were not notifiable until shortly after the outbreak of war. There was a sharp but brief rise in the incidence of diphtheria and scarlet fever in the reception areas after evacuation: the rise was larger among the native children than among the visitors. In the reception areas, too, the children suffered a higher rate of attack from whooping-cough, as indicated by notifications, than in the remainder of the country. From 1917 to 1938 there had been no break in the biennial periodicity of measles, but the epidemic which should have occurred during 1939-40 failed to appear. From the epidemiological view the most unexpected result following the evacuation was, perhaps, the remarkable fall in the incidence of the common infectious diseases of childhood during the last quarter of 1939. The closing of schools had become discredited as a means of controlling outbreaks of infectious diseases, although it had never been enforced for long periods in epidemic seasons nor over a wide area. It was not, therefore, thought that the trends of the epidemics would be affected by school closure, forced upon us by the outbreak of war, but the absence of schools, and, in the evacuation areas, the large decrease in the child population were factors in reducing the incidence of infectious diseases during this quarter.

The intensification of aerial warfare caused a second large-scale evacuation of the great towns twelve months after the first. The first scheme had been seriously impaired by the end of 1939, and large numbers of children had returned to the evacuated areas by early 1940. This second evacuation occurred towards the end of the third quarter of 1940, and it would be expected that changes in the proportional incidence of infectious diseases in the rural areas similar to those of twelve months earlier would have been shown. In the fourth quarter of 1939 the proportion of diphtheria notifications in the rural districts showed a substantial increase and a corresponding decrease was recorded in the county boroughs, but in the fourth quarter of 1940 the proportion of diphtheria in the rural districts fell slightly and rose in the county boroughs. The experience of London during the fourth quarter of 1940 was in striking contrast to that of twelve months earlier. The increase in the notifications of scarlet fever and diphtheria during the fourth quarter of 1940 was 66% and 50% respectively, of the total of the preceding three months, while in the fourth quarter of 1939 large decreases had been recorded, 71 and 52% for scarlet fever and diphtheria respectively. The general conditions of life and congestion in shelters seems a reasonable explanation of this unfavourable experience of London.

No further large-scale evacuation has disturbed the population since 1941, but the changed constitution of the population might be expected to affect the trends of the infectious diseases. The number of children exposed to risk of infection has increased due to the rise in the birth-rate, and the amount of overcrowding has risen owing to the large numbers of houses destroyed. It is not possible to assess the influence, if any, exerted by these factors, for area comparisons cannot be made yet. The notifications for the whole country for the first four war years, 1940-43, were: measles 407,908; 406,507; 285,300; 374,198: whooping-cough 53,403; 171,406; 65,563; 95,859: scarlet fever 65,573; 59,111; 84,932; 116,217: diphtheria 46,683; 51,091; 42,318; 35,944. The incidence of scarlet fever, which has risen by 100% between 1941 and 1943, shows no signs of decreasing. During the first 21 weeks of 1944 the notifications of scarlet fever were 41,315 compared with 20,448, 24,678, 23,406, 41,256, for the corresponding periods of 1940-43. The notifications of whooping-cough, 44,308, during the first 21 weeks of 1944, were at a higher level than during the preceding two years, when 29,869 and 39,496 cases were recorded during these weeks. The notifications of measles during these weeks of 1944 were 39,122, and this was the smallest total since notifications began. The corresponding totals for 1940-43 were 93,472, 309,589, 65,911, 316,510.

The decline in the incidence of diphtheria during 1941-43 coincided with the campaign for immunisation, and there appear to be prospects that a further reduction in the incidence of this disease will be effected during 1944. The notifications of diphtheria for the first 21 weeks of 1941-44 were 14,566, 17,257, 16,196, 13,662. This result gives cause for some satisfaction, but it is evident that a large improvement could still

* *Roy. Stat. Soc. J.* 1941, **104**, 311. *Ibid.*, 1942, **105**, 259.

be effected. An approximation to the mortality trends can be obtained by considering the experience of the great towns, although deaths are tabulated by place of occurrence and not residence, but this probably does not affect the comparisons. The number of deaths per 1,000 notifications in the great towns during 1940-43 were: scarlet fever 2·6, 2·1, 1·3, 1·2; whooping-cough 13·6, 15·5, 13·6, 12·3; diphtheria 54·3, 54·2, 39·4, 35·9; measles 2·7, 3·4, 1·8, 2·5. The fatality rate of measles and whooping-cough has undergone little change during the war, but a substantial decrease has been recorded for scarlet fever and diphtheria. Although the notifications of scarlet fever in the great towns during 1943 were 116% above those for 1941, the deaths had only risen by 16%. The notifications of diphtheria were 25% lower in 1943 than in 1941, while the number of deaths fell by 50%.

Child Nutrition in War-time

An interesting and valuable study * made by the British Paediatric Association under the auspices of the Ministry of Health enables answers to be given in some part to questions which have long been exercising the minds of Medical Officers of Health. What effect have the dietary restrictions resultant from rationing and from the short supply of vitamin products had upon the health of young children? The incidence of rickets, mainly though not solely a disease of diet deficiency, is an important index. The report based on the findings of a large number of skilled local observers in all parts of the British Isles, which have been the subject of a most detailed statistical analysis by Dr. Percy Stocks, of the General Register Office, indicates that on the whole there is little cause for uneasiness and that the health of our child population has been well maintained. Certainly there is no reason to apprehend that we are in danger of suffering the conditions which took such a toll of our enemies during the last war†. On the other hand some evidence has emerged from the enquiry to indicate that, though the resources appear to be available, the maximum measure of freedom from rickets has not been attained. It is not yet sufficiently realised that the administration of cod-liver oil and/or malt of unknown vitamin D content may engender a false sense of security. Clinic medical officers, health visitors, general practitioners, and all whose duty it is to advise on questions of infant feeding should stress the importance of using only a brand of guaranteed vitamin D content. There are, of course, a number of reliable brands on the market in addition to the Government's National "C.L.O." referred to in the report, but it is for the practitioner endorsing the use of these other brands to satisfy himself of the vitamin content.

The major portion of the report is devoted to the statistical analysis of the *x*-ray and clinical reports on the 5,283 children subject to investigation. There are also interesting sections on the clinical and the radiological diagnosis of rickets and an interesting study by Drs. Richard and Audrey Ellis of rickets in a mainly rural area of Lincolnshire. The difficulties of conducting the enquiry were numerous, and the significance of the data in certain parts of the questionnaire used was in some areas vitiated by the fact that the answers had to be based on the statements furnished by parents and not on the actual observations of the medical officers and health visitors. The writers of the report, and in particular Dr. Stocks in his statistical analysis, have handled with much discrimination the uncertain factors so introduced. That there has often been discrepancy between the clinician and the radiologist in regard to the presence or absence of rickets has long been recognised. The report discusses frankly the difficulties which both encounter in finding from their respective points of view evidence for and against. It shows that for a diagnosis of early rickets close co-operation between both is required. These difficulties of diagnosis and apparent discrepancies, far from reflecting on the abilities of either, furnish matter for congratulation that in this country they have to deal mainly with rickets in so early a stage that its detection is by no means easy.

The value of breast feeding in prevention of rickets is discussed. It was in this portion of the enquiry that the observers were most dependent upon the information furnished them by the parents and least upon their own observations. Evidence is given in support of the view hitherto largely empirical that breast feeding diminishes the likelihood of rickets occurring, but supports also clinical experience that breast feeding is not *ipso facto* prophylactic against rickets and that the conditions under which it is conducted need consideration *e.g.*, the health and diet of the mother, the rate of growth of the child, the duration of the breast feeding. The conclusion is reached that even with breast feeding under the best conditions vitamin D supplement should be given.

The compilers of this report are to be congratulated on having furnished a most valuable work of reference for the Medical Officer of Health and the paediatrician, on having done much to dispel anxieties arising from war-time conditions and to indicate the means of averting the dangers which might be apprehended.

A Better Way with Delinquents

Of the dozen or more prisoners who, during a day at a county sessions, came up for trial the majority were young lads; few were far in their twenties. The offences with which they were charged, and to which most of them pleaded guilty, were chiefly stealing in one form or another. With almost mechanical regularity in the case of the younger offenders the chairman said, "What you need is a period of discipline. You will go to Borstal for three years." It was then explained to the offender that the three years was nominal, and that if he behaved himself his period of detention need not be anything like so long. The word "Borstal" in this court seemed to be a kind of refuge. It saved the court from imposing a prison sentence on a mere youth, and at the same time it segregated the offender and protected society against his further mischief. To those who look below the surface of criminal behaviour, without being any more sentimental than anyone else, this one-measure method of meting out punishment is very unsatisfactory, as a visit to the Borstal institution near Rochester or the juvenile prison at Wormwood Scrubs will show. The very offence—that of larceny—for which half a dozen lads went to Borstal might, from a psychological point of view, be split up into as many categories as there were offenders. Was the theft from friends or from strangers? Was it a theft of private or of public property? Was it kleptomania or ordinary pilfering? What was in the background of the act? An understanding of it might determine into which of several groups an offender ought to be placed for psychological treatment. Admittedly the treatment of delinquents, unlike the treatment of patients, cannot be ideal, for not only has the delinquent to be brought to see the error of his ways, but until he has done so society has to be protected from him. It follows that even the wisest and most humane administration of the law is bound to be a compromise, but there would seem to be plenty of room for more frequent reference to the psychologist of cases which do not seem on the face of them to offer any problem. A magistrate will often be persuaded that a sexual offender would benefit by a psychological approach, but he rarely thinks of referring a case of shoplifting for similar treatment.

Magistrates and those who preside over quarter sessions, and even assize judges, would do well to study an admirable "clinical report"* which Dr. Edward Glover, one of the directors of the Institute for the Scientific Treatment of Delinquency, has prepared on the five years' work of that Institute since it opened its well-equipped clinic in Manchester Street for dealing with out-patients. The majority of the cases—in most years more than two-thirds—have been referred to the clinic from police courts. An enlightened magistrate will ask for a report before a case is proceeded with, or a probation officer will request assistance with cases already on probation. About 65% of the cases referred to the clinic are stated to

* Report on the Incidence of Rickets in War-time. By the British Paediatric Association. Ministry of Health Rep. Publ. Hlth. Med. Subj. No. 92. H.M.S.O. 9d.

† Studies of Rickets in Vienna. Med. Res. Cl. Spec. Rep. Series No. 77. H.M.S.O.

* *The Diagnosis and Treatment of Delinquency.* By Edward Glover, M.D. Published by I.S.T.D., 17, Manchester Street, W.1.

require psychotherapy, and of those needing institutional treatment, including the mental hospital and the mental deficiency home, only 2% are allocated to an approved school: this suggests that there must be a good many misfits at Borstal. When delinquency has been found to be due to endocrine imbalance, head injuries, epilepsy, obsessional neurosis, mental deficiency, or psychosis, it is easy to prescribe and institute clinical treatment, but in the great majority of cases the position is complicated by social factors.

Nevertheless, the results of five years' work at this clinic, with material so unpromising, are good. Allowing for a margin of error and averaging out fluctuations due to war conditions, "the fact remains," says Dr. Glover, "that an average of almost 40% of cases given psychological treatment at the clinic may (even if they do not complete their treatment) be expected to become and remain non-delinquent as the result of that treatment." Indeed, if the statistics were restricted to those who had actually completed the prescribed course, "the percentage of satisfactory results would be almost too good to be true." To this optimistic claim there are just two demurs. First, in delinquency, as in disease, there are some spontaneous remissions, which would have taken place, treatment or no treatment. Secondly, along with the psychological treatment has gone a change of environment, brought about, perhaps, by the supervision of the probation officer or by the finding of a more suitable billet or of employment. And who shall say how much is due to psychological technique and how much to a favourable change in the circumstances of the individual? But, making all allowances, the percentage of good results is so high as abundantly to justify the claim that delinquency cases of various types and ages are amenable to appropriate treatment. The treatment ranges from pure suggestion and hypnosis to psycho-analysis; short-term cases require from five to fifty interviews while long-term cases may require interviews by the hundred.

Dr. Glover looks forward to future developments in the shape of the establishment of a hostel and observation centre, a scheme of staff training in this "new medico-sociological speciality," and various research projects. His most optimistic suggestion is the organisation of seminars for magistrates and clerks of courts. Unfortunately, the magistrates who would be likely to take advantage of such a provision are those who need it east.

Sir Stanley Woodwark has been appointed President of the Royal Institute of Public Health and Hygiene. He was elected to this office at the annual general meeting held at the Institute on May 25th.

By arrangement with the University the Medical Research Council has established a Unit for Research in Applied Psychology at Cambridge. The Unit is located in the University Psychological Laboratory, the head of which is Prof. F. C. Bartlett, F.R.S. Dr. K. J. W. Craik has been appointed to the Council's staff as Director of the Unit, and will have the collaboration or assistance of other workers there in the Council's service. The members of the Unit will undertake work elsewhere than at Cambridge when required, including investigations within the field of the Council's Industrial Health Research Board.

The National Society of Children's Nurseries has sent this resolution to the Minister of Health: Following the decision of the Minister of Education in the new Education Bill now before Parliament to provide additional nursery schools, the National Society of Children's Nurseries urges the Minister of Health to legislate for an increasing number of children's nurseries after the war, including both day and short-stay residential nurseries. Evidence continues to accumulate that a day off a week from her family cares is essential if the mother of the future is to carry out her work efficiently, and the National Society urges that the provision of a weekly holiday for mothers, as for every other worker, should rank as one of the first claims on the attention of the community.

The meeting of the School Medical Service Group of the Society, which was to have been held on July 21st, has been postponed until further notice. The President of the Board of Education has promised to offer a date for his address to the Group as soon as circumstances permit.

THE NUTRITIONAL STATUS OF FACTORY WORKERS

By JOHN YUDKIN, M.A., PH.D., M.D. (CAMB.), F.R.I.C., *Lieut.* R.A.M.C.

(*formerly Sir Halley Stewart Research Fellow at Dunn Nutritional Laboratory, University of Cambridge and Medical Research Council*)

Nearly 800 workers in a steel tube factory at Birmingham were examined in September, 1941, and about 350 re-examined in July, 1942. The investigation comprised a short clinical history and measurements of height, weight, dark adaptation, and haemoglobin. It was not found possible to visit the factory again in 1943, as had been hoped, but through the courtesy of Dr. A. M. Stevens the weights of about 520 of the subjects who had been examined in 1941 were recorded in September, 1943. Nothing of interest emerged from the clinical histories or from the measurements of height; the results which follow are concerned only with the measurements of weight, haemoglobin, and dark adaptation.

WEIGHT

The subjects were weighed in their clothes except for outdoor coats and boots or shoes. Since an increase in weight is to be expected in adolescents, the results have been calculated separately for subjects who were below 20, and those who were 20 and over at the time of the first examination in 1941. It was found there had been a gain in weight both from 1941 to 1942 and from 1942 to 1943. (Table I.) As

TABLE I
AVERAGE YEARLY GAIN IN WEIGHT

	1941–1942		1942–1943	
	Number	Average gain in weight, lb.	Number	Average gain in weight, lb.
Men—				
Under 20 years	39	4·0	31	3·7
20 years and over	191	1·1	169	0·4
Women—				
Under 20 years	59	3·4	49	2·8
20 years and over	59	1·5	45	0·9

expected, the gain was greater in the under-20 age group, both for men and for women. The figures also suggest that the gain in weight was less in the second year. Some of the subjects weighed in 1943 had not been weighed in 1942; the gain in weight of these for the two years 1941–1943 is shown in Table II. For comparison, the second part of this table

TABLE II
AVERAGE GAIN IN WEIGHT OVER TWO YEARS, 1941 TO 1943

	Weighed 1941 and 1943 only		Weighed 1941, 1942 and 1943	
	Number	Average gain in weight, lb.	Number	Average gain in weight, lb.
Men—				
Under 20 years	14	8·0	31	8·1
20 years and over	152	1·4	169	1·1
Women—				
Under 20 years	27	5·2	40	5·5
20 years and over	43	3·7	45	2·2

gives the gain for the two years of those who were re-weighed in 1942 and 1943. These results may be taken as indicating that the diets consumed by these workers between 1941 and 1943 were adequate at least in calories. The increase in weight recalls the increase in height and weight found in Cambridge school children within the same period (Yudkin, 1944a).

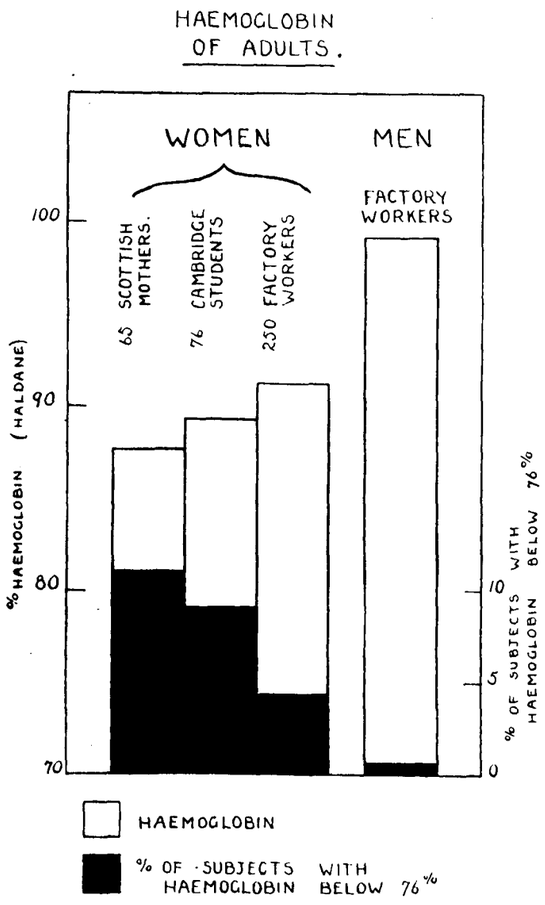
HAEMOGLOBIN

The average values for the 528 men and 250 women examined in 1941 were respectively 99·1% and 91·2%, Haldane scale (Table III). If we take a haemoglobin value of 75% or less as indicating anaemia, then 0·4% of the men and 4·4% of the women were anaemic. The average values are lower than

TABLE III
HAEMOGLOBIN OF FACTORY WORKERS IN 1941 AND 1942

	Number examined	Average Hb % 1941	Average Hb % 1942
Men	231	100·1	104·0
Women	118	90·8	93·4

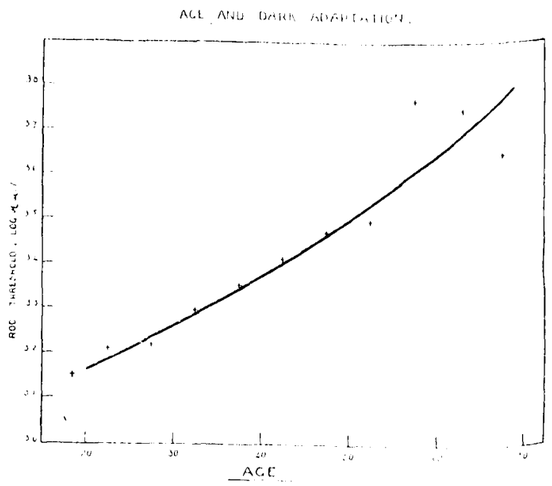
those reported by most other workers (see, for example, Price-Jones, 1931; Jenkins and Don, 1933; and Widdowson and McCance, 1936). The values for women are also slightly lower than those reported by H. M. M. Mackay and her colleagues (1942) for factory workers (94%), but higher than those found by the same workers for London housewives (89·6) and nurses (90·6 in London, 84·1 in the country). (See also Davidson *et al.*, 1943.) They are also higher than those we have found in 76 Cambridge women students (89·4%) and in 65 Scottish housewives (87·7). (Yudkin, 1944b). The proportion of factory women with "anaemia"—*i.e.*, a haemoglobin of 75% or less—was, as might be expected, lower than in the Cambridge students and Scottish housewives (Fig. 1).



The factory workers re-examined by us in 1942 showed a slight increase in average haemoglobin, which amounted to 3·9% for men and 2·6% for women (Table III). There have been several suggestions in the recent literature that a decrease in haemoglobin levels has occurred since the outbreak of war (Hamilton and Wright, 1942; Mackay *et al.*, 1942; Davidson *et al.*, 1942; Murray Scott, 1942). As against this, the 349 workers examined by us in July, 1942, showed a slight increase in average haemoglobin compared with September, 1941. There is some evidence of a seasonal variation in haemoglobin, the value being slightly higher in summer than at other times (C. P. Stewart; personal communication). Our results, therefore, are to be interpreted not as showing that there has been a rise during these ten months but simply that there has apparently been no fall.

DARK ADAPTATION

Dark adaptation was measured with the Crookes apparatus, modified in certain respects (Yudkin, Robertson and Yudkin, 1943; Robertson and Yudkin, 1943). It was possible to demonstrate clearly, in the 778 workers whose age ranged from 14 to 60 years, a gradual deterioration in the dark adaptation (final rod threshold) with increasing age (Fig. 2). An



analysis of the results showed that the deterioration with age can be accounted for entirely by the gradual diminution in size of the pupil.

In comparing the dark adaptation of different groups it is therefore necessary either to make a correction for differences in age or to compare groups of similar age. By the latter method, it was shown that the 145 factory workers between the ages of 19 and 22 had slightly but significantly poorer dark adaptation than 50 nurses and 200 men and women students of the same age at Cambridge (Robertson and Yudkin, 1944).

Effect of Vitamin Supplements

From October, 1941, until May, 1942, some of the Birmingham factory workers were given vitamin pellets similar to those taken by the Cambridge school children: that is, they received a daily supplement of 5,000 I.U. vitamin A, 1 mg vitamin B_1, 25 mg. vitamin C, and 500 I.U. vitamin D (Yudkin, 1944a). When they were re-examined in June, 1942, it was found that many of those given the pellets had not taken them regularly. At the examination, therefore, each subject was asked to state in confidence whether he had in fact regularly taken the pellets, and in the analysis of the results those who admitted that they had not done so were included with those who had not been given the pellets. The analysis revealed that these 188 "controls" showed no appreciable alteration in dark adaptation (average improvement of 0·002 log units), whilst the 147 subjects who claimed to have taken the pellets regularly, showed an average improvement of 0·073 log units. Of the "control" group, 58 improved, 71 were unchanged, and 49 deteriorated; of the "vitamin" group, 73 improved, 46 were unchanged, and 28 deteriorated. The difference between the results in these two groups is statistically significant.

No difference in haemoglobin or weight was produced by the vitamin pellets.

Discussion

The fact that in these workers there were no fall in haemoglobin, no deterioration in dark adaptation, and an increase of weight between 1941 and 1942, and that the increase of weight continued between 1943 and 1944, suggests that the diets had not deteriorated during this time. It does not mean, however, that the diets were entirely satisfactory; an indication of their deficiency is shown by the fact that the dark adaptation was lower than that of Cambridge students and nurses.

It is worth noting that a group of subjects may be better nutritionally than a second group in one respect and worse in another. For example, although the factory workers had a poorer dark adaptation than Cambridge women students, their haemoglobin values were better.

Summary

1. Measurements of weight, dark adaptation and haemoglobin were made on 778 factory workers (528 men, 250 women) in September, 1941. All measurements were repeated on 347 of these subjects in July, 1942, and weights only were recorded on 521 of the subjects in September, 1943.

2. A gain of weight in both men and women was found between 1941 and 1942 and a slightly lower gain between 1942 and 1943. The gain was observed in men and women over the age of 20 as well as that anticipated in adolescents below that age.

3. The average haemoglobin value in 1941 was 99·1% for the men and 91·2% for the women. A slight increase in these values was found between September, 1941, and July, 1942, but this was probably due to a seasonal variation.

4. The average dark adaptation of the younger factory workers was slightly poorer than that of nurses and students of the same age examined in Cambridge. The administration of pellets containing vitamins A, B_1, C and D produced a slight but significant improvement in dark adaptation.

I am most grateful to the management of Messrs. Accles and Pollock for their generous provision of the facilities which made this work possible, to the employees for their co-operation and willingness in undergoing the tests, and to Dr. A. M. Stevens whose help in the initiation and completion of the tests was invaluable.

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At a meeting of the Royal Statistical Society on May 16th, a paper by Kathleen Box and Geoffrey Thomas on the War-Time Social Survey was read and discussed. The War-time Social Survey is the Government social research unit, and has been set up to provide any department with information needed for the planning and administration of policy. It is concerned with social problems, in the investigation of which it aims at establishing facts and ascertaining the attitude of the public toward these facts. Investigations are carried out by 55 trained field workers, all women. The reception accorded to field workers suggests that the public is ready to appreciate the importance of such enquiries and to give all possible help. Field workers are instructed to assure informants that giving information is entirely voluntary and that there is no need for them to answer if they do not wish to.

CORRECTION

In the article, *Tuberculosis and Housing*, by H. J. Peters, which was printed in the May issue of PUBLIC HEALTH, page 98, under the cross-heading, "Efficient Ventilation," it was stated: "Each bedroom should be at least 100 feet square." This should, of course, have read "100 square feet."

MINIMUM REQUIREMENTS IN THE EXAMINATION OF TUBERCULOSIS HOME CONTACTS*

By BRIAN C. THOMPSON, M.A., M.D.,
Tuberculosis Officer, Middlesex C.C.

In the years 1942 and 1943 it was the policy at the Ealing Chest Clinic to examine every home contact of each new case of tuberculosis of all forms becoming known to us.

TABLE I
SUMMARY OF CONTACT FIRST EXAMINATIONS, 1942–1943

	Children	*Adults*	*Total*
Number of Contacts examined for first time ..	644	1,083	1,727
Number found to have pulmonary tuberculosis	28	28	56
Percentage found to have pulmonary tuberculosis	4·3	2·5	3·2
New cases of tuberculosis occurring in 1942–3 (Index cases)	43	562	605
Ratio of contacts examined to total index cases	1·06	1·94	3·00

It was no small achievement on the part of the clinic nursing staff to obtain for examination two adult and one child contact for every new case notified. Kayne (1943) states that an overall total of two should be a reasonable target, and 1·5 may be regarded as creditable. The total yield of 3·2% of cases on first examination is substantially lower than the 5·8% quoted in the M.R.C. Special Report (1942) from a smaller series, but differences in diagnostic standards make such comparisons difficult. It was noteworthy that the 56 contacts with lesions in the lung were derived from 41 index-cases, ten of whom gave rise to two or more secondary cases. All the total index-cases had pulmonary tuberculosis and only three had T.B. negative sputum. Of the latter, one had pulmonary cavitation, one had pulmonary tuberculosis under apparently good pneumothorax control, and the third was a child with a primary lesion.

The highest percentage of cases was thus found at an age in childhood when the death-rate from tuberculosis is lowest, and, as might therefore be expected, the lesions detected in that particular group were in every instance benign in character.

Results in Children

All contacts below the age of 15 were first tested by tuberculin patch and, if this was negative, by intradermal P.P.D. (second strength) or 1/100 O.T. If either test was positive, postero-anterior and lateral *x*-ray films were taken. Tuberculin-negative children were "re-patched" every three months so long as contact was maintained, and *x*-rayed if they became "patch-positive." In this way it was hoped to detect any primary lesion at the earliest moment, while sparing unnecessary radiological work.

The 28 child contacts initially found with intrathoracic lesions all gave a positive patch reaction with one exception—a child aged 12 with chronic haematogenous pulmonary tuberculosis who was only faintly positive to the intradermal P.P.D. test. Three further children, initially tuberculin-negative, were found on routine re-examination to have developed intrathoracic lesions coincidentally with positive patch-reaction.

One of the children with an active primary complex, the child with acute miliary disease, and the two with no *x*-ray abnormality beyond tuberculin-sensitivity, died subsequently of tuberculous meningitis. They were aged respectively 3 years, 14 months, 9 months and 7 months, and death took place 7, 5, 15, and 8 weeks after first examination. This accords with the observation of Wallgren (1938) that, when fatal generalised tuberculosis ensues from the primary infection in childhood, it does so usually within three months of the development of allergy. Otherwise the immediate prognosis was uniformly good, progressive resolution with or without calcification occurring in both parenchymal and glandular components in the cases with active primary complex, and

* Presented at a meeting of the Tuberculosis Association in London, Jan. 21, 1944.

TABLE II

AGE-DISTRIBUTION OF CASES DISCOVERED ON FIRST EXAMINATION

Age Groups	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65 *plus*	*Total*
Number examined	223	212	209	180	137	120	146	114	94	109	75	59	33	34	1,827
Number found tuberculous ..	7	17	4	12	2	5	4	..	4	..	..	1	..	..	56
Percentage found tuberculous	3·1	8·0	1·9	6·7	1·5	4·2	2·7		4·3			2·0			3·1

spontaneous re-expansion of atelectatic areas in the three cases with bronchial stenosis.

In every case with a primary lesion, a parenchymal focus was seen on the postero-anterior *x*-ray film, usually accompanied by visible lymphangitis leading to enlarged glands at the hilum. Lateral views in some cases confirmed the presence of hilar adenopathy, but in no case, despite careful attention to the diagnostic criteria of Engel and Kayne (1940), did a lateral view disclose glandular enlargement that was not obvious in the postero-anterior film.

TABLE III

CLASSIFICATION OF LESIONS FOUND IN CHILD-CONTACTS

Active primary complex	21
Enlarged *tracheo-bronchial* glands with lobar atelectasis	3
Pleural effusion	2
Pulmonary tuberculosis of adult type	2
Acute miliary tuberculosis	1
No *x*-ray abnormality	2
TOTAL	31

Results in Adults

All contacts aged 15 and over were *x*-rayed on first examination. Those up to the age of 30 were *x*-rayed thereafter at three-monthly intervals. Those over 30 who were initially found healthy were warned to return if symptoms should occur, but were otherwise not re-examined. Of 1,083 first examinations, 28 cases of clinically significant pulmonary tuberculosis were detected, or 2·5%. Every one was derived from a sputum-positive index-case with a single exception—the father of a child recently admitted to hospital with a primary lesion. This was the only instance in the whole series in which the source of infection could definitely be said to have been revealed by these routine methods, though the "elderly relative with chronic bronchitis" was zealously pursued (see Table II), he was, in fact, never found to be excreting tubercle bacilli. As a means of detecting "source" cases, the Ealing programme proved on analysis to be unexpectedly disappointing.

Of the 344 routine re-examinations during the period under review, seven adult contacts with initially negative *x*-ray findings developed tuberculous lesions, or 2·2%. This not inconsiderable yield was reinforced by seven further cases developing similar lesions, but disclosed by means other than routine re-examination, owing either to non co-operation or because their initial investigation dated before the institution of our present policy. These seven cases were referred to the clinic on account of symptoms by private doctors or hospitals.

It is clear that re-examination of initially healthy adults can be neglected only at the cost of subsequent disease becoming detected in a relatively advanced stage. This applies not only to those in the younger age-groups. Of the 14 contacts who developed disease after a negative *x*-ray examination (that is, one-third of the total adult cases discovered), eight were adolescents and three young adults. Two, however, were in the forties and one was 57. A feature common to all was the continued contact with a sputum-positive index case. Only five out of the total 42 adults developing lesions had been out of such contact more than three months, and the maximum interval was 13 months.

Discussion

A tuberculosis officer hard pressed by depletion of staff, or by increased calls on his services due to a rise in new cases, augmented perhaps by the results of mass-radiography, may have at some time to contemplate a reduction in contact work. Consideration of the above findings leads to the conclusion that a programme such as has been followed at Ealing for the past two years could be substantially reduced without serious loss of practical efficiency. Had contact-examination during that period been limited to the families of sputum-positive patients, only three cases would have been missed, and of these, two were in children with regressive lesions that probably gained nothing by being detected. The very large number of contacts with non-sputum positive tuberculosis, probably more than half the total, could thus have been omitted with the loss of a single significant case.

One hesitates to advocate the abandonment of the long-established routine recommended by the Ministry of Health of examining all contacts at least once, but where the question of priority arises it is clear that effort should be concentrated in the most productive field.

TABLE IV

CLASSIFICATION OF LESIONS FOUND IN ADULT CONTACTS

	Pulmonary Tuberculosis Detected		
Stage of Disease	(1) *Routine First Examination*	(2) *Routine Re-examination*	(3) *Referred from Outside Source*
Minimal ..	13	6	2
Moderately advanced	8	1	2
Far advanced ..	2		2
Childhood type ..	1		
Pleural effusion ..	1		1
TOTAL ..	25	7	7
Disposal -			
Treatment ..	12	3	7
Observation ..	16	4	

The examination of children cannot be said to have had much practical value, apart from its purely clinical and epidemiological interest. Those found with lesions either died rapidly from generalised tuberculosis—a disaster which it is at present beyond our power to forestall—or else recovered undramatically. Nor did those who were treated in sanatoria appear to do better than those who remained at home, for both did as well as anyone could have wished. The fact must be faced that childhood tuberculosis, apart from the occasional cavitary case, is more or less untreatable, and there is almost nothing to be done in an institution that cannot be done in good home conditions. Even bed-rest is in the case of small children difficult to achieve to any useful degree.

The immediate prognosis, therefore, is probably outside medical control. As for the later effects—such as bronchiectasis supervening in an atelectatic lobe—I am not aware of other than theoretical methods for preventing this, and in my own patients all collapsed lobes have so far expanded spontaneously. It is my practice to send young children to sanatoria only if there is a lesion which can be therapeutically attacked (*e.g.*, by collapse therapy), or if home conditions cannot provide good food and hygiene and maternal care, or if contact with sputum-positive tuberculosis cannot be broken in any less expensive way.

If child contacts are to be examined, there seems to be no indication for changing the tuberculin-testing routine. Though the patch alone was in fact positive in all cases (except one) of active tuberculosis, to abandon the intradermal test would mean, if re-examinations are to be continued, the re-patching *ad infinitum* of any child already infected but allergic to a degree below the patch threshold. Routine lateral *x*-ray films could be omitted with only academic loss—a great radiographic economy. The employment of radioscopy instead of *x*-ray photography is convenient in some clinics, but it spares material rather than personal effort.

On the re-examination of adults the figures are unequivocal. Again it was the contacts of sputum-positive patients who developed significant lesions; all other contacts could have been ignored after a single negative *x*-ray examination, and a large amount of work could have been saved without the loss of a single case. A similar conclusion was reached by Horton and others (1940), who urged that effort be transferred from unrewarding re-examinations of all contacts indiscriminately to the all-important first examination of adult contacts—especially of sputum-positive patients—and to the re-examination at three-monthly intervals of the latter group, so long as contact is maintained and for at least 18 months after contact is broken, without regard to age. While the 15–24 age group provides the highest yield, older persons are also susceptible to the effects of close and prolonged contact with the tubercle bacillus, as has been clearly demonstrated at the Henry Phipps Institute (Israel and De Lien, 1942).

Summary

The results of an intensive programme of contact examination extending over two years are analysed. For the purpose of discovering new cases some procedures are shown to be relatively unprofitable, and in the event of facilities in any tuberculosis clinic requiring to be curtailed certain priorities are indicated.

The character of the index-case is decisive. Contacts of sputum-positive index-cases give the highest yield, irrespective of any other factor. In these contacts intrathoracic lesions are found in a high proportion of children, especially those aged 5–9 years; but such lesions are almost always benign. Dangerous but treatable and therefore important lesions are found in adult contacts of sputum-positive index-cases, either on initial examination or, subsequent to initial examination being negative, on routine re-examination. Maintenance of contact, or resumption of contact temporarily broken, demands routine re-examination, omission of which may lead to 50% more cases being missed. Though adolescents and young adults show the highest secondary attack rate, older age groups are by no means immune. Maximum attention is thus claimed by households containing a sputum-positive patient, especially the adult members. Until this attention is secured, the examination of other groups must be regarded as a clinical luxury. This is particularly so in the case of child contacts, and circumstances might arise which would justify the omission of their examination as a routine.

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OBITUARY

J. T. NEECH, M.D., D.P.H.

The death of Dr. J. T. Neech, which occurred on May 24th, will be deeply regretted by the few veterans who were his contemporaries in the public health service.

James Thomas Neech was born in 1860. While at the Anderson College, Glasgow, he took the Scottish conjoint qualification in 1884. After his appointment as M.O.H. for the Atherton Urban District he became keenly interested in public health work and took the D.P.H. (Vict.) in 1893. Shortly after this he was appointed M.O.H. for Halifax and Medical Superintendent of the Borough fever hospital and the municipal sanatorium at Shelf. In 1901 he received the M.D. of Durham University. On his retirement he founded the Neech Prize to be awarded annually for distinguished contributions to the transactions of the Society of Medical Officers of Health.

Dr. Ernest Watt, of the Medical Department for Scotland, in a brief tribute to his old friend, writes: "Neech took a very active interest in medical, and especially public health, progress up to the end, and he was also well-read in other than strictly professional subjects. During his twenty years of retirement he was able to enjoy much travel. His passing at the age of 84 was a matter of a few days, and he will be greatly missed by a wide circle of friends."

INTERDEPARTMENTAL COMMITTEE ON SCHOOLS

We print below a memorandum of evidence approved by the Council of the Society of Medical Officers of Health and submitted on their behalf by Dr. A. Middleton Hewat and Dr. Oscar M. Holden.

A. Standard Desirable

The Society of Medical Officers of Health is of opinion that in all schools, whether controlled by public authorities or private bodies or persons, there should be adequate arrangements to maintain a satisfactory standard of hygiene of the buildings and health of the scholars. There should also be continued medical supervision and treatment of the children attending school. The arrangements to be made in carrying out such work may be briefly described under the following heads:—

General Hygiene.—The school should conform with a minimum standard of hygienic requirements regarding such matters as dryness of buildings; sanitary, washing, and bathing accommodation; water supply; floor space and ventilation; lighting and acoustic and other matters; having regard to the special use to which the rooms and other parts of the building are being put.

Medical Inspection.—All children on admission to school and from time to time thereafter should be fully medically examined to detect any abnormality or commencing illness. At such examinations, if at all possible, the parents of the children should attend and inform the medical officer of any previous illness of the child or any matters bearing on its physical health or mental development. The personal contact of the medical officer with the parent is regarded as a subject of some importance, and if parents cannot attend at medical examination it may be practicable for the school medical officer to interview them on some other suitable occasion. This is particularly important in the case of boarding schools.

Infectious and Contagious Diseases.—It is essential that a close supervision of the children attending the school should be arranged in order to keep the children free from such diseases and to isolate and treat such diseases whenever they occur.

Advice to Teachers.—The medical officer should advise the teachers regarding any children for whom his examination has shown some need of modification of instruction, of games or of physical exercise. He should also advise as to the suitability of the child from a physical or mental aspect to attend school or to continue in a particular form or class in the school or to interrupt certain instruction.

Treatment.—Treatment facilities in the form of "sick rooms," etc., must be provided at all residential schools. Moreover, arrangements for treatment should be made for all defects, whether the child is in a residential or non-residential school. Such arrangements should be available without undue delay. As defects are frequently of a special character it will seldom be possible for any single doctor to be qualified to detect the wide range of conditions likely to come under survey. Arrangements should therefore be made so that a consulting staff would be available when the school medical officer requires it. Apart from this, medical officers should be able to treat all the commoner conditions found, including minor orthopaedics. The chief object is to maintain the normal physiological development of the child both physically and mentally at its highest standard during the school years. In public schools, the dangers and trials of the adolescent period should receive special attention. This is a period of extremely rapid development, physically, mentally, and socially, when disease and defects are apt to appear.

Health Instruction.—Suitable health instruction should be given to children appropriate to their age; instruction in sex should be included, and for those leaving school special instruction in venereal disease.

The Society of Medical Officers of Health is of opinion that children should not be received into any educational institution if the above requirements are not complied with, and for this purpose would welcome power being given to the appropriate Government departments to require the approval of such arrangements.

B. Present Position

With respect to what are known as public schools two types may be recognised—day schools, where the great majority of the scholars live in their own homes, and residential schools, where the scholars are in residence; but a considerable number of schools are a mixture of the two types. In some of the day schools there has been set up a fairly good co-ordination of the medical work with that of the local education authority of the area in which the school is situated, but in others this linking up is less satisfactory. In the residential schools very great variation in the scope and methods of this work can be noted, in some little more than medical treatment for urgent illnesses being provided, little or no attention being given to the broader and equally important aspects mentioned in A above, while in a few others the work in all its departments has attained a very high level of efficiency.

At the present time there is no requirement for *routine* inspection at public schools. Where it is not done this is a fundamental omission, as upon this examination important health and educational procedures affecting particular children frequently depend. It would appear that in a comparatively few instances is the school medical officer consulted upon such matters as design of buildings, particularly having reference to sanitation, diet having regard to nutritional requirements, scope and extent of organised games and exercise, and instruction to the scholars on hygienic and sex matters.

C. Suggested Improvements

In view of the lack of any evidence that the Board of Education at the present time carries out any scheme of inspection of premises of public schools, or has any control on the general suitability and hygienic condition of the day or sleeping quarters of the scholars, the Society feels that an important item in the duties of a school medical officer is that he should be consulted regarding the general hygienic conditions as mentioned under A above. The Board of Education already appear to take an active part on the education side of the public schools and have laid down educational standards which the public schools are expected to attain. The Society feels that the Board of Education should take as active a part on the physical side regarding the well-being of the pupils as they now take on the purely educational side. It recognises, however, that this may probably require legislation, but, if so, in the judgment of the Society such legislation is long overdue.

Another item of considerable importance in the view of the Society is the incidence of over-strain at public schools. This appears to be more marked in children who have passed from the public elementary schools on scholarships or in some similar way into the public schools. It seems likely that more and more the trend of education in England will be for the public elementary school under the control of local education authorities to be regarded as a preparatory school for the public schools. In such circumstances special attention should be given to the psychological aspect of pupils who have entered a public school on a scholarship, particularly where the boys come from really poor homes. Another important question is the age of transfer of pupils to public schools from preparatory schools or from public elementary schools. If the age of transfer is 11 plus the Society considers that such pupils should be educated in a special junior department of a public school and should not be mixed with the older boys or girls. If the age of transfer is 13 plus then such segregation is not in the judgment of the Society necessary. The Society is also of opinion that the medical officer of a public school should be brought into consultation by the head master and house and form masters in all questions of character and habit formation, nutrition, diet, sleep, suitability for occupations, etc., and that the medical officer of these schools should be free to express to the head master, and if necessary direct to the Governors, his opinions on any such matters.

Finally, the Society of Medical Officers of Health submit that all schemes of medical inspection and supervision at public schools should be drawn up and approved by the Board of Education. It is felt, moreover, that in any such scheme it should be made clear that the medical officer of the school should have responsibility for the decision as to pupils playing games, swimming, doing gymnastics and other forms of physical exercise. The heads of schools should consult the medical officer in all such matters and be guided by him as to the extent of physical exercise desirable in any particular case.

BOOK REVIEWS

Studies on Immunisation, First Series. By Sir Almroth E. Wright, M.D., F.R.S. 1943. London: William Heinemann. Pp. 421. Price 25s. net.

This handsomely produced volume is a reprint, with very few changes, of the author's *Studies on Immunisation*, first published in 1909. It contains a group of papers on undulant fever and its differential diagnosis by serum agglutination; a series on the bactericidal properties of serum which led to Wright's differentiation of bacteria into serophytes and serosaprophytes according to their viability in normal serum; seven papers on the nature of opsonin and the part it plays in different infections, and, lastly, a group of papers on vaccine-therapy. Important as these studies have been in the development of immunology, it is a little difficult to appreciate what prompted their reprinting at the present time.

Allergy Anaphylaxis and Immunotherapy. By Bret Ratner, M.D. 1943. London: Baillière, Tindall & Cox. Pp. x + 824. Illustrated. Price 47s. net.

This is a book for the specialist in infectious diseases and for the immunologist. The first section contains a wealth of up-to-date and accurate data on the nature and methods of preparation of toxins, antitoxins, and other anti-sera, including the new classification of the globulins by electrophoretic analysis. Chapters on blood groups and blood transfusion, and on sulphonamides and sulphonamide-therapy, are included in this section. The next part of the book deals with the part which serum and chemotherapy should play in the prophylaxis and treatment of some 40 different infections, listed alphabetically, from anaerobic infections and anthrax to whooping-cough and yellow fever. Again, the review of the literature is remarkably complete and includes many references to British work. There follows a series of chapters on the nature of allergy (with graphic illustrations), serum sickness, acquired serum sensitivity and its management, transfusion risks and drug allergy, while the last section elaborates the physiological pathology and blood chemistry and cytology of anaphylaxis and allergic phenomena. The bibliography extends to 56 pages and there is an adequate index.

The Journey to Work. By K. Liepmann, Ph.D. London, 1944: Kegan Paul, Trench, Trubner & Co., Ltd. Bound volume, 206 pp. 15s. net.

Since the beginning of the present century, large towns and cities have developed in the industrial areas of Great Britain. Greater London is now 30 miles across, and the distances within built-up areas have grown correspondingly. This development would not have been possible but for the spectacular growth of mechanical transport, which has allowed millions of people to travel considerable distances to and from work. The author of the book under review sets out the social and economic problems involved in the journey and illustrates how little these problems have been considered in the past. "In Greater London the main housing estate was developed in the East side of the town, while most of the new factories were built in the West. The result has been daily journeys across the whole width of London. . . ." Long "bread-and-butter journeys" entail a number of hardships to the worker—big fares which take a large bite out of the family budget, loss of sleep and leisure time, the strain of travel and of getting to work in time; all of which impair both personal well-being and working efficiency.

In our present society Dr. Liepmann rightly finds some advantages in the worker's ability to travel long distances to work. He has a wider choice of employment, and the family unit may be preserved because each earning member has the opportunity to find work in different localities and to live at home. The employer can pick and choose his employees, not only from local labour. To help the traveller to work the author makes constructive suggestions which could be applied without delay. The first is the adoption of a five-day week and the staggering of working hours. The second is the reorganisation, or at least the amendment, of the existing regulations for workmen's tickets. In their present form they inflict severe hardships in strain and loss of time to the users of workmen's trains. Thirdly, a wider use of private transport is advocated. The modest importance of these suggestions, and the fact that the main solution is to be found in town planning, is stressed. The statistical enquiries which are the real value of this book confirm the growing need for quicker, cheaper, and more direct means of transport, bold policies for housing development and planning, and even broader plans to relieve workpeople of the need to follow the fluctuations of trade.

This book, which is illustrated with a number of good plans and diagrams, provides valuable information for those concerned with transport services, the planning of our new towns and cities, and the health of industrial workers.

Manual of Industrial Hygiene. Prepared by the Division of Industrial Hygiene, National Institute of Health, U.S. Public Health Service. Edited by Wm. M. Gafafer, D.Sc. Philadelphia and London: W. B. Saunders Company. 1943. pp. 508. Price 18s. net.

This is one of a number of excellent books on industrial medicine that have recently come from the U.S.A. The unprecedented growth of industry there has demanded a corresponding increase in industrial physicians—a matter of difficulty with the urgent call for doctors by the military forces. This book is intended specially for those who must meet the changed conditions in industry converted to war purposes, but it is a guide also for industrial engineers and nurses.

Some idea of the variety of subjects covered can be obtained from the fact that sixteen different writers have contributed to its pages—seven doctors, one dentist, one nurse, one health educationist, two statisticians, and four engineers. While the book is directed mainly to the urgent problems of war—the use of man-power, absenteeism, fatigue, women in industry, health education—there is at the same time much valuable information on what we may term normal industrial medicine: on the organisation and set-up of medical, nursing, and dental services; on the problems of occupational disease; and factory environment. Indeed the book is specially noteworthy for the attention that has been paid to "plant sanitation," working conditions, and hygiene engineering generally.

In many parts the book has a refreshing width of outlook. In the U.S.A. the public health authorities have apparently more to do with industry than in this country—perhaps because of multiple state legislation. It was estimated from conditions before the attack on Pearl Harbour that by the end of 1943 over 27 million persons would have undergone an economic dislocation. The statement goes on, "With this social and economic uprooting and relocating of nearly 30 million persons, the danger of serious epidemics will be greatly increased if vigorous measures are not adopted to prevent them"—measures that are not only the responsibility of the local health services but, in partnership, that of the industrial medical officer as well. Industrial medicine and public health should come into closer partnership in this country. That there is a joint challenge, from the educational point of view alone, is clearly shown by the fact that in America the "very large majority of the war workers have come out of school with little knowledge of health protection. Their health education comprises the teachings of advertisers and the fatuous theory that by obeying school-book rules of hygiene, one will come unscathed to a ripe old age. . . ." And what applies in that country may not unreasonably be said to apply here.

While this book is primarily for the industrial physician, much of its contents should be known to the public health officer.

Catechism Series. Public Health, Part I pp. 63, Part II pp. 69; Venereal Diseases, pp. 80; Mental Disease, pp. 84; Physiology, pp. 82; Diseases of the Eye, pp. 66. Edinburgh: E. & S. *Livingstone*. 1944. Price 1s. 6d. each part, postage 3d. each.

Many people insist that the aim of education is not to enable the pupil to acquire a large mass of information, but rather that he should be grounded in certain general principles, in method, and in the forming of judgment. Examinations, for example, are subject to criticism, but as yet have not been displaced as no-one has thought of a really satisfactory alternative. But whether merely to satisfy his many examiners, or as a help when he comes to the practice of medicine, the medical student must acquire many items of information. Some students are helped by attendances at formal lectures; others learn most readily from reading large volumes; many, perhaps most, learn more from their own notes taken from lectures or from their reading. Some are helped to meet the examiners in the *viva voce* examinations, and even in the written answers, by having learned on a "question-and-answer" basis. That this number cannot be small is evident from the popularity of Livingstone's "Catechism Series," which now deals with some 29 subjects—some so comprehensively as to need more than one volume. New editions of the volumes dealing with five of these subjects have been produced recently, the volume on physiology being in its fifth edition, and the two on public health in their fourth. In all five subjects the information has been brought up-to-date, the volume on venereal diseases (which, incidentally, gives the name of the author) containing a reference to Regulation 33B. There is a risk, in these condensed answers, of a sacrifice of literary style. The volumes on diseases of the eye and mental diseases, however, read so smoothly that they avoid the irritation caused by badly constructed phrases or inaccurate punctuation, faults from which the public health volumes are not entirely free.

As their purpose is to assist the student correctly to answer the examiners' questions, it is unfortunate that there are so many inaccuracies in the two volumes on public health. Some, such as the statement that puerperal pyrexia and puerperal fever are both notifiable diseases (p. 63), are due to failure to bring information completely up-to-date. Information about exclusion from school of contacts of infectious cases (p. 66) might have been brought into line with the recommendations of the Memorandum of the Ministry of Health and Board of Education; so also might the lengths of the incubation periods (p. 85), which are so very differently listed in different publications. Neither the dosage of material used in diphtheria immunisation nor the spacing of the doses (p. 90) are those recommended to-day, while few school medical officers would welcome having to examine all the other children in a class when an infectious disease had occurred in one member (p. 75). Violet rays are referred to (pp. 30 and 31) instead of ultra-violet rays, while TB. is sometimes used as an abbreviation for tuberculosis, and at other times for the tubercle bacillus.

CORRESPONDENCE

Darlington Tuberculosis Care Committee

To the Editor of Public Health

Sir,—The Darlington Tuberculosis Care Committee has completed its twenty-fifth year's work. Its continuance is an essential link in the work being undertaken by local authorities to combat the scourge of tuberculosis by protecting the healthy as well as helping the afflicted. The money subscribed to the committee's funds enables us to help stricken families in providing extra nourishment, clothing, footwear, bedding, invalid chairs, rent subsidies, and domestic assistance for incapacitated mothers; 902 cases have been helped altogether, and during the past year 38 new applications were dealt with. The Committee spent £825 and received valuable assistance from the Soldiers' and Sailors' Buffet Fund, who expended a further £65 on tuberculous cases with an ex-Service connection.

The scheme, which receives the approval and financial support of the Council, is carried out voluntarily and all money subscribed goes to the benefit of patients. Every case is thoroughly investigated by the medical officer, ward visitor and committee.

We appeal to you to help us in this work of relieving the afflicted and protecting the healthy. It is more important now than ever before that the committee's work should not be curtailed in any way due to lack of funds. More can be done voluntarily than statutorily in the matter of this relief. The Hon. Secretary, Dr. G. A. Dawson, will be glad to receive gifts of beds, bedding, boots and shoes, clothing, etc., the need of which is urgent, for distribution to necessitous cases. The parcels should be specially marked "For the Tuberculosis Care Committee," and addressed to the Tuberculosis Dispensary, Health Centre, Greenbank, Darlington.—We are, etc.,

A. J. Best (Chairman).
G. A. Dawson (Hon. Secretary).
A. J. Shaw (Hon. Treasurer).

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

COUNCIL MEETING

A meeting of the Council was held in the Hastings Hall, Tavistock House, Tavistock Square, London, on Thursday, May 4th, 1944, with the President (Dr. R. H. H. Jolly) in the chair. The session was continued and concluded on the morning of May 5th.

There were present: Drs. Cyril Banks, Malcolm Barker, G. F. Bramley, W. C. V. Brothwood, G. F. Buchan, J. J. Buchan, J. A. Charles, G. Lissant Cox, W. Allen Daley, James Fenton, James Ferguson, D. H. Geffen, J. M. Gibson, F. Gray, E. A. Gregg, F. Hall, C. E. Herington, Katherine M. Hirst, J. W. Hunter, Sir Wilson Jameson, Drs. J. Johnstone Jervis, Gordon Lilico, Sir Alexander Macgregor, Drs. G. V. T. McMichael, A. A. E. Newth, Thomas Orr, R. H. Parry, H. Paul, Professor R. M. F. Picken, Drs. E. Virginia Saunders-Jacobs, J. A. Scott, J. E. Spence, J. A. Stirling, J. A. Struthers, Mr. A. Gordon Taylor, Drs. G. McKim Thomas and F. T. H. Wood.

The minutes of the last meeting, held on January 28th, 1944 were approved and signed.

Nomination of President.—After considering nominations from Branches, the Council decided by ballot that Prof. R. M. F. Picken should be recommended for election as President of the Society for the session 1944-45.

Election of Officers.—The following officers were elected for the session 1944-45: *Vice-Presidents*—Dr. R. H. H. Jolly, Dr. Cyril Banks, Sir Alexander Macgregor. *Hon. Treasurer*—Dr. G. F. Buchan.

White Paper on a National Health Service.—Dr. G. F. Buchan submitted a memorandum summarising the recommendations and suggestions received from Branches and Groups in reference to the interim policy set out by the Society in the booklet "A National Health Service." After a prolonged discussion it was agreed to postpone further consideration of the White Paper and the Society's policy in regard thereto, until the next meeting of the Council.

Report of General Purposes Committee.—Dr. J. A. Charles reported the meeting of the General Purposes Committee held on May 4th, 1944 (PUBLIC HEALTH, July, 1944). The recommendations and decisions of the Committee were approved and adopted.

The Council then adjourned.

ORDINARY MEETING

An ordinary meeting was held at Tavistock House, Tavistock Square, London, on Friday, May 5th, 1944, with the President (Dr. R. H. H. Jolly) in the chair. There was a good attendance.

Election of President.—The recommendation of Council that Prof. R. M. F. Picken be elected President of the Society for the session 1944-45 was approved by acclamation.

Dr. Cyril Banks.—On behalf of the East Midland Branch, Dr. Stirling asked the Society to accept the portrait of Dr. Cyril Banks in commemoration of his services as President during the session 1943-44. In accepting the gift, the President said Dr. Banks had proved himself in every way worthy of the highest honour his colleagues could bestow, and the portrait would remain as a reminder of his long years of service to the Society.

Life Membership.—On the recommendation of the Yorkshire Branch, Dr. R. L. Thornley (formerly County M.O.H., East Riding) was elected a fully-paid life member of the Society.

B.M.A. Elections.—The Council recommended the following Public Health members for election to B.M.A. vacancies for 1944-45: *Two Members of Council*—Prof. R. M. F. Picken, Dr. James Fenton. *Four Representatives for Representative Body*—Drs. George Buchan, G. M. Gibson, J. W. Hunter, J. Johnstone Jervis. *Deputy Representatives*—Drs. R. H. H. Jolly, Hugh Paul, J. A. Stirling.

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

As Fellows: Anderson, Martha Lindsay, M.B., CH.B. (GLAS.), Ashford, Hazel Isobel, M.B., CH.B. (EDIN.), D.P.H., Bingemann, Uma Beatrice Stewart, M.B., B.S. (LOND.), D.P.H., Bradford, Mark, M.R.C.S., L.R.C.P., Brennen, Robert Gibson, M.B., B.CH. (BELF.), Cordiner, Robert, M.B. (GLAS.), D.P.H., Crawford, John Howard, M.D., CH.B. (LEEDS), Fellowes, Vera, M.B., CH.B. (BIRM.), Gibbs, Winnifred, M.B., CH.B. (EDIN.), D.P.H., Glyn-Jones, Kate, M.R.C.S., L.R.C.P., Hamilton, Betty Cossar, L.R.C.P. & S. (EDIN.), D.P.H., Hammond, Hester Margaret, M.B., CH.B. (BRIST.), Jamieson, William Maxwell, M.D. (ST. AND.), D.P.H., Laird, Sydney Mander, Major, R.A.M.C., B.SC., M.D. (GLAS.), F.R.F., P.S.G., D.P.H., Lejbowicz, Erwin, M.D. (VIENNA), Mills, Edward, M.B., CH.B. (ST. AND.), D.P.H., Murray, Francis J., L.R.C.P. & S.I., D.P.H., Nathan, Horace Abe, M.R.C.S., L.R.C.P., D.P.H., Neugroeschi, Margarete, M.D. (VIENNA), C.M.B. (LOND.), Richards, David Thomas, M.R.C.S., L.R.C.P., D.P.H., Smithson, Ronald Geoffrey, M.D. (LEEDS), CH.B., D.P.H., Stuart, George, O.B.E., M.A., M.D. (ABERD.), D.P.H., Thomson, Charles Samson, Lieut.-Col. R.A.M.C. M.B., CH.B., B.A.O. (QUEENS), D.P.H., Walker, Joseph, M.B., CH.B. (ST. AND.), D.P.H. L.D.S., D.P.H., Weizmann, Madeline, M.R.C.S., L.R.C.P., Wofinden, Robert Cavill M.D. (LOND.), D.P.H., Wynne, Winifred, M.B., CH.B. (BIRM.).

As Associate: Shields, Alexander Brodie, L.D.S., R.F.P.S. (GLAS.)

Nominations were received for the next election in respect of the following:—

Drs. A. G. Atkindon (Acting C.M.O.H., East Suffolk); A. E. Benyon) Med. Dir. Chest Radiography Centre, Nottingham); H. D. Dobson (M.O., Chesterfield Tube Works); Mary A. J. Melville (Temp. Sen. A.S.M.O., Manchester); Hugh Ramsay (T.O., Walthamstow and Chingford); C. M. Whiteford (M.O.H., Woodbridge U.D. and Deben R.D.); A. M. Wyllie (Phys. Supt. Aberdeen Roy. Men. Hospital).

The meeting then adjourned.

GENERAL PURPOSES COMMITTEE

A meeting of the General Purposes Committee was held in London on May 4th, 1944. Dr. J. A. Charles was in the chair, and there were present Drs. Cyril Banks, G. F. Buchan, J. J. Buchan, G. Lissant Cox, J. Fenton, J. Ferguson, J. M. Gibson, F. Hall, C. Herington, J. W. Hunter, R. H. H. Jolly, Gordon Lilico, Sir Alexander Macgregor, Professor R. M. F. Picken, Drs. E. Virginia Saunders-Jacobs, J. A. Stirling and F. T. H. Wood. The minutes of the meeting held on January 27th, 1944 (PUBLIC HEALTH, March, 1944, page 70) were approved and signed.

Rent Control. The Committee considered a letter from the Secretary of the Inter-Departmental Committee on Rent Control asking for the Society's opinion as to the usefulness of the existing provisions of the Rent Restriction Acts under which certificates are issued by sanitary authorities enabling a tenant to withhold a permitted increase of rent and for a sanitary authority itself to apply to the court. The Inter-Departmental Committee was anxious to know whether the comparatively limited use of these provisions was due to ignorance of the tenants or reluctance on the part of the local authority. The Committee recommended that the Inter-Departmental Committee be informed that in so far as pre-war conditions are concerned the limited use of certificates was due to ignorance on the part of the tenants, and that where publicity had been given to the provision of the Acts an increased number of certificates had been issued. As regards war-time conditions, the Committee was of opinion that there were a number of causes deterring tenants from utilising the provisions of the Acts. It was not within the knowledge of the Society that there had been any reluctance on the part of sanitary authorities to issue certificates.

Bacteriological Standard for Milk Churns and Bottles. The Committee considered a letter from the Urban District Councils Association regarding the institution of a standard of bacteriological count for all rinsings of churns, bottles, etc. It was agreed to inform the Association that the Society agrees in principle with the proposal, but would point out that it would be necessary to obtain an adequate definition of the term "thorough cleanliness" used in Article 21 (1) of the Milk and Dairies Order, and that if such a definition could be obtained and a satisfactory bacteriological standard could be devised, the Society would be prepared to recommend the institution of that standard.

Cost of Living Bonus for Men and Women Medical Officers. The Committee, after consideration of the letter from the Secretary of the B.M.A., which pointed out that the differentiation between the cost of living bonus awarded to men and women raised issues which extended beyond the sphere of professional activities, recommended that the letter be referred to the sub-committee of the Society dealing with the Askwith Scale of Salaries.

Control of Communicable Diseases.—Letters from the Ministry of Health were considered by the Committee in reference to (*a*) proposed brochure on standard methods of control of communicable diseases, and (*b*) a new statistical return for diphtheria immunisation. The Committee recommended that these matters be referred to a special sub-committee of the General Purposes Committee consisting of the President of the Society, the Hon. Treasurer, Professor Picken, Dr. H. Stanley Banks and the Chairman of the General Purposes Committee, for discussion with representatives of the Ministry and further report.

RESOLUTIONS FROM YORKSHIRE BRANCH

Resolution (1).—That the Council of the Society be requested to take steps to have Section 25 of the Food and Drugs Act, 1938, modified to include the following: "That when a sample of milk from a single producer has been found to be tuberculous by animal inoculation, or otherwise, the Medical Officer of Health of the county or sanitary district in which the milk was produced, shall have power to direct that all milk produced on the premises of that producer, and intended for human consumption, shall be efficiently pasteurised, such direction to remain in force until a producer submits a certificate from the Veterinary Inspector of the Ministry of Agriculture certifying (*a*) that the tuberculous animal(s) has (have) been removed from the herd; or (*b*) that he is satisfied that the milk now being produced has ceased to be infective."

The Committee recommended that the resolution be adopted by the Society with the addition of the following words as a preamble: "That until the public is effectively protected against tuberculous milk"—and that the resolution so modified be forwarded to the Ministries of Agriculture, Food and Health.

Resolution (2).—That the Council of the Society make representation to the Ministry of Health for power to be obtained permitting the employment of home helps, at the discretion of the Medical Officer of Health, in cases of any kind of sickness, or infirmity, on terms similar to those whereby home helps are at present employed in maternity and child welfare work.

The Committee recommended that the resolution be forwarded to the Ministry of Health.

Resolution (3).—That the attention of the Council of the Society be called to the inadequate allowance of towels at present permitted in schools, with the request that representation be made to the Board of Education to increase this allowance.

The Committee recommended that the Resolution be forwarded to the Board of Education.

RESOLUTIONS FROM EAST MIDLAND BRANCH

(*a*) "In the opinion of the East Midland Branch of the Society any person who, immediately prior to taking up war service, was about to enter the local government service, and who by reason of war service was unable to do so, should, if he or she enters the local government service within a reasonable time after demobilisation, have the period of war service reckoned for superannuation purposes."

Referred for consideration by Salaries Sub-committee.

(*b*) "That in the opinion of the East Midland Branch of the Society it is highly desirable there should be a unified health service under the Ministry of Health incorporating all health services, but that if it is not found possible to include the School Medical Service, that service should be administered and controlled locally by a medical officer who should have direct access to the local education authority."

The Committee recommended that this resolution be considered by the Council in its further deliberations as to the White Paper.

Regulation 33B and Ophthalmia Neonatorum. The letter from the Northern Counties Association for the Blind asked for the opinion of the Society as to the necessity for tightening up the regulations in regard to ophthalmia neonatorum by using the machinery of Regulation 33B. The Committee recommended that the Northern Counties Association for the Blind be informed that while the Society is sympathetic with its object, it does not consider that action under Regulation 33B will be practicable.

Child Psychology.—A memorandum from the Institute of Child Psychology concerning psychotherapy and children's medicine was referred to the Maternity and Child Welfare Group and the School Medical Group for consideration and report.

Inadequate Pensions for Medical Officers. Letters from Dr. E. H. M. Milligan and others in reference to pensions for medical officers were referred for consideration by the Salaries Sub-committee.

The Committee then adjourned.

COUNTY DISTRICT GROUP

A meeting of the Group was held in London on March 17th to discuss the White Paper on a national health service, and for the election of officers. Apologies were received from several members for absence.

The minutes of the last annual meeting, held on July 7th, 1939, were taken as read and signed by the Chairman.

The following officers were elected: *President*, Dr. A. F. Adamson; *Vice-President*, Dr. A. W. Forrest; *Hon. Secretary, Representative on the Council of the Society*, Dr. G. F. Bramley. *Executive Committee*: Drs. G. F. Buchan, C. E. E. Herington, J. C. Sleigh, K. E. Tapper, E. W. Caryl Thomas, James Gorman. *Hon. Secretaries to the Sub-Groups*: These appointments were referred to the Branches except in the case of the Midland, whose secretary, Dr. Horsbrough, being present, was re-elected.

Dr. Adamson, opening the discussion on a national health service, gave a clear picture of the proposals, stressing those which particularly affected the members of the Group. Many members took part in the discussion which followed and the meeting passed the following resolutions:—

1. That this meeting views with grave concern the proposal in the White Paper to limit the basis of local Government health services to county councils and county borough councils.

2. That the Council of the Society be recommended to ask for a revision of local government areas as a matter of primary importance.

3. That the meeting deplores the absence of any indication to utilise any experience gained in directing and controlling health services by the several hundred Medical Officers of Health of county districts, and urges the Society of Medical Officers of Health to seek some clarification as to how the reference to Medical Officers of Health at page 41 of the White Paper applies to the functions which will be exercised by the County District Medical Officers of Health under the proposed reorganisation.

4. That the Council of the Society be requested to send details to every member of the Society of opinion or observations collated from the expressed views of the Branches and Groups which they propose to submit to the Ministry, or officials of the Ministry, prior to such submission, whether these opinions are written or verbal.

5. That the Council of the Society be requested to recommend that the administration of the health centres under the new scheme should be delegated to the authorities to whom school medical and infant welfare administration is delegated.

Other views expressed, but not as formal resolutions, were that the Group welcomed the White Paper in its general purport, but that they disapproved of the principle of a whole-time salaried State Medical Service. The Secretary was also instructed to request the Council of the Society in the immediate future to draw up and send a questionnaire concerning the White Paper proposals to every member of the Public Health Service.

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Marjorie Back.

Hon. Secretary: Dr. Violet Russell.

Hon. Assistant Secretary: Dr. Miriam Florentin.

A meeting of the M. & C.W. Group was held on March 10, in London. The President was in the chair and 32 members were present to hear Dr. Doyne Bell give an address on the re-assessment of some paediatric procedures.

Dr. Doyne Bell discussed a variety of subjects of great interest to maternity and child welfare officers, such as the indications for circumcision and for tonsillectomy; tongue tie; the physiological variation in the period required for the establishment of lactation; the technique of breast feeding; the treatment of breast abscess; the management of constipation in the breast-fed baby; the use of sedatives for the "crying baby"; the treatment of bronchitis in infancy; the value of ultra-violet light as a source of vitamin D; the advantages of National dried milk over patent foods; the low cost of oatmeal as compared with groats; and the number of units of vitamin D which could be obtained for a shilling. A lively discussion followed, and a vote of thanks proposed by Dr. Mary Fisher, and enthusiastically acclaimed by the meeting, ended the session.

A meeting of the Group was held on May 5th, when the President was in the chair. The President of the Society, Dr. R. H. H. Jolly, and the Acting Executive Secretary, Sir George Elliston, were among the 54 members and guests who were present.

Dr. Dorothy Taylor, of the Ministry of Health, gave an interesting account of her recent visit to the U.S.A. and of the impressions she had gained during her tour, particularly in relation to maternity and child welfare. Dr. Jolly then proposed a vote of thanks to the speaker. He took the opportunity to pay a tribute to the work which the Group had done for the Council of the Society.

YORKSHIRE BRANCH

President: Dr. E. C. Benn (Medical Superintendent, Seacroft Hospital, Leeds).

Hon. Secretary: Dr. J. M. Gibson (M.O.H., Huddersfield).

An extraordinary meeting of the branch was held in Leeds, on April 14th. Twenty-four members were present and continued the discussion on the White Paper.

Resolutions were submitted for consideration, and the following were carried:—

1. That whilst a Joint Authority area should be large enough to provide in a satisfactory manner the ordinary hospital services, there is a danger of it being made too large, thus stifling local interest and increasing administrative difficulties. It is suggested that county boroughs and other similar large areas of population, with the county areas surrounding each, would form the most satisfactory units. They would not each provide the more highly specialised services, such as brain surgery, cancer treatment, etc., but would combine on a regional basis to provide these services.

2. That adequate safeguards should be provided for members of the existing public health service.

3. That the Society of Medical Officers of Health give consideration to the incorporation by Royal Charter of a Royal College of Public Health, having the same status, privileges and responsibilities as the existing Royal Colleges.

4. That the Council should enquire what steps the British Medical Association propose to take to safeguard the interests of medical officers of health.

5. That in the new scheme the Council should press for the recognition of existent whole-time medical officers of health, and other whole-time officers in the public health service, with special qualifications, or experience, as having a status equivalent to that of the consultants.

6. The provisions of the White Paper indicate a separation between the clinical side of infectious diseases and the field of epidemiology. To secure efficiency a close association between these branches of medicine is essential.

7. As they are parts of the same service that the ante-natal clinics and the maternity hospitals should be under the same authority.

8. That steps should be taken to encourage and facilitate suitable grouping of county districts for all local health services.

9. That the Council of the Society be requested to send details to every member of the Society of opinions or observations collated from the expressed views of the Branches and Groups which they propose to submit to the Ministry, prior to such submission, whether these opinions are written or verbal, and to keep the members informed regularly and promptly of the progress of negotiations, if necessarily confidentially, and by circular.

A meeting of the Branch was held in Leeds on April 28th, there being present 28 members and two guests. The minutes of the meeting held on April 14th were approved and signed.

An address was then given by Dr. W. N. Pickles, M.O.H., Aysgarth Rural District, on rural epidemiology. Dr. Pickles began with a description of a prevalent complaint known as "farmer's lung," an illness with a peculiar cough and shortness of breath which was believed to be due to mouldy hay. Dr. Richard Fawcitt, of Ulverston, a general practitioner and a skilled radiologist, had done much work on this subject, and not only was there a definite *x*-ray appearance, but the mycologists were able to isolate the fungus. The importance of the disease was that it might prevent the farmer from continuing his occupation. If more were to be known about it, country doctors would have to exert themselves and supply information and material from their ample opportunities.

Dr. Pickles then went on to the subject of endemic goitre. He said that he could not explain why the young generation in certain villages where the disease had once been prevalent seemed to be unaffected. It was true that in one such district the water supply had been improved, but in another it remained the same. He thought the addition of certain tinned foods, such as sardines, pilchards and herrings, to the diet might be responsible.

Dealing with acute rheumatism and associated heart disease, Dr. Pickles thought that the strong hereditary factor should be taken into account as much as poverty, malnutrition, and bad housing. He then went on to speak of two children's diseases, the presence of which he felt as a personal reproach. One was dental decay and the other tuberculous glands of the neck. Regarding the latter, he mentioned that a young Harvard physician had seen no cases of this disease until he came to Wensleydale.

Dr. Pickles presented charts illustrating epidemics of chicken-pox, measles, and jaundice, showing how infections were spread in buses, at village fêtes, etc. He then dealt with diphtheria prophylaxis. After an interesting discussion a vote of thanks was accorded to him for his most interesting paper.

NORTH-WESTERN BRANCH

President: Dr. J. E. Spence (M.O.H., Eccles).
Hon. Secretary: Dr. W. C. V. Brothwood (Deputy C.M.O., Lancashire).

A meeting of the Branch was held in Liverpool on April 28th. The President and 22 members were present.

Dr. A. O. Ross read a paper on venereal diseases in a large port in war-time. The education of the public, by means of speeches on the radio and by advertisement in the daily Press, said Dr. Ross, had engendered a fuller conception of the evil effects of these diseases. Promiscuity had increased during the war, and many people had received practical experience of these diseases. The number of women suffering from syphilis who had attended centres had, he said, been a feature of the war years. The total of 1,412 women attending with early syphilis in 1939 had risen to 3,576 in 1942, a figure which exceeded the total number of early syphilis cases in males for 1939 (3,574). Early gonorrhoea in women had increased by 35% in the same period, although in men there had been a 25% decrease in cases of early gonorrhoea. Early syphilis in males had risen by 53%.

The decline in the number of cases of early gonorrhoea in men was probably due to the efficacy of sulphonamide treatment, whereby the period of infectivity had been greatly reduced. The ratio of cases of early gonorrhoea to early syphilis was, in 1939, 6½ to 1; in 1942, it was 3¼ to 1. The ratio of Service cases, infected in Liverpool during 1942–1943, was 10 of gonorrhoea to 3 of syphilis. Since Service cases were all notified, this latter figure seemed to Dr. Ross to afford striking corroboration of the altered ratio. Early cases of gonorrhoea in the male had contributed 5·9% of the total for England and Wales, and early cases of syphilis 5·2% in 1939. In 1942, excluding Service cases, these figures had risen to 10·4% and 10% respectively. Since 1941, the dispensaries established by the Dutch, Norwegian, Belgian, and Polish authorities had gradually absorbed patients of their respective nationalities, and in 1943 these allied medical establishments had diagnosed and treated 246 cases of early gonorrhoea and 276 cases of early syphilis.

Women in Liverpool had attended the female clinics in great numbers since 1939. Cases of early syphilis rose from 25 in 1939 to 260 in 1942. Expressed as a percentage of the total early syphilis in females in England and Wales, this constituted a rise from 1·8% in 1939 to 7·2% in 1942. Cases of early gonorrhoea had risen from 123 in 1939 to 249 in 1942. The rise, compared with the total in England and Wales, had been from 2·2% to 3·3% respectively. Infected women had to be considered as a greater menace to the public health than men, because of the tendency towards clinical latency, coupled with ante-natal or natal infection of children. It was estimated that only one woman in every five or six infected showed clinical signs. For this reason Dr. Ross thought that ante-natal clinics should more than ever direct attention to the exclusion of syphilitic infection from mother and child.

Dr. Ross said that by the very reason of latency, Regulation 33B would always operate against the infected woman rather than the infected male. Most women of promiscuous habits would infect at least one male before they learnt that they were infectious. A contact slip system, whereby the recently infected male directed the contact to a female clinic, was, therefore, of value. This system had been operated in Liverpool for about ten years. It worked well, and by this means 72 women had reported at the centres during the latter half of 1943, as against 20 after the issue of Form 1, 33B. Women, generally speaking, were less likely to default than men, and in Dr. Ross's opinion an equitable system as well as a sensible one would be the continuation of contact slips and Regulation 33B, together with compulsory treatment of infectious defaulters.

Rapid and efficacious treatment of both syphilis and gonorrhoea was now possible through the use of intensive arsenoxide therapy for syphilis and of sulphonamide therapy for gonorrhoea. Still more promising and non-toxic methods of treatment had been adumbrated by the discovery of the therapeutic value of penicillin in both diseases. If these claims were substantiated, then the argument against compulsory treatment on account of its inherent dangers would cease to hold good.

A discussion followed, and Dr. Frazer proposed a vote of thanks to Dr. Ross for his instructive survey.

SCHOOL MEDICAL SERVICE GROUP

EAST MIDLAND SUB-GROUP

At a meeting held in Nottingham on May 19th, it was unanimously decided to establish a Sub-Group of the School Medical Service Group in the area corresponding geographically with the area covered by the East Midland Branch. About 25 members and guests were present. Dr. H. L. Barker, M.O.H., and S.M.O., Ilkeston, was elected President, and Dr. G. G. Buchanan, M.O.H. and S.M.O., Newark-on-Trent, Hon. Secretary and representative on the Group Council. It is proposed to hold meetings at convenient intervals, generally in Nottingham, for discussion on clinical and other matters of special interest to school medical officers.

Major Kenneth Mellanby read a paper on scabies and lice as a problem among school children; it provoked a most interesting discussion in which a large number of those present joined.

All medical officers concerned with school medical work are asked to communicate with Dr. G. G. Buchanan, Public Health Department, Middle Gate, Newark-on-Trent, or with the Group Secretary.

HOME COUNTIES BRANCH

President: Dr. Malcolm Barker (M.O.H., East Ham C.B.).
Hon. Secretary: Dr. C. Herington (M.O.H., Dagenham C.B.).

A meeting of the Branch was held in London on April 14th. There were present 23 members, and 32 members of the Metropolitan Branch.

A discussion on the proposed national health service was opened by Dr. G. F. Buchan. Dr. Fenton (Kensington) pointed out that the case for Scotland received special consideration in the White Paper, and argued in favour of similar treatment for London, which was almost ignored. Dr. C. F. White made several points in favour of the smaller joint authorities and compared the situation with that experienced by big business, where the lack of personal touch proved a disadvantage. Dr. Geffen thought the contemplated Joint Authorities would be administered by laymen. Many other speakers took part in the discussion, after which a series of recommendations was drawn up to be forwarded to the Council of the Society for consideration.

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EDITORIAL

Delay in Publication

The Acting Editor much regrets the delay in the publication of this Journal.

Post-Graduate Education in Public Health

Prof. J. M. Mackintosh appropriately chose the teaching and practice of preventive medicine as the subject of his inaugural lecture on 23rd June at the London School of Hygiene and Tropical Medicine. It has been printed in full in *The Lancet*† and a fairly full abstract has appeared in the *Medical Officer**. A detailed summary is therefore unnecessary here, but it will be recognised that the subject is of first importance to members of the public health service. The disquisition is learned and thoughtful, and should be studied carefully by all those who realise that the White Paper has brought public health to a parting of the ways. Neither the practice of public health nor instruction in the subject can remain static. Teaching must change and look forward to change in practice. It must therefore aim at turning out men and women not only able to meet the requirements of the posts they will immediately fill, but also fit to learn as they go and to strike out beyond the margins of a field which is ever widening. The post-graduate training of a medical officer of health must be vocational, but it must also be a liberal education. Prof. Mackintosh points out that a course of teaching in preventive medicine should be elastic and capable of ready adaptation to changing needs. He favours the system in vogue at Johns Hopkins, and some of the other American schools of hygiene, which affords both basic and elective subjects of study, enabling the student to choose a pattern for his course according to his inclinations and special interests, while retaining the foundation of essential subjects. As the "true functions of the medical officer of health are administration and public education" the course should be designed to train men and women in medical administration, both of institutions and of public health services generally, as an essential subject. The headings of a course in health administration which he sets out follow pretty closely the lines which most modern schools in this country have been pursuing. But the training would be of such a nature as to recognise the proper place for the lay administrator working side by side with the medical officer of health.

Certain questions raised by Prof. Mackintosh require careful consideration. The flexible type of course he favours is attractive, and realistic in relation to public health work. It is evidently intended, however, that courses of study which are not uniform should lead to a common academic qualification. This, of course, is quite usual with higher degrees and is the way things are arranged in the American schools of hygiene. But higher qualifications in public health were originally intended for Medical Officers of Health and in this country have carried a special statutory significance since 1888. Their meaning might be obscured if the content of the courses leading up to them were diverse. Is it intended that the statutory requirement as to the qualification for a post as Medical Officer of Health should disappear? Or is every student who would benefit from post-graduate study in public health, although he intends to branch off into lines which are largely clinical or scientific, to take basic subjects in the course which would fit him to take a post as Medical Officer of Health if at some time he wished to do so?

Prof. Mackintosh expresses the view that "the primary aim of a school or university department of hygiene is to make good general practitioners in health." In its context the phrase is evidently intended to describe those engaged in public health work, not in the general practice of medicine. It is certainly intended to reflect the great diversity of knowledge and interest required of a Medical Officer of Health, but it is an unfortunate form of words. The standard of public health administration will depend on the quality of men and women engaged in it, rather than upon the type of training they have undergone. To some extent, but by no means entirely, this again will depend on the monetary rewards to which they can look forward. Professional status will also count. Rank in the medical profession is apt to be measured by qualification and the type of work in which a practitioner is engaged, and any description which ignores the specialist nature of the work of a Medical Officer of Health will put this branch of medicine at a disadvantage in the competition for the best brains among young graduates. A qualification in public health should carry as much social credit, in the medical sense, as an F.R.C.S. or an M.R.C.P.

The Teaching of Preventive Medicine to Medical Students

A recent report† of a Committee of the Royal College of Physicians suggested that the course of public health for medical students, as now presented in the majority of teaching schools, should be replaced by a course of study concentrating on social and preventive medicine and designed to create a consistent and progressive curriculum. The aim should be (a) to indicate to the medical student some of the personal, industrial, and social factors which contribute to the causation of human disease; (b)

†*Lancet*, 1944, 2, 1.
**Med. Off.*, 1944, 72, 1.

†Royal College of Physicians of London: *Interim Report of The Social and Preventive Medicine Committee.* Oct., 1943.

to demonstrate the structure and working of the preventive and remedial organizations provided by public and voluntary agencies with the object of modifying or counteracting the effect of these causal factors; and (c) to train him in the practice of social investigation so that he may be able in the practice of his profession to use the appropriate social technique to reinforce his therapy. The first two of these aims have been in the minds of many of the teachers of public health or hygiene in provincial medical schools for a number of years. The difficulty has been to cover the ground in a short course of lectures and demonstrations usually confined to one term of less than three months, especially when it could safely be assumed that little attention was devoted to these subjects by the students' other teachers. In several of the London medical schools, indeed, the time allocated to hygiene has been so meagre as to preclude any but the most sketchy treatment of the preventive and social aspects of medicine.

The Committee has proposed that the physicians, surgeons, obstetricians, pædiatricians, and all those concerned with clinical instruction should be primarily responsible for inculcating a knowledge and interest in these aspects by constant reference to the cases and diseases coming under review. The function of the special department would be to co-ordinate these studies in order to secure a balanced and comprehensive course, to create the necessary background by means of lectures and demonstrations, partly before and partly during the time when the clinical approach is being pursued, and to arrange that such organizations external to the medical school as welfare clinics, school clinics, and industrial concerns are effectively used in the teaching. The third aim, training in social investigation, would be achieved by case-taking in collaboration with the almoner and under the supervision of a socially-minded clinician. For this purpose the types of problem which arise constantly at tuberculosis and child welfare clinics afford especially valuable instructional material. The scheme would include visits by students to the homes of patients and their reports would be read and criticized. The method was devised in Vanderbilt University, Tennessee, and has been adopted in a number of medical schools in the U.S.A. It is also pointed out that student health services afford an invaluable opportunity for emphasizing health as something more than the prevention and treatment of disease, and that these services should be under the general direction of the department of social and preventive medicine. Under a system of this kind the systematic teaching to be given by the department, spread over the three clinical years, would not be great in amount, apparently about 40 hours, but the work of co-ordination would be considerable. The head of the department would hold the status of professor. It is perhaps as a concession to fashion and to mark a break with the past that the title of the chair is described as "social and preventive medicine" and not "hygiene," a shorter and more comprehensive term, if rightly interpreted.

The view of this Committee is reinforced by a commentary on the subject of Dr. J. A. M. de Loureiro of Lisbon*, who recently visited this country under the auspices of the British Council and who has also studied the methods used in America. He points out that the old idea of teaching hygiene to medical students as a miniature replica of the course for health officials is entirely out of date and useless. The new teaching will have to be in strict association with the clinics, and especially the medical clinic, if it is to catch the attention of the student. He regards as antiquated, for instance, the German tradition of teaching hygiene in relation to bacteriology. On the other hand, a hospital patient has no problems apart from his illness: these arise in the home and the social and economic environment, and it is only by investigating them that the student can learn how the illness originated and how it might have been prevented. Technically the organization of such studies requires either a visiting service from the hospital or close collaboration with the public health and nursing services. From his account it would appear that it may be even more difficult in Portugal than in this country to engage the interest of the clinicians in such a project.

Supervision of Eating and Drinking Establishments

The extent to which disease is acquired in restaurants and public houses is still largely a matter of speculation. Indeed our knowledge as to the amount of food-borne infection in this country is far from complete, although the Annual Reports of the Chief Medical Officer of the Ministry and of Medical Officers of Health indicate that it is far from negligible. More recently the Monthly *Bulletins* of The Emergency Public Health Laboratory Service have contained frequent accounts of outbreaks of food-poisoning and other diseases conveyed by food and drink. These, however, usually refer to occasions when several people are so affected in time and place as to point to a common source of infection. There is little chance of tracing the origin of sporadic cases of alimentary infection. The increase of detection, if not greater incidence, of cases of dysentery of untraced origin in recent times, for example, should awaken the public to the need for more stringent control over the management of places where they eat and drink. The powers of local authorities are contained in Section 13 of the Food and Drugs Act, 1938, and are general in character, so that the action of a health department must be taken with an eye on the interpretation which any Court may place upon the law. Presumably the Minister of Health could make regulations in terms of Section 8 specifically bearing on eating and drinking houses.

In this connection the latest revision of an Ordinance and Code Regulating Eating and Drinking Establishments* recommended by the U.S. Public Health Service for adoption by States and health authorities is of interest. The code sets out in some detail the measures as regards construction, management, and personal conduct of the employees which such establishments must observe. In addition to the precautions which would ordinarily be regarded as essential in this country, attention may be drawn to certain important rules which are unusual here. For instance, inlets by which flies may enter must be screened and doors must be self-closing during the fly season, unless other effective means are taken to prevent the entrance of flies; not only must sanitary conveniences be isolated but they must have hand-washing facilities near at hand with individual towels for the workers, and they must use these before resuming work; eating and drinking vessels after the usual cleansing must be subjected to an approved bactericidal process after each usage and at the end of each day; all perishable food and drink must be kept in refrigerators. These are only a few examples of the detail into which the regulations enter. The major part of the *Bulletin* contains advice as to how the regulations should be operated and made effective, and includes useful illustrations of methods and references to literature on such subjects as the conveyance of infection by food and utensils. The essential point, however, in this code is that it would enforce registration of all such establishments and the issuance of permits by the health authority, with power to suspend or cancel or degrade if the regulations are not complied with. There can be no question that such a power, reasonably exercised, is the only effective means of ensuring a reasonable standard of hygiene in many restaurants, buffets and public houses. Since the Minister of Agriculture will soon be able to refuse registration of milk producers, an extension of this power to eating- and drinking-houses exercisable by local authorities would not be revolutionary.

**Comentários a uma viagem de estudo sobre o problema do ensino da medicina preventiva aos estudantes de medicina (Problems of Teaching of Preventive Medicine to Medical Students). Jornal do Médico*, Lisbon, 1944, 4, 139.

The following medical men in the public health service have been appointed Honorary Physicians to the King for a period of three years: Andrew Davidson, M.D., Chief Medical Officer, Department of Health for Scotland; G. Selby Wilson, M.D., F.R.C.P., Professor of Bacteriology, London School of Hygiene and Tropical Medicine, and Director of the Emergency Public Health Laboratory Service; J. A. Charles, M.D., F.R.C.P., Deputy M.O., Ministry of Health (until recently M.O.H., Newcastle-upon-Tyne); H. M. C. Macaulay, M.D., M.O.H., Middlesex County Council. The following men in the public health service have now completed their term of office as Honorary Physicians to the King: Sir Weldon Dalrymple-Champneys, Bt., D.M., F.R.C.P., Deputy C.M.O., Ministry of Health; R. Veitch Clark, M.B., lately M.O.H., Manchester; W. G. Clark, M.B., M.O.H., Edinburgh; J. Ferguson, M.B., M.O.H., Surrey C.C.

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The Minister of Supply has appointed Prof. H. Raistrick, F.R.S. as honorary scientific adviser on pencillin production. Prof. Raistrick is a member of the General Penicillin Committee and is Professor of Biochemistry at the London School of Hygiene and Tropical Medicine (University of London).

MEDICAL SUPERVISION IN INDUSTRY IN PEACE AND WAR*

BY

S. A. Henry, M.A., M.D. (Cantab.), M.R.C.P., D.P.H., D.T.M.

H.M. Medical Inspector of Factories, Ministry of Labour and National Service.

The term "industry" embraces many more undertakings than those to which the Factories Act applies, and so, as an Inspector of Factories, it would be impertinent of me to do more than touch upon such undertakings as mining and quarrying; transport by air, by land (whether by road or rail), or by water (whether inland canal, or sea); agriculture; fisheries; or offices such as that of His Majesty's Mails, otherwise the Post Office; as I have no practical knowledge of any of these. But perhaps some of them have very limited knowledge of our present subject.

By medical supervision I mean to imply not "power without strain" but *medical service*, which requires very close application of the medical mind to the health of the worker in industry. This medical service in industry may be statutory or voluntary, continual or periodic, permanent or temporary, and it may be for a purely specific or for a general purpose; but in order to appreciate its progress it is necessary to state briefly its origin and history.

Early Factory Legislation

The first germ of factory legislation in this country is to be found in the Health and Morals of Apprentices Act of 1802, which, however, only provided for the cleaning and ventilation of one class of factory namely, cotton mills—and for the clothing, hours of labour and religious education of apprentices therein. Inspection was voluntary and was provided by Justices of the Peace and the Clergy, who reported to Quarter Sessions. That was an age of much fatigue, much godliness, and little cleanliness.

In 1830, an employer in worsted spinning who was perturbed by the public concern about children being crippled by the long hours and conditions of factory life consulted Robert Baker, a surgeon in Leeds, who advised that a medical officer should be appointed to visit the factory daily and watch the effects of work on the children's health. It is interesting that this first recorded instance of recommending medical supervision for a general purpose came from a medical man who was destined to become a junior inspector or superintendent of factories in 1834 serving under Robert Rickards, one of the four original inspectors under the Factory Act of 1833. In 1858, however, he was raised to the Inspectorate. Three years later, when another inspector, Sir John Kincaid, resigned, Baker and Alexander Redgrave remained as the only two inspectors. Had Baker not resigned before the new post of Chief Inspector was created by the Home Secretary in December, 1878, thus leaving Redgrave to be the sole candidate in the field, one cannot help wondering whether Baker would have been considered suitable to hold this post, thus enabling the medical profession to claim the first Chief Inspector as its offspring though not following his original profession.

It was not until eighteen years later, in 1896, that the services of a medical man, Arthur Whitelegge, Medical Officer of Health for the West Riding of Yorkshire, who became Sir Arthur Whitelegge, were enlisted for the post of Chief Inspector, and, although he did not so act in a medical capacity, it was no doubt as a result of his advice that the post of Medical Inspector was created in 1898 and Thomas Morison Legge, who later became Sir Thomas Legge, was appointed. Since then the medical branch has expanded, and, although skilled labour is scarce, there are, in addition to four who have been seconded for special work, six permanent (including one woman) and six temporary (including two women) Medical Inspectors, under a Senior Medical Inspector; but the last remaining departmental medical link with Legge's reign are Dr. Sibyl Horner, Dr. Middleton, and myself. (The Factory Department was transferred at the beginning of the war from the Home Office to the Ministry of Labour and National Service.) To Leeds we owe another debt of gratitude, for in 1831 there was published in that town a book, small in size but abundant in wisdom, on the effects of the principal arts, trades, and professions on health. The author was a Leeds doctor, Charles Turner Thackrah, who may well be described as the pioneer of industrial medicine in Great Britain.

The Factory Acts of 1819 and 1825 left the voluntary local system of factory inspection unchanged, and it was not until the Factory Act of 1833, of which the application was still limited to textile factories, that the principle of enforcement of the law by means of statutory inspection was introduced and the first four inspectors—Leonard Horner, Thomas Jones Howell, Robert Rickards, and Robert Jones Saunders—were appointed. Prior to the passing of this Act the age of a child was established by a certificate, often very dubious, from the parent; but by the Act of 1833 a certificate of age was required from a medical man to the effect that a child was of the ordinary strength and appearance of a child exceeding 9 years or other specified age.

The Certifying Factory Surgeon

Those who take a kindly interest in the medical profession may like to know that, even at this period of its history, the difficulty of preserving uniformity in certification was not unknown, for Mr. Saunders, an inspector, observed in 1838 that a parent would go to one surgery with a child clean and in his best clothes, and, if the surgeon did not think him old enough, the parent immediately put the child into a working dress, higher shoes and, by the aid of an indigo complexion obtained in a woollen mill, endeavour to get a certificate from another surgeon. If still unsuccessful, the parent would try another type of mill, such as a flax mill, where a surgeon was available, and if the child was still thought to be too small and young would persist until a surgeon was found who took the lowest estimation of height for development as a guide in certification. Although the inspectors tried to arrange as far as possible for one medical man in each district to perform the duty of certifying surgeon, they had no statutory powers to back them; but eleven years later, by the Act of 1844, power was given to them to appoint a sufficient number of practising medical men to be certifying surgeons for the purpose of examining young persons brought before them for certification, though it was still possible for certificates to be given by persons other than the certifying surgeon provided there was a counter-signature by a Justice of the Peace and the examiner was not a factory occupier of the father or son of an occupier. Apparently the legislators of that time did not visualise the later appearance of a woman as a doctor.

Thus we see the birth of the certifying factory surgeon system. Although it was not until 1878 that permission for other than the certifying surgeon to certify was abolished, in due course a part-time certifying surgeon was appointed for each district, and there are now 1,758, of whom 83 (or 4.7%) are associated with charitable institutions which, since the 1907 Act, have been allowed to have the surgeon of their choice appointed instead of the surgeon for the district.

Since 1937 the factory surgeon may also be deprived of one of his duties at an individual factory in his district, for where a doctor is employed by the occupier of a factory in connection with medical supervision the Minister may authorise such a doctor to act as examining surgeon for that factory, but solely for the purpose of examining and certifying the fitness of young persons; so far 117 such appointments have been made. There are, of course, rare occasions in which no medical man applies for a vacant appointment, when it becomes incumbent on the Poor Law Medical Officer in England and Wales, and the Medical Officer of Health or his chosen deputy in Scotland, to take on the duties; there are 13 instances of this in England and Wales and 45 in Scotland.

Certificate of Fitness

It was also in 1844 that the principle of health was introduced, but in a limited way, into the certificate, for in addition to age the surgeon had to certify that the child or young person was not incapacitated by disease or bodily infirmity from working daily in the factory concerned for the time allowed by the Act. Normally the examination for these certificates of fitness, as they were now called—a better term would have been the more negative one of non-incapacity—had to be performed at the factory, but now by later legislation, as a concession to small employers if under 4

**Lecture delivered under the auspices of the Chadwick Trust at the London School of Hygiene and Tropical Medicine on March 14, 1944.*

Results of Examinations of Young Persons 1939-1942

Examined	Number of Examinations	Percentage of Sexes		Percentage Rejected or Suspended			Percentage Passed					
							With Conditions			Provisional		
		Male	Female	Male	Female	Total	Subject to Nature of Employment	Subject to Re-Examn.	Total	Pending Result of Advice	Pending Receipt of School Record	Total
Young Persons Between the Ages of 14 and 16 years	1,387,342	49·5	50·5	0·93	2·04	2·97	2·8	1·28	4·08	0·6	0·05	·65
Young Persons Re-examined;— Under 16	14,281	46·5	53·5	2·54	4·42	6·96						
Over 16	6,055	94·4	5·6	0·50	0·77	1·27						
Boys over 16 years of age for employment at night	37,099 (2½ exams, yearly per person)	–	–	0·85	–	0·85						

Calculated percentage of refusals or suspensions to number employed = 2·1

young persons under 16 are employed, they can be examined at the surgeon's residence or surgery.

The Act of 1901 gave the certifying surgeon the same power as an inspector to inspect the process at which it was proposed to employ the worker in question, and to qualify his certificate of fitness, if he thought advisable, by conditions as to the work to be performed, and now also as to re-examination even up to the age of 18.

For a number of years a few surgeons have voluntarily co-operated with a local Juvenile Employment Committee by forwarding a summary of the conditions on a card provided by the committee, so that the young person could be advised of a factory where such conditions were available when not so at the factory first concerned.

The initial examination must now take place within fourteen days of commencing work, and when performed at the factory must be in suitably furnished premises provided for the examination. Power is also given to grant a provisional certificate for a period of 21 days pending results of advice or receipt of any further information the surgeon may desire—as, for example, the school medical record, which he is entitled to obtain from the requisite educational authority. Further, he must record his findings on an official form or card provided by the Department; but I hasten to add that no container is included with this gift.

Thus at last we have a true certificate of fitness. An analysis of 1,387,342 examinations of young persons for the 4 years 1939 to 1942 (Table I) shows rejection in nearly 3% (over 2 in females and less than 1 in males); passing with conditions in over 4%, or provisionally in well under 1%, mainly pending result of advice rather than of the school certificate. While the percentage of refusals at re-examination of those under 16 is nearly 7, for those over 16 it is only just above 1. The main causes of refusal (Table II) are pediculosis in 43%, eye defects 20% and skin diseases 11%.

The statutory duty for certifying surgeons to investigate and report on all accidents in any factory for which they had been appointed to grant certificates of age was introduced also by the Act of 1844, but in 1916, to the chagrin of many of them, this power was reduced by the Police Factories, etc. (Miscellaneous Provisions) Act, and limited to investigation of cases of injury caused by exposure to gas, fumes, or other noxious substances, or what are described as "gassing" accidents.

The Consolidating Act of 1878 introduced a disciplinary measure, as the Secretary of State was authorised to make rules to govern the office of certifying surgeon. Further, the objectionable principle of the child or young person contributing 3d. towards the fee for examination was no longer allowed, and thereafter the employer was alone responsible for payment of the whole fee.

The Act of 1891 placed a new obligation on the surgeon of making an annual report, and some of them felt that insult was added to injury, as it carried with it no fee. However, apparently the pill was not altogether bitter, as this obligation was substituted for a provision contained in the original bill to abolish the certificate of fitness, instead of strengthening it.

Periodic Examination

After the passing of the Factory Act of 1891, special rules were applied to industries where dangerous materials were handled and injurious effects known to be produced. In the special rules for the enamelling of iron plates (vitreous enamelling), it is interesting to note that the employer was required to send to a doctor, at his own expense, any worker complaining of feeling ill when apparently due to his employment. These special rules have passed away and have been superseded by regulations which require a periodic medical examination, weekly to quarterly according to the process.

Rejections of Young Persons 1939-1942

Defects causing rejection	Number rejected	Percentage of total rejections
Pediculosis	9230	43·30
Diseases of Eye, Eyelids and Refractive Errors	4359	20·45
Diseases of Skin	2438	11·44
Diseases of Circulatory System	1041	4·84
Diseases of Ear, Nose or Throat	735	3·41
Disease of Lungs	565	2·66
Disease of Nervous System	520	2·44
Defective Bodily Development	492	2·32
Disease of Bones and Joints	168	0·79
Deformity	157	0·74
Hernia	143	0·68
Disease of Glands	133	0·63
Specific Fevers	87	0·41
Rheumatism	71	0·34
Other Reasons	1180	5·55
TOTAL	21,319	100

The Act of 1895 introduced the great principle of notification of industrial diseases, 14* of which are now notifiable. The investigation of such cases added to the duties of the certifying surgeon, and entailed not only a clinical examination of the injured person but also a thorough examination of the process at which he

*Lead, phosphorus and arsenical poisoning and anthrax from 1896, mercurial poisoning from 1899, toxic jaundice from 1916, epitheliomatous and chrome ulceration from 1920, chronic benzene, carbon bisulphide and aniline poisoning from 1925, manganese poisoning from 1936, compressed air illness from 1939 and toxic anæmia from 1942.

was engaged, thus giving the certifying surgeon the unique opportunity of continually increasing his knowledge of industrial medicine while providing the Factory Department with valuable data, for which the department pays the fee.

The Factory Act of 1901 introduced the principle of periodic examination of young persons to ensure that certain work of an unusual nature was not causing injury to health. Under the Act, male young persons of 14 years of age and upwards (this age was subsequently raised by future legislation to 16) were permitted under certain conditions to perform shift work which necessitated work at night, because the process was necessarily continuous, as in paper, glass, and metal works, provided that they were examined periodically every six months by the certifying surgeon. By the Act of 1937 the principle of an initial medical examination at the factory, within fourteen days of employment, was added, and the periodic examination now takes place within the first three months and thereafter six-monthly, with the power of suspension by the surgeon if the work appears to be injuring the health of the young person. It is calculated that slightly over 2% are refused at the initial or subsequent examinations (Table I). I may add that similar medical supervision is required for the few male young persons under 16 who, since 1942, have been permitted by Order made under the Defence (General) Regulations, 1939, to perform two-day shift work, as an emergency measure in special cases at some 28 factories, most of which are glass works.

But this was not the only addition to the surgeon's labours for in 1906 his services were enlisted by the Home Office for a new duty outside the province of the Factory Act for the purpose of giving a certificate of disablement under the Workmen's Compensation Act to any workmen suffering from one of the diseases, of which there are now 43, scheduled under that Act. Many of these diseases occur elsewhere than in factories, such as that now rare disease of Cornish tin-miners, known as ankylostomiasis or, as the worker calls it, "The Bunches," nystagmus, inflammation of the synovial lining of the wrist joint and tendon sheaths, and the conditions of acute bursitis known as "beat" hand, "beat" elbow and "beat" knee, all in coal miners, though the house-maid's knee can similarly be affected, but on her lies the onus of proof of causation. Other examples are chimney-sweep's scrotal cancer, the glanders of those caring for equine animals or handling the carcass of such, and the cramp of telegraphists and writers. Such pulmonary diseases as silicosis and asbestosis are in a separate category and are dealt with by special schemes, which include examination by members of the Silicosis Board.

All factory workers suffering from a disabling notifiable disease can obtain compensation under one scheduled heading or another, but certain diseases subject to compensation such as dermatitis produced by dust or liquids, and cataract in glass workers or in those exposed to rays from molten and red hot metal, poisoning by diethylene dioxide (dioxan) causing hæmorrhagic nephritis, and poisoning by methyl bromide or tricresyl or triphenyl phosphate, with their effects on the nervous system, are not notifiable.

"Examining Surgeon" and "Appointed Surgeon"

When the new Factories Act reached the Statute Book in 1937, not only did it raise the status of a workshop to that of a factory, but it added greatly to the power and prestige of the certifying surgeon, whose title was altered to that of "Examining Surgeon," though the original title of "Certifying Surgeon" still remains under the Workmen's Compensation Act. It is probably for this reason that the Association of Certifying Factory Surgeons has not thought fit to follow the fashionable lead of the Factories Act by altering its name.

In certain colliery districts, in order to obviate any suggestion of partiality when an examining surgeon under the Factories Act holds the post of medical officer to a colliery, the duty of certifying surgeon under the Workmen's Compensation Act is given to another medical man not so associated, and there are 10 instances of such appointments.

With the introduction, after the 1891 Act, of *Special Rules* for dangerous trades (which were not in force until they had been established for individual factories, and which were gradually replaced by *Regulations* applicable to all such factories after 1901) a new Statutory medical figure came upon the scene—the Appointed Surgeon, for the *weekly* examination under the Special White Lead Rules (replaced by the Regulations for the Manufacture of Lead Compounds in 1921) and the *monthly* examination under the Regulations for the Manufacture of Electric Accumulators in 1903, of Paints and Colours in 1907, for Lead Smelting in 1911, of Indiarubber and for Chemical Works in 1922, and the *quarterly* examination under Regulations for the Heading of Yarn dyed by means of a lead compound in 1907, for Vitreous Enamelling in 1908, and for Tinning of Metal Hollowware in 1909, could be performed by the Certifying Surgeon or other duly qualified medical practitioner, appointed by certificate of the Chief Inspector. This concession was no doubt primarily allowed to enable those employers who had wisely initiated voluntarily such a periodic medical examination prior to its becoming statutory to retain a medical man whose services they were already employing.

When the Electric Accumulator Regulations were amended in 1925, the principle of examination *before* commencing work was instituted, as the first examination must take place within seven days before or after commencing work.

Under regulations for painting of vehicles in 1926, and the lead paint regulations of 1927 made under the Lead Paint (Protection against Poisoning Act) of 1926, there are normally no periodic medical examinations, but the Chief Inspector has power to require them under certain conditions if he thinks fit.

The chromium plating regulations of 1931 require for the first time a fortnightly examination and finally, under Defence legislation, the Factories (Luminising) (Health and Safety Provision) Order, which came into force in 1942 provides for an *initial* and *quarterly* medical examination of those persons of 16 years of age and over who are allowed to be employed in the process of luminising with radio-active material.

Under all these regulations an appointed surgeon may be allowed to perform the medical examinations. But there is one set of regulations in which only the Certifying Factory Surgeon can do so—namely the Pottery Regulations. These regulations, which came into force in 1913 for the pottery industry, in addition to the monthly periodic medical examination of certain workers in contact with lead, imposed further duties of a special nature on the certifying surgeon relating to certain processes of a strenuous nature, such as the carrying of clay or other systematic carrying or lifting work which male or female young persons aged 14 to 18 are allowed to perform only provided that the certifying surgeon gives within 7 days of commencement of work a certificate of "permission to work," specifying the maximum weight to be carried. Further, the young person must be re-examined twice in the first period of 6 months and once in each period of 6 months thereafter till the age of 18 is reached. A similar certificate of "permission to work" has to be obtained by a female employed in a pottery as a wheel turner to a thrower or in wedging of clay and she must be re-examined at a later date if the surgeon considers it necessary. We come across, in 1921, another statutory examination for a specific purpose in which the appointed surgeon plays no part and the certifying surgeon reigns supreme. This is the quarterly examination of women and young persons who are permitted under certain conditions to work in certain processes involving the use of lead compounds, and was prescribed by an Order under the Women and Young Persons Lead Processes Act, 1920, which, although since repealed, is incorporated in the Factories Act of 1937.

Lastly, since 1940 we have the introduction of the principle of statutory medical supervision of workers of all ages for a general purpose by means of the Factories (Medical and Welfare Services) Order of 1940, made under Regulation 60 of the Defence (General) Regulations, 1939, which gives power, under certain conditions, to the Chief Inspector to require provision of medical supervision, nursing and first-aid services, and supervision of the welfare of the worker, if he so directs. But so far no direction has been made owing to the success of voluntary adoption, and a number of examining surgeons who can spare the time are being employed part-time by firms complying with this Order.

Some Pioneers

There have been many criticisms of the examining surgeon system and of individual examining surgeons, both by the employer and by the worker, either for giving a certificate of fitness without what was considered an adequate examination, or because of refusal to give a certificate. Unfortunately, in any community there are those who give cause for complaint but they may also have their own grievances. It is only fair to say that until 1937

the powers of the examining surgeon were extremely limited and many had to work under difficulties. But there is no doubt that the new Act of 1937 has given powers which should enable the work to be satisfactorily performed by all. How seldom in the old days did we hear of those few or many who performed their work so admirably in spite of the limitations, and I think it is only fitting now that they are no longer with us that we should pay tribute to such outstanding certifying surgeons as Charles Delacherois Purdon of Belfast and his son, Henry Samuel, who succeeded him in 1882, who both wrote on the diseases which prevailed in workers in flax; William Francis Dearden, Secretary for so many years of the Association of Certifying Factory Surgeons with his investigations on phosphorus poisoning in the manufacture of lucifer matches and his Milroy lectures on the effects of cotton dust; and Prosser White of Wigan, who contributed so much to the knowledge of industrial dermatology in his great treatise on the *Dermatergoses*. There were those who chose to make their particular concern one or other finding during the medical examination—apart from the everlasting problems of pediculosis and defective vision—such as poor development, defective teeth, enlarged tonsils and adenoids, insufficient clothing, and long hair which, when uncovered, may get into machinery.

I welcome the opportunity to pay tribute, long overdue, to a Lancashire man who succeeded his father in November, 1884, as Certifying Surgeon for over 35 years and preceded myself—namely, William Stanwell—because he exemplifies many of those who, unappreciated, consecrated their daily lives to the factory worker and, in his case, also to the Post Office worker, thereby having to see his private patients far into the evening; and he was one of those few whose reports on accidents stood out as exceptional. And so ends the story of factory legislation with its whole-time medical inspector and the part-time examining surgeon.

The primary concern of the medical inspector in conjunction with his colleagues, the engineer and the chemist, is in prevention of injury to the worker's health by ensuring the health of the working process; whereas that of the examining surgeon is in the supervision of the worker for health's sake alone, with power of suspension of the worker from his work if necessary to preserve health, or restoration to it if lost. Hence we may say that the outlook of the examining surgeon is not concerned with rehabilitation measured in terms of wage-earning capacity, but is concerned with preservation and restoration measured solely in terms of the worker's health.

Naturally, the powers of the whole-time inspector are greater than that of his part-time colleague, but the examining surgeon has one advantage over the medical inspector though shared with the lay inspector—and I state this without jealousy—of having his name displayed on the abstract of the Factories Act, which, preferably glazed, or framed and under glass, hangs, or should hang, on the factory wall.

Mines and Quarries

The other Department which is backed by an Act of Parliament is that of the Department for Mines, and Quarries, which was transferred from the Home Secretary in 1920 to the Parliamentary Secretary of the Board of Trade and has recently come under the Ministry of Fuel and Power. Although, owing to the perseverance of Antony Ashley-Cooper, then Lord Ashley and subsequently 7th Earl of Shaftesbury, a Mines Act was passed in 1842 which instituted the principle of government inspection under the Home Office by the appointment of an Inspector—Seymour Trumanheere—no medical man appeared until 1923, when one was appointed to report to the Mines Department on the condition of first aid in mines. I do not know whether or not this appointment was influenced by the fact that more than three centuries before, the East India Company appointed in 1614, a Chirurgion Generall—John Woodall, a Barber surgeon of St. Bartholomew's Hospital—to provide the company with surgeons and to fit up their medicine chests for them; but the fact remains that this investigation led to the investigator becoming a popular novelist, and to the appointment, in 1927, of a whole-time Medical Inspector of Mines, who, after a solitary reign of 17 years, has recently become a senior officer with a staff of 9 Medical Inspectors of Mines under him, 8 being regional and 1 at Headquarters who was previously a Factory Inspector. All are males, presumably because females are prohibited from employment in mines by the Act.

Non-Statutory or Voluntary Medical Service

The service of a medical man who may be required by the employer to be on call for accidents or for giving advice on questions of pension or compensation, especially if the firm carries its own insurance, cannot be described as supervision, but reference must be made to schemes of treatment either provided free or to which the employers and employed contribute, apart from, or by contracting out of, the Insurance Act. Presumably the appointment of surgeons to their factories in India by the East India Company in the 17th century visualised free treatment, but I wonder if John Surtees, the surgeon to the Surat factory in 1636 had any views on prevention, seeing that even more than two centuries later the prayer of the Lancashire cardroom operative was, "From Surat cotton, good Lord deliver us."

An important example of free treatment, however, in Great Britain is provided by the Post Office Medical Service of His Majesty's Mails. The scheme, which is described in No. 31 of the Post Office Green Papers, is a combination of free medical treatment at the surgery or at the home, examination for suitability for entry into employment, and for pension, and, as originally stated in the first terms of reference, for enquiry into cases in which there is suspicion of feigned or exaggerated illness. This service was introduced as early as 1855, when Dr. Waller Augustus Lewis, the father of the famous actor, the late Lewis Waller, was appointed as whole-time medical officer at Headquarters in London, and has so expanded that there are now eight medicl officers, including five women, under the Chief Medical Officer, who was, in a previous existence, a certifying surgeon, and 2,600 part-time medical officers in other parts of the country.

Again there are examples of a hospital being maintained by a colliery or a railway, while one large glassworks had, in the past, a small hospital with an orthopædic surgeon and a staff of nurses for the main purpose of restoring severed nerves and tendons to normal; but before it ceased to exist it expanded in association with the Ministry of Pensions into a large centre with 300 beds and rooms for mechano-therapy, hydro-therapy, thermo-therapy and re-education.

Examples of schemes to which employer and employed contribute jointly are, however, more numerous. According to the researches of Mr. Hyde of the Industrial Welfare Society, the earliest example has reference to the Crowley Iron Undertakings in Sussex in the 18th century, where a doctor, a schoolmaster and a clergyman were retained jointly by employer and employed.

In this connection, it is interesting to note that in recent years some undertakings abroad have chosen to enlist the services of a clergyman as a welfare officer with good results. A more detailed description is given of the employment in 1845 of a certifying surgeon, W. T. Callan, as a doctor at the North Shore Mill Company, near Liverpool, employing about 850 workers, of whom 52% were children and young persons. He attended the workers at their homes and daily at the surgery fitted up at the factory, at a salary of £200 a year, of which a quarter was paid by the firm and the remainder made up by a levy of 1d. a week on the wages of the workpeople when they exceeded 4s. a week.

Another example of administrative interest is that of a Railway Medical Fund Society founded in 1847, which is a self-supporting and autonomous institution, including hospital treatment, receiving important aid from the Railway Company. The relation of the Society to the National Health Insurance Scheme on the one hand, and to the permanent staff of the Company on the other, is sufficiently defined by a formula that the Society is on the Panel while the individual medical staff is not.

Finally, some colliery companies have a hospital used by employees and members of their families or of other firms, supported by a levy from the workers and the grant from the Miners' Welfare Fund, which was endowed by a tax on coal in 1920, and is best known for its pit-head baths.

Supervision for Special Risks

But there are two forms of medical supervision which envisage only first-aid or other treatment of a preventive nature, one form being for a specific and the other for a general purpose.

Such medical supervision for a specific purpose has reference to a number of processes which, whether under special regulations or not, are not subject to a statutory periodic medical examination. A medical examination is advisable, for instance, for the purpose of preventing unsuitable persons from taking up work in compressed air, or on railways with special reference to eyesight, including night and colour vision, which is as important to the public as to the workers, in order to avoid accidents. Consequently the Railways have some 14 whole-time and 6 part-time medical officers mainly for this specific purpose, in addition to others used on an area basis as required.

Many firms have been persuaded to institute a periodic examination as a preventive measure where some toxic product is involved. In the case, however, of workers in cancer-producing substances such as pitch, tar, mineral oil, or even arsenic, the object of examination cannot be so much to prevent the disease as to discover it at the earliest stage when it can be treated with the best chance of recovery. Such periodic medical examinations have been instituted for pitch-briquette workers, tar distillers, paraffin or shale-oil refiners, and arsenical sheep-dip workers, while in certain large gas works and chemical works even whole-time medical officers are employed. Such examinations must, of course, have the consent of employer and employed. Sometimes, although the employer willingly offers to provide and finance such supervision, there are workers who are suspicious that the examination, although intended only for a specific purpose, may result in some other defect being found which will be prejudicial to their employment and lead to their discharge; it is therefore most important that the management and doctor should reassure them in no unmeasured terms if the scheme is to be successful.

Results of Periodic Medical Examinations in Dangerous Trades 1939-1942

Nature of Examination	Number of Examinations	Percentage of Sexes		Percentage Rejected or Suspended		
		Male	Female	Male	Female	Total
Statutory	1,409,985	81·4	18·6	0·34	0·44	0·78
Voluntary	124,364	61·8	38·2	0·34	0·74	1·08

Table III shows that, while the percentage of suspensions during a statutory examination is under 1, in the non-statutory it is over 1, because the percentage for females is higher in the non-statutory than in the statutory examination. But during the last war it was realised by the Ministry of Munitions that certain processes such as filling shells with T.N.T., which is absorbed by the skin, could not be met completely by regulating the process, and that it was essential to have not periodic but continual medical supervision, and the Ministry of Supply in this war have, for this purpose, enlisted the services of over two dozen part-time, and five dozen whole-time, doctors, including two dozen women, under a chief medical officer at headquarters.

After the last war, when the incidence of lead poisoning increased, one large firm manufacturing accumulators came to the conclusion in their wisdom that, although statutory periodic medical examination was in force under Regulations, it would be advisable to go further and institute continual supervision, by appointing a whole-time works medical officer in 1927. I am not suggesting that this wise action was responsible for all the subsequent reduction in the number of notified cases of lead poisoning from all cases throughout the country, or even in the whole accumulator trade, but there is little doubt that his contribution to preventive medicine is one with which the works medical officer in question should be very satisfied, and forms an outstanding example of true supervision. Lastly, we must not forget the very special periodic medical examinations of the Silicosis Board.

While the first reference to medical supervision for a general purpose was Baker's suggestion in 1830 to the worsted spinner in Yorkshire, a more definite example seems to have been in 1842, in Scotland, when the report of the Poor Law Commissioners (of which Edwin Chadwick was Secretary) on sanitary conditions of the labouring population of Great Britain recorded that Mr. James Smith, Managing Director of the cotton mills at Deanston, in Perthshire, dating from 1787 and owned by James Finlay & Co. of Glasgow, retained the services of a medical man to inspect the workpeople from time to time to give them advice and, as far as possible, to prevent disease.

Work's Doctor and Industrial Nurse

The adoption, from about 1900, of whole-time medical supervision for a general purpose was comparatively slow, being mainly confined to a few larger firms manufacturing foodstuffs or engaged in engineering, but since the Order of 1940 came into force and the advantages were increasingly realised, adoption without direction has increased apace, the larger firms engaging the services of one or more whole-time medical officers, and the smaller firms a part-time medical officer, whether he be the examining surgeon or other medical man of the firm's choice; in some cases, where his time permits, one doctor may be employed part-time by more than one firm. Hence, in spite of the shortage of medical men, there were, at the end of 1943, 926 works medical officers, including 63 women, of whom 176 are whole-time in 209 factories, and 750 part-time in 1,155 factories.

This Medical Service Order of 1940 also gave special recognition to the Nursing Service in addition to the Medical and Welfare Services; although for a number of years many firms had employed a trained nurse whole-time, while others had enlisted the part-time services of the District Nurse, even if only to be present at the medical examination of employees. In fact, it would appear from the researches of Miss Charley, of the Royal College of Nursing, that the earliest appearance of a nurse in industry actually related to a District Nurse, Philippa Flowerday, aged 32, who was engaged in October, 1878, by the firm of J. & J. Colman of Norwich, at 26s. a week to act as District Nurse. She began her work at 9 a.m. helping the doctor at the Dispensary of the Carrow Works Self Help Medical Club, formed by Mrs. Colman in 1872. Later in the day she visited the sick workers at home, and appears to have acted as an almoner, distributing many nourishing delicacies no longer obtainable. It is not surprising that, in view of her name, she wedded the Colman's head gardener, William Reed, about 1888, as his second wife, and went to live at the seaside.

The present-day nurse (there are now about 4,000 State-registered nurses in industry, in addition to a similar number not so qualified) holds a much more responsible position, and may in the smaller factories have to give service without the presence of a medical officer, and, in some cases, take on the added duties of a welfare supervisor, though this should be the exception rather than the rule, seeing that such duties are best performed by those specially qualified to do so.

The duties of a works medical officer for a general purpose cannot as yet be adequately defined, for each officer may have his own special problem which may not arise in another factory. A memorandum issued by the Factory Department has, however, suggested certain broad principles for guidance at the present time. But there is one essential rule. His home should be mainly in the workroom among the workers, rather than in the ambulance room. Thus only can he investigate the causes of bodily injury which necessitate a worker's visit to the ambulance room, and enable him to offer the best medical advice to management and workmen which, if adopted, will reduce the attendance of worker and doctor at the ambulance room to a minimum.

The works medical officer is also studying the difficult problem of where lies the border-line between preventive and curative treatment. During the present war, owing to the difficulty of transport, the black-out, and the shortage of medical men, various schemes are being tried out which necessitate co-operation with the workers' panel doctor, the local hospital, the examining surgeon, the Medical Officer of Health (regarding problems of general health, infection and contagion), the school medical officer, the tuberculosis officer, the Silicosis Board, and last, but not least, the Factory Department. The advantage of a whole-time works medical officer being on the honorary staff of a hospital cannot be over-estimated.

Time does not permit of making more than a brief reference to the innumerable auxiliary or special services directly or indirectly connected with the health of the factory worker, and which are of concern to the works medical officer, such as dentistry, ophthalmology, pathology, gynæcology, radiology and radiotherapy (which, however, are limited by shortage of apparatus), chiropody, and even manicure for the health of the few processes which require short and well-trimmed nails—lastly a hairdresser's shop, which, while primarily intended for convenience, may assist the descendant of the Barber-Surgeon by disclosing some affection of hair or skin.

Special attention must be devoted to the ever-important question of nutrition, and provision of a good canteen with a clean kitchen supplying adequate, well-balanced, appetizing meals at a reasonable price, should obviate the indiscriminate distribution of synthetic vitamins and inoculation for such conditions as the common cold or influenza, at least until such time as research workers can assure us of the true value of any one or other type of treatment. Health education of the worker by means of classes, posters, films and exhibitions are the concern of the medical officer and his colleague the State-registered nurse, but in any effort to use the factory population for the purpose of enlightenment on prevention of a particular disease which is common to the general population it should be made quite clear to the worker that it is not an industrial disease. The works medical officer may well associate himself with any scheme of physical training for purpose or for health, any rest-break scheme for the fatigued worker, and rehabilitation and retraining of the injured worker with proper allocation to suitable work. Finally, both doctor and nurse are necessary members, together with employers and employed, of any advisory health committee which may exist in the factory.

And so it would appear that there is hardly any form of specialization of which the works medical officer should not be cognizant, and which at present does not find some reason for its entry into the factory. In fact it was suggested to me after a lecture recently to safety officers that the only omission was that of the veterinary surgeon, who would be most useful, as he has an advantage over the doctor in that the latter always asks the patient what is wrong with him, whereas the Veterinary Surgeon has to find out for himself.

Future Policy

For the benefit of the formulators of industrial medical policy there must be forthcoming medical advice which must be sound and constructive to be acceptable.

All that my small experience leads me to believe is that the worker, whether the employer be a private owner or a department of State, would feel most secure if he continued to have an industrial health department on the lines of the Factory Department backed by the statutory powers of an Act with the same principles as the Factories Act (amended again and again if you will); and whether it be under a Ministry of Health, Labour, Industry or Construction, or returned to the original home of factories and mines at the Home Office, though not so called for this reason.

But there is one non-controversial fact. Whatever system is ultimately adopted for medical service in industry—in fact my remarks hold good for any system of service—its ultimate success or failure depends on the personnel, and the individual personality of that personnel which is a matter of selection and training. Such training throws a grave responsibility upon the teachers, who must have full practical experience. One of the problems is where to find such teachers of "industrial medicine" in sufficient number, and how is this number to be sustained. Does it mean that, as a preliminary step, the first teacher must create a training school such as was instituted at Falfield prior to the war for teachers of air-raid precautions, and, if so, should such a pioneer school be centred in one impartial university town, but capable of being on loan to others, until such time as these others have become self-supporting. That is not for me to decide.

Recommendations

But although it is not within my province to recommend a policy, may I come down from my side shelf and presume to offer some words of advice without wishing to disturb the peace, trusting that my words will be received in the helpful spirit in which they are intended. And so:—

1. *To the layman I would say:* The labourer is worthy of his hire: and it is for the public to see that professional servants in industry receive justice and appreciation without the necessity of agitation, thus enabling them to devote their whole attention to research, prevention and restoration.

2. *To the examining surgeon:* Never hurt the feeling of the young host or hostess of that elusive pimpernel, the louse, by using such words as "filthy" or "unclean." Like that of the Medical Inspector, your motto in all things should be: "Softly after the manner, strongly after the matter."

3. *To the works medical officer:* Devote your attention to the state of health in your industry leaving others to take care of your status.

4. *To the industrial nurse:* Guard closely the old tradition of your predecessors by treating the patient as a human being, and not as a case.

5. *To the ambulance room:* You may be a casuality clearing station, but not the officers' mess.

6. *To the rest room:* You are a room for recovery, not a hostel.

7. *To the first-aid attendant:* You are the necessary forerunner of the doctor. Lest you become a first offender make sure that your training marches with the times and fully qualifies you for your responsibilities.

8. *To the first-aid box:* You may be a dressing case, but not a picnic basket.

9. *To the optician:* If you are a man of vision, you will realise your limitations.

10. *To the welfare superintendent:* You have a great contribution to make to industry as liaison officer and almoner. Let your thoughts be in co-operation and not in the power house.

11. *To the safety officer:* Build so securely that there will be no need for restoration of the worker.

12. *To the employer of labour:* It is possible to take away from an industry the reproach of being unhealthy and yet retain and increase its beauty, utility and interest.

13. *To the operative:* You have a duty to perform to yourself as well as to the community by adopting willingly and with understanding whatever provisions for your well-being are made by those best qualified to judge. Of what value is the statutory or voluntary provision of a medical or nursing service, a machinery guard, protective clothing, rescue apparatus, a canteen or a bath, if not used.

14. *To propagandists:* Let your words ring true and your posters be of high artistic merit.

15. *To the head of the team:* If you want a good team, you must give credit where it is due. Bear in mind that many grown-up individuals still retain something of childhood and appreciate an occasional pat on the back, not a pat of butter, in the form of insincere praise or a "Yes-man's prize," but genuine encouragement conveyed personally by the head of the team. And that is why throughout the ages the medical man, deep down in his heart, prizes more than any worldly honour or popularity that which is conferred on him by the severe judgment of his own profession, whether it be a degree, a diploma, a chair or a medal. Is it not thus from his colleague's testimony of his bravery that an industrial worker, however humble, receives the coveted and well deserved Edward medal?

16. *To the young person:* See that the limelight of any necessary restoration is focused upon you as the future generation, not waiting for rehabilitation in later adult life.

17. *To medical youth:* Bear in mind that those of an older generation rather enjoy narrating their past experience, and you might be wise to invite them to do so while they are following the example of Sir Isumbras and transporting you across the ford to the shore of industrial medicine. When you reach the opposite bank, you can suggest, politely, of course, that they return for others while you plough your own industrial furrow.

18. *To myself:* There is an old Quaker saying: "It needs a very little wit to be extremely ill-natured."

But I have reserved my final remarks for those, be they few or many, who fear that the subject of medical service in industry, in which they believe and to which they have given and are still giving of their best, may fall among thieves, and be used as the popular plaything of self-seeking individuals, or companies, or departments, or societies, or parties whether medical or otherwise. May I venture to offer a word of comfort by suggesting that they turn their thoughts to the East, where the sun still rises, and call to mind one of its ancient proverbs: "The dogs bark, but the Caravan moves on."

THE CARE OF THE PREMATURE INFANT

Analysis of Circular 20/44

By C. Fraser Brockington, M.D., D.P.H.

County M.O.H., Warwickshire.

Generally speaking, Circular 20/44, dated March 22nd, makes two recommendations to Welfare Authorities for the saving of infant life at present lost through prematurity: (a) to raise the standard of home care; (b) to make institutional provision for premature babies.

The accommodation it is suggested should be provided for these babies is somewhat elaborate -small wards with temperature- and humidity-regulating apparatus, and accommodation for isolation, staff and nursing mothers; the nursing is on the high ratio of 1 nurse to 1½ infants. Accommodation in different parts of the country at present varies considerably. At Queen Charlotte's Maternity Hospital, London, and at the Sorrento Maternity Home, Birmingham, there is one large ward with natural ventilation and no artificial humidification other than that provided by the steam kettle. At the Children's Hospital, Birmingham (modelled on the arrangements in Chicago, but not so far in use), there are glass cubicles with humidity and temperature varied by means of the plenum system, so that there is no natural ventilation at all. A compromise might be separate glass cubicles with natural ventilation and humidification by special humidifying apparatus. Small humidifiers controlled by a humidistat in the room, capable of dealing with the cubicles separately, can be obtained from various air-conditioning firms (roughly £65 each). Extensive accommodation requires careful planning, and it is unlikely that any Welfare Authority will accept the figure of 10 cots for every 100 maternity beds, which the Circular recommends as a basis for calculation. Prematurity being an accident of birth in no way related to the rate of provision of lying-in accommodation, it would be more logical to base computations on the number of births in the administrative area. A closer investigation of prematurity figures needs to be made in relation to survival and the risks of removal.

An examination of premature birth figures suggests that the overall rate may vary between 3% and 5% per cent. of total births. In Warwickshire in 1942, it was 3%, and in 1943, 3.8%. Roughly one-third of the babies are between 5 and 5½ lb. in weight; roughly half are between 3½ and 5 lb.; and roughly one-fifth are under 3½. In other words four-fifths of the babies are over 3½ lb. in weight and only one-fifth are below 3½ lb. in weight.

The question of institutional provision raises the important issue of the risk to the baby of removal from the home and possibly from the mother. Provision for mothers should be made in all premature units, but the removal may not always be possible and in any event they can rarely remain in the unit as long as the infant. Probably the most important factor in the survival of a premature baby is the avoidance of the slightest chill for at least several weeks from the moment of birth, and high survival rates are probably due to the understanding, appreciation, and practical application of this point by devoted nurses with years of experience in the handling of such babies. Whatever provision is made for the journey there must enter an element of risk of chill if the baby is removed from its home. Thus it is unlikely that babies over 5 lb. will be removed, because their survival rates are not greatly less than those for full-term infants. In Warwickshire the figures were 89.3% in 1942, and 92.2% in 1943. Such rates of survival might easily be less if the babies were subjected to a journey. The same considerations are likely to apply to babies of 4½-5 lb. and 4-4½ lb.; in Warwickshire the survival rates for these two classes of babies were 81.9% and 85.5% in 1942, and 78.6% and 83.9% in 1943. There may, of course, be some special reason for removing babies of these relatively high weight groups, such as the death or serious illness of the mother, where the birth is in lodgings or the home exceptionally unsuitable by reason of overcrowding or other circumstances. Or the babies may be cyanosed or have some other medical condition suggesting the need for nursing in an institution. In the absence of such circumstances, however, Welfare Authorities would not be likely to consider making extensive institutional provision for them.

It would, therefore, seem that institutional provision should on the whole be limited to babies under 4 lb. In certain areas the survival rate of the 3½-4 lb. group may be sufficiently high to justify leaving these also out of account; the survival rate in Warwickshire in 1942 was 59.3% and in 1943 75.9%. Below the weight of 3½ lb. there appears normally to be a sharp drop in survival rates, probably due to the failure of the infants of this size to suck. In 1943 the survival rate of the 3-3½ lb. group in Warwickshire was 31%; 2½-3 lb., 15%; 2-2½ lb., 22%; 1-2 lb., 9%. The number under 4 lb. is roughly one-third of the total, or under 3½ lb. one-fifth. If we take the mean (i.e., a quarter) and assume a premature rate of 3.6%, this suggests the provision should be on the basis of 0.9% of the births. Making allowance for those other babies of higher weight which might have to be admitted, we can reasonably work on the basis of 1%. The average stay of a premature baby surviving can be reckoned as two months. As, however, the overall survival rate of babies under 3½ lb. is low (in Warwickshire, 1943, 28%), and as with the best possible facilities it is not likely to be raised higher than 50-60%, we must reckon that half of the babies will only occupy a cot for a short space of time. One cot can be assumed to accommodate 10 premature babies in the year. Thus a workable formula for cots in a premature unit would appear to be the number of births in the County divided by 1,000.

From a practical point of view a unit should not contain fewer than 10 cots in view of the highly skilled nursing facilities and elaborate equipment. In Warwickshire the total births for 1943 were 8,650, and the cot provision should therefore be 9—i.e., presumably a single unit of 10 cots. The estimated pre-war cost of such a unit* built on the top floor of a new maternity home is £5,000, which figure, in view of Lord Portal's statement in the House of Lords that building costs are up by 100 per cent. can be reckoned at £10,000. Welfare Authorities with less than eight or nine thousand births a year will probably seek to make a joint arrangement with another authority rather than provide a unit of their own.

The location of the unit presents certain difficulties in view of the fight between the pædiatrician and the obstetrician for the care of these little mites. It would appear that the pædiatrician is winning, but the matter is so closely related to midwifery that it would seem advisable to locate a unit at an up-to-date maternity home rather than at a children's hospital. This would not prevent the appointment of a pædiatrician to the unit, and it would avoid the risk of infection, which would be greater if the unit were located as part of a children's department in a hospital.

If a quarter of the infants only are to be institutionalised, it follows that Welfare Authorities will need to give close attention to the improvement of home-nursing facilities as outlined in the Circular. The high survival rates for babies over 4 lb. in weight suggest that the midwife is already doing excellent work in the care of the premature infant, and it would therefore seem a practical proposition to give her further training (which might take the form of a week spent in a premature unit under expert tuition) and to provide outfits of the following equipment on the basis of one to every 3,000 births†:—1 draught-proof cot with detachable lining; 3 hot water bottles; 1 thermometer; 2 special feeding bottles; 1 mucus catheter; 1 electric blanket pad; clothing; oxygen cylinder (25 cu. ft.) with gauge and fittings.

The Maternity and Child Welfare Officer should visit each case to discuss the position with the midwife and the general practitioner, if he has been called in, and to decide whether the home is sutiable and whether the special outfit would be needed. She should also decide upon those cases which need removal to the special premature unit and should have authority to call in a children's specialist to give a second opinion in any difficult case.

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*The unit is planned to contain 10 separate glass cubicles with a separate humidifying apparatus to each cot, rooms for six nursing mothers, an instruction room for visiting mothers.

† 3,000 birth can be reckoned to produce roughly 60 premature infants in the year—i.e., about one a week.

CORRESPONDENCE

A Reasonable Attitude to the White Paper.

Sir,

In the June issue of Public Health, p. 101, you printed some remarks of mine on the White Paper. The Warsop Urban District Council, has at my suggestion, passed the following resolutions:

1. That the Central Health Services Council should democratically be elected by the medical profession and its auxiliaries, and that this Council must have the right of separate report, and propaganda, irrespective of the Ministry's wishes.

2. That in the local areas to be set up, the responsibility of either acting or not acting must rest with elected persons, who should be advised by a Council similar to the Central Council, also democratically elected by the profession and its auxiliaries; the chairman of which Council could serve on the lay Council for liaison purposes.

3. That as many branches of medicine as possible should be brought under this suggested unified administrative structure, including industrial medicine.

These resolutions have been forwarded in the first place to the Urban District Councils Association, and may thereafter be forwarded to the local Member of Parliament.

I feel that if other medical officers can persuade their councils to take similar action a most useful purpose will be served.—I am, etc.,

W. P. Forrest,
M.O.H., Mansfield Woodhouse and Warsop.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH

HOME COUNTIES BRANCH

President: Dr. Malcolm Barker (East Ham C.B.).
Hon. Secretary: Dr. Cecil Herington (Dagenham M.B.).

A meeting of the Home Counties Branch was held on July 14, there being present the President and 10 members.

The minutes of the meetings held on March 3, March 10, April 14, May 12 and June 9 were confirmed and signed.

The following Officers and Representatives of the Branch were elected for the Session 1944/5: *President*, Dr. M. Manson, G.M., M.C. (M.O.H., Wood Green M.B.); *Hon. Treasurer*: Dr. K. E. Tapper, G.M., O.B.E. (re-elected); *Hon. Secretary*: Dr. C. E. E. Herington (re-elected). *Representatives on Council of Society*, Drs. Barker, Herington, and Manson; *Representatives on T.B. Group Committee*, Drs. Barker, Townsend, and Underwood (re-elected); *Representatives on Kent Branch Council of B.M.A.*, Drs. Bramley and Brocklehurst (re-elected); *Representatives on Stratford Local Medical War Committee*, Drs. Ball and Williams (re-elected).

The President referred to the recent death of Dr. A. J. Smythe, M.O.H. Cambridge, and the bereavement sustained by the Acting Executive Secretary by the loss of his son. The members stood in silence.

After the closure of the meeting the members attended a showing of three films by the Central Council for Health Education: "A flying start," on breast feeding; "Unwanted guests," dealing with verminous heads; and "Round figures," dealing with posture.

SOUTHERN BRANCH

President: Dr. W. P. Cargill (Deputy M.O.H., Southampton).
Hon. Secretary: Dr. H. C. Maurice Williams, O.B.E. (M.O.H., Southampton).

The Annual Meeting of the Southern Branch was held at Southampton on July 21, when 15 members and 1 visitor were present; the President was in the Chair.

It was resolved to elect the following Officers for the session 1944-45: *President*, Dr. C. H. Avery; *Hon. Secretary and Representative on the Council*, Dr. H. C. Maurice Williams, O.B.E.; *Hon. Treasurer*, Dr. H. L. Cronk; *Executive Representatives on the Tuberculosis Group*, Drs. W. J. Hart and J. G. Cairns; *Executive Committee of the Branch*: Drs. A. B. Williamson, T.D., G. Chesney and 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. D. J. Easton gave an address on tuberculosis in war and peace. This was followed by an interesting discussion, and a vote of thanks to Dr. Easton was heartily endorsed by all present. It was agreed to hold the next meeting in October.

MIDLAND TUBERCULOSIS GROUP

At a provisional meeting held on May 3, it was agreed that the time was opportune to revive the Midland Tuberculosis Group. A general meeting was, therefore, held on June 10 at Birmingham. Dr. Geddes, the Chief Clinical Tuberculosis Officer for Birmingham, was elected President, with Dr. Deaner as Secretary, Drs. Paul, Peebles and Ogg constituting the Committee. It was decided to have six meetings annually. Dr. George Jessel gave an address on a "National Tuberculosis Policy." He pointed out that the dispensary was the pivot of the tuberculosis work, which should be run by specialists in chest diseases, who should be paid as such. Improvement was required in buildings, general institutional and x-ray facilities, in the co-operation with other specialists, and in environmental work. Policy and progress were dependent upon administrative officers who were often far from expert on the subject; fortunately many M.Os.H. were now progressive. In discussing the White Paper it was agreed that the revision of boundaries and the enlargement of areas would help to ensure a uniform service of high quality. It was important, however, that the clinical and environmental aspects should not be dissociated, as tuberculosis was a public health service.

The Annual General Meeting of the Maternity and Child Welfare Group of the Society has been postponed until October.

The Permanent Central Opium Board held its 44th session in London from July 24 to July 27, 1944, under the Presidency of Sir Atul Chatterjee. The other members present were Sir Malcolm Delevigne (United Kingdom), Mr. J. H. Delgorge (The Netherlands), Dr. George Woo (China). The Board reviewed statistical information recently received, and also the measures of control over trade and manufacture of narcotic drugs which were under consideration by the competent authorities for countries which are to be liberated. At its last meeting, three months ago, the Board issued a report containing recommendations for action which, in the Board's opinion, should be taken to minimise potential dangers in the present situation. The Board understands that its recommendations have received the attention of the military authorities concerned with Western Europe and that decisions have been taken which in substance are in accord with the Board's recommendations and which will be carried into effect as occasion arises. The Board hopes that decisions will be taken for the other theatres of war at an early date, especially in South-Eastern Europe and in the Middle and Far East. It is important that information should be available to the Board about any steps taken in the liberated areas—e.g. Italy for the establishment of the national control.

OBITUARY

H. J. Milligan, M.C., M.D., D.P.H.

We regret to record the death on July 31 of Dr. H. J. Milligan, M.C., who had been M.O.H. and School M.O. for the County Borough of Reading since 1920.

Henry Joseph Milligan received his medical education at Glasgow University, qualifying M.B., Ch.B., in 1905. He took the Cambridge D.P.H. in 1910, and the M.D. of Glasgow in 1914. After serving as assistant medical officer to the Southern Hospital under the Metropolitan Asylums Board, he became senior assistant medical officer at the Eastern District Hospital, Glasgow. He then moved to Bootle to take up the posts of deputy M.O.H. and tuberculosis officer. He was called to the Bar as a member of Gray's Inn. In the 1914-18 war he won the M.C. while serving in the R.A.M.C., from which he retired with the honorary rank of major. He was a Fellow both of the Society of Medical Officers of Health and of the Royal Sanitary Institute. Among his publications were articles on infant welfare and the health of school children, and on pasteurized milk. As M.O.H. for Reading he published eighteen annual reports on the borough's health. He served on the Public Health Committee of the B.M.A. from 1932-38. He also served on the M. & C.W. Sub-Committee.

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EDITORIAL

Continued Delay in Publication

Unusual circumstances made it impossible to give in the last issue of Public Health a fuller explanation of the delay in publication. As Public Health is edited, printed, and published "somewhere in southern England," readers were probably able to make a shrewd guess about the cause of the delay. We are, in fact, now allowed to state that the impeding object was a flying bomb. The ill effects of this, unfortunately, still persist in some degree, and some time must elapse before normal conditions can be restored. We tender our apologies, and feel confident that readers of this journal will warmly sympathise with those persons who sustained injuries.

Planning the Health Services

It is difficult to keep pace with the flow of documents and reports on the future of the health and medical services of the nation, but a recent broadsheet* issued by PEP is bound to arouse special interest, coming as it does from a body which examined so thoroughly the British health services in 1937. Although the proposals of the White Paper differ in several respects from PEP's original suggestions, especially in extending medical benefits to the whole population and in splitting up the personal health services between old and new authorities, this body now appears as a strong supporter of the Government's scheme. Almost the only major criticisms it has to offer are the failure to include industrial and social medicine in the comprehensive health service and the omission of emphasis on research into the social background of health and illness. It admits, too, that there may be some justification for the medical profession's fear of Whitehall because of past experience of bad administration, and quotes Simey's dictum that the problem of reconciling political control with administrative courage and efficiency still awaits satisfactory solution. Nevertheless, PEP seems to be satisfied with the rather curiously designed central administrative machine proposed, probably accepting the view that the Central Medical Board has been forced on the Government by the general practitioners' antagonism to service under local authorities as now constituted. It is recognised, however, that the Board should not operate in isolation from the rest of the health services. Rather surprisingly, in the light of past experience, some of which it recounts, PEP takes a rosy view of the prospects of the Central Health Services Councils, believing that the White Paper reveals a "change of heart" at the Ministry of Health.

This broadsheet is impatient of any criticism of the scheme for local administration. Very curtly it dismisses, as having defects which require no elaboration, the idea that the major local authorities should continue to administer their own institutions and that joint boards should be replaced by planning bodies over still wider areas. It seems to be afraid of throwing more responsibility for the enforcement of plans on the Ministry of Health. Yet, in another context, it conceives the Ministry under the new regime as being "in an unrivalled position to give constructive leadership, to spur on backward authorities and to give free rein to progressive authorities," and urges the Ministry, in order "to cope efficiently with the immense amount of planning, supervising and sanctioning work" involved, to decentralise and adopt more flexible methods. PEP omits to mention that planning over wider regions would mean fewer plans and no more authorities to execute them than the White Paper proposes, except in the provision and maintenance of hospitals. It would appear that it has not thought out this question with its usual care. Like the writers of the White Paper, it is virtually silent about the future of medical men and women in the public health service, but it may be significant that it sees the joint authorities as requiring a chief officer of "a rare and exceptional type" with "a new and important task, never before anyone's full responsibility, of planning all the medical facilities of his area."

For those who wish to recall the White Paper view of the future of medicine and see it from a slightly different angle, the broadsheet is well worth reading. It also contains some useful facts on the present state of the health and medical services. It is a pity, however, that this anonymous and hitherto judicial body should have allowed a note of asperity to creep into its comments on the B.M.A.'s view of the White Paper, which has brought a retort in kind from the Editor of the *B.M.J.* The present situation in medicine requires dispassionate consideration. PEP's assertion that doctors have no special claim to speak as experts on administrative issues seems contemptuous of those medical men and women in the health services who have devoted their lives to the study of such problems in relation to medicine.

Medical Schools

The Report of the Goodenough Committee* is likely to stand for many years as a guide to national policy in medical education. It is long and exhaustive, occupying 313 pages of close print. Full summaries have appeared in the weekly medical journals, but the Report itself should be in the hands of everyone who is interested in the future of medicine. Most of our readers will be aware that it urges the need for select-

* Medical Care for Citizens. Broadsheet No. 222. PEP (Political and Economic Planning). 16, Queen Anne's Gate, London, S.W.1.

* Report of Inter-departmental Committee on Medical Schools. 1944. H.M.S.O. 4s. 6d.

ing students on other criteria besides the possession of school certificates, for ensuring that there will be no financial barriers to entrance to or continuance in the study of medicine and for weeding out the unsuitables at an early stage of their career; that the General Medical Council, supported by the University Grants Committee, should undertake a radical revision of the medical curriculum so that it is shorn of much disconnected factual instruction and that teaching in the various stages and subjects forms a smooth and logical development worthy to be called a liberal university education; that general medicine should take precedence as a clinical subject and more attention should be given to minor ailments, the early manifestations of disease, chronic diseases, infectious diseases and rehabilitation; that the student period proper, excluding what is now called the pre-medical stage, should last four and a half years and that, at the end of this period, every student would take a University degree instead of qualifying, as more than half do now, through the examinations of an external licensing body; that admission to the Medical Register should be deferred until each graduate has spent a year's residence in an approved hospital under proper medical supervision; and that places in every school and hospital should be open to women students and graduates.

Certain parts of the Report are of special interest to those concerned with public health. The Committee has accepted the term "social medicine" as the title of the subject that we have been struggling under adverse circumstances to teach to students as hygiene, public health or preventive medicine, and which the General Medical Council has repeatedly said should permeate the whole curriculum. Constant reference is made to it throughout the Report, and, in addition, a separate chapter is devoted to the subject. It is suggested that the opportunity should be taken during the course in anatomy to study growth, posture and respiratory movements, and ideas about such subjects as fatigue and nutrition should be introduced into the study of physiology. Proper emphasis should be given to social and preventive problems throughout the whole of the clinical period, and studies should include the personal investigation of social and industrial conditions associated with individual cases of disease, in addition to a set course of instruction in the communal and administrative sides of disease prevention, partly historical in character. To make this comprehensive training effective requires not only a fundamental change in the outlook and methods of most clinical teachers and a large development of hospital social service, but also the closest possible liaison between the medical school and outside agencies like public health departments, factory medical officers and general practitioners. A well-organised students' health service will go some way to impress them with the need for keeping fit and how it may be achieved. The department of social medicine is envisaged as being within the division of general medicine, its head being under the general direction of the professor of medicine, though it may perhaps be linked with other divisions. It seems to us that the Committee is getting into difficulties here. It appears to incline toward selecting a clinician to be head of this department, no doubt with the London schools in mind; but it realises that in provincial schools where post-graduate teaching in public health is conducted he "must also have had good practical experience in public health administration," whatever that may mean. While, therefore, stressing the urgency and importance of social medicine it deprecates premature appointment to posts in the subject but recommends schools to look around for the right man and train him if necessary. It seems a temptation to young clinicians to talk and write on the subject with a view to securing a chair, without having any real background of experience.

As to post-graduate education and the qualifications of specialists, it is satisfactory to note that the Committee considers that specialists in public health should be subject to standards of training and qualification comparable to those of specialist physicians and surgeons. This would entail lengthening of the probationary period before entry on any register of specialists which may be set up, but not necessarily of the time required to be devoted exclusively to study and attendance at educational courses.

Public health administrators will be interested in the proposals of the Committee for attaching to the parent teaching hospitals of Universities other hospitals either by association for regular teaching or more loosely for the accommodation of pre-registration resident graduates and other post-graduate students. In this connection representatives of local authorities have suggested that, as far as practicable, a joint advisory selection committee set up for any teaching centre should be used for the selection of senior staff in non-teaching hospitals in the "zone of influence" of the centre.

One complaint about the set-up of this report must be voiced. It is divided into chapters with paragraphs numbered afresh from the beginning of each chapter. All references are by chapter and verse without the number of the page being stated. The finding of references is thereby made unnecessarily difficult and irritating.

Relief for Europe

At a Press Conference held on 27th July, a representative of UNRRA's European Regional Office said that recruitment was now taking place of public health officers from this country and America who are to be used in two particular ways. In order to keep close contact with the work of the military authorities in liberated countries, about six or eight public health men will be attached to the Civil Affairs Branch of the Army. In the military phase they will be used by the Army, and they will be released to UNRRA when the military phase ends. Another important liaison is with the representatives of the various Allied Governments. Regular meetings already take place between their medical men and UNRRA officials.

In the Balkan area, the headquarters of the staff of the three Balkan Missions—Yugoslavia, Greece and Albania is already practically complete. There the co-operation between the Army and UNRRA is excellent. The Army doctors and nurses and their opposite numbers in UNRRA are working as one unit. Owing to the special conditions in the Middle East, such as the presence of large numbers of refugees, the medical and nursing staffs already find themselves at work supervising camps and training suitable refugees in nursing, sanitation and other work.

New draft Sanitary Conventions have been prepared by an Expert Committee appoited by UNRRA and are now being submitted to the various authorities. An Epidemiological Bureau has been set up to which all countries will send information about epidemics, and the distribtuion of medical supplies is being arranged. An emergency unit has been planned, containing drugs, surgical equipment, etc., to meet the requirements of 100,000 people for one month. Such unit will include one hospital of 200 beds with operating theatre and x-ray equipment and five 40-bed hospitals, the latter being cottage hospitals to supply the needs of remote villages. Midwifery supplies will be included to the amount needed for each 100,000 people.

A special Division of UNRRA will deal with displaced persons. There are several million of these, particularly from France, Holland, Belgium, and other countries. Most are in Germany, but some are in Poland. The problem is to avoid spreading infection without necessarily holding people up at frontiers.

The Minister of Health has congratulated hospital staffs and casualty services of the E.M.S. on the efficiency with which they have carried out their duties. These have included the reception, transport, and treatment of casualties arriving in this country from the battle area in Western Europe and of civilians injured by flying bombs, in addition to the casualties arriving from other theatres of war.

Some medical officers who need under Circular 2818 and 2881 the Minister's permission to apply for other posts, write direct to the Ministry at Whitehall. This delays the reply to them, as the Minister cannot formulate a decision until he has first obtained the comments of his (Principal) Regional Medical Officer to whom the requests have to be sent on for the purpose. The notifications issued under the circular advise medical officers to seek the permission through the P.R.M.O. (and so reduce the delays due to transmission by post).

DIPHTHERIA IMMUNISATION

OBSERVATIONS ON PROPHYLACTICS AND DURATION OF IMMUNITY

By A. Anderson, M.D., D.P.H.,

M.O.H., Borough of Heston and Isleworth

During two periods of seven years, toxoid-antitoxin mixture (T.A.M.) and alum-precipitated toxoid (A.P.T.) have been used here for diphtheria immunisation. Now that A.P.T. is employed on a large scale and the manufacture of T.A.M. is being curtailed, it is of interest to compare the results obtained by the use of these two prophylactics, especially as A.P.T. has not been found to be as consistently reliable as is generally accepted. The difficulties and dangers of drawing conclusions from results obtained over different time intervals are recognised, but it is felt that the comparison is not wholly invalidated by such a condition.

Methods and Materials

All children were submitted to primary Schick tests, and only Schick-positive children were inoculated. Three months after the last inoculation a posterior Schick test was carried out. A number of children converted to Schick-negative were re-tested after intervals of two, three, four and five years. Burroughs Wellcome & Co. Schick test toxin and control have been used throughout, readings have been made on the seventh day, and a fresh site chosen for each test. The prophylactics employed were one brand of T.A.M. during 1930–36 and four brands of A.P.T. during 1937–43. All inoculations were made deep into the deltoid muscle of the left arm, and attention was given to the precautions in technique recommended by Bousfield (1942). All prophylactics were purchased from the makers or supplied by the Ministry of Health. Except for one batch of A.P.T. (brand D) they were obtained in small quantities at a time, and all were stored under satisfactory conditions.

Immunising Value of T.A.M. and A.P.T.

T.A.M. and A.P.T. were given in varying doses and with varying intervals between doses. All dosages administered to more than 100 children are shown in Table I.

The conversion rate of 88·5% after three injections of 1 c.cm. T.A.M. fell short of expectation, but the increasing of the third dose to 1·5 c.cm. raised the conversion rate to 93·2%. Lewis (1939) records 99·0% conversion rate after three injections of 1 c.cm. T.A.M., but Cole (1943), using the same dosage, found during 1928–32 that the percentage of children rendered Schick-negative varied from year to year, the lowest being 66·4 in 1931 and the highest 87·0 in 1929. He considers that a standard course of injections cannot be expected to produce a stable and predictable result when employed on an unselected section of the child population, and instances many of the factors involved. He does not suggest that variation in the potency of T.A.M. was a factor, and here, over a period of seven years, no definite evidence of such variation was found. In the light of recent work on diphtheria immunisation it seems probable that lengthening the interval between doses to four weeks rather than increasing the dosage would have produced an even better conversion rate. Swann (1944), who has used T.A.M. extensively, has found it to be a most satisfactory antigen, yielding conversion rates as high as those of A.P.T.

The introduction of A.P.T. raised great hopes that a diphtheria prophylactic which would be effective in one dose had been found. Faragó (1940) has claimed good results in Hungary from a single injection of A.P.T., but the general opinion of observers in this country is that "one shot" A.P.T. is not a satisfactory method. This is confirmed in Table I, where the Schick-conversion rate of 76·5% corresponds closely with the 71·5% recorded by Bousfield (1938). Two doses of A.P.T. were then tried, and by 1938 it was established that, in this area, a 0·2 c.cm./2 weeks/0·5 c.cm. dosage yielded a conversion rate strictly comparable with the best obtained by three doses of T.A.M., though still falling short of the conversion rates of 98·7% and 99·3% recorded by Bousfield (1938) and Freeman (1942). In an endeavour to get a higher conversion rate, A.P.T. in 0·5 c.cm./2 weeks/0·5 c.cm. dosage was tried. Two brands of A.P.T. were used and both doses were not always of the same brand. The earlier results were not as good as had been anticipated, but they deteriorated rapidly when towards the end of 1940 the Ministry of Health took control of the distribution of A.P.T. The conversion rate fell from 92·3 to 76·0%, and it became evident that the poor conversion rate was due to brand B, which was withdrawn later by the Ministry. Brand D, supplied by the Ministry, was also used in the 0·5 c.cm./2 weeks/0·5 c.cm. dosage, and Table II shows that brands of A.P.T. vary in their antigenic potency. It is of interest to note that improved conversion rates were obtained when different brands were used for the two doses, though the differences between any combination of two brands were not significant.

The dosage of 0·1 c.cm./4 weeks/0·3 c.cm. recommended by the Ministry of Health towards the end of 1940 was viewed with concern by experienced workers such as Bousfield (1941) and Lewis (1941a), and here (Table I) the results were far from satisfactory. A reversal of the dosage to provide a larger initial stimulus produced no improvement in the conversion rate. Some explanation was called for when Downie *et al.* (1941) and Fulton *et al.* (1942) recorded conversion rates of 95·7% and 97·7% respectively, with the Ministry dosage. Fulton and his colleagues employed various brands of A.P.T. and found some to yield very poor conversion rates. Here brand B had latterly been found inadequate in 0·5 c.cm./2 weeks/0·5 c.cm. dosage, and brand D on test was found to have an Lf value of 21 units per c.cm.; therefore the relatively low conversion rates obtained on the Ministry dosage

Table I

Schick-Conversion Rates from Use of T.A.M. and A.P.T. in Varying Dosage

Prophylactic	Period of Use	Dosage in c.cm.	Interval in Weeks Between Doses	Age of Children: 0–4 Years, No. Inoculated	0–4 Years, Rendered Schick Neg. No.	0–4 Years, Rendered Schick Neg. %	5–9 Years, No. Inoculated	5–9 Years, Rendered Schick Neg. No.	5–9 Years, Rendered Schick Neg. %	10–14 Years, No. Inoculated	10–14 Years, Rendered Schick Neg. No.	10–14 Years, Rendered Schick Neg. %	Total, No. Inoculated	Total, Rendered Schick Neg. No.	Total, Rendered Schick Neg. %
T.A.M.	1930–33	1·0/1·0/1·0	1/2	489	460	94·0	1,236	1,066	86·2	387	344	88·8	2,112	1,870	88·5
T.A.M.	1932–36	1·0/1·0/1·5	1/2	1,372	1,285	93·7	1,527	1,428	93·5	299	267	89·3	3,198	2,980	93·2
A.P.T. Brand A ..	1937	0·5	—	161	135	83·8	195	134	68·7	49	41	83·7	405	310	76·5
A.P.T. Brands A & B ..	1937	0·1 + 0·5	2	87	83	95·4	64	57	89·1	13	13	100·0	164	153	93·3
A.P.T. " A & B ..	1937–39	0·2 + 0·5	2	526	501	95·2	480	445	92·7	154	144	93·5	1,160	1,090	94·0
A.P.T. " B, C & D	1938–42	0·5 + 0·5	2	1,394	1,276	91·5	1,314	1,117	85·0	463	390	84·2	3,171	2,783	87·8
A.P.T. " B, C & D	1941–43	0·1 + 0·3	4	735	643	87·5	396	281	70·9	169	128	75·7	1,300	1,052	80·9
A.P.T. " B, C & D	1941–42	0·3 + 0·1	4	229	198	86·4	114	73	64·0	48	35	72·9	391	306	78·3
A.P.T. " C & D ..	1942	0·3 + 0·3	4	265	257	96·9	189	172	91·0	72	65	90·3	519	494	95·2
A.P.T. Brand D ..	1942	0·2 + 0·3	4	82	70	85·4	44	35	79·5	12	7	58·3	138	112	81·2
A.P.T. " D ..	1942	0·4 + 0·1	4	76	73	96·0	35	28	80·0	12	6	50·0	123	107	87·0
A.P.T. " D ..	1942	0·1 + 0·4	4	67	60	89·5	36	27	75·0	16	9	56·2	119	96	80·7
A.P.T. " D ..	1942–43	0·2 + 0·4	4	69	65	94·2	28	25	89·3	15	10	66·7	112	100	89·3
A.P.T. " D ..	1942–43	0·4 + 0·2	4	71	71	100·0	39	33	84·6	9	8	88·9	119	112	94·1
A.P.T. " D ..	1942–43	0·5 + 0·1	4	56	48	85·7	30	22	73·3	14	10	71·4	100	80	80·0
A.P.T. " D ..	1942–43	0·1 + 0·5	4	52	45	86·5	30	22	73·3	18	10	55·6	100	77	77·0
A.P.T. " C ..	1942–43	0·2 + 0·5	4	470	462	98·3	331	324	97·9	134	130	97·0	935	916	97·9

TABLE II
SCHICK-CONVERSION RATES OBTAINED BY USE OF THREE BRANDS OF A.P.T. IN 0·5 C.CM./2 WEEKS/0·5 C.CM. DOSAGE (BOTH DOSES OF SAME BRAND)

Brand of A.P.T.	Age of Children: 0–4 Years			5–9 Years			10–14 Years			Total		
	No. Inoculated	Rendered Schick Neg.		No. Inoculated	Rendered Schick Neg.		No. Inoculated	Rendered Schick Neg.		No. Inoculated	Rendered Schick Neg.	
		No.	%		No.	%		No.	%		No.	%
B	686	630	91·8	594	470	79·1	187	144	77·0	1,467	1,244	84·8
C	254	232	91·3	356	333	93·5	147	138	93·8	757	703	92·9
D	58	52	89·7	34	27	79·4	20	18	90·0	112	97	86·6
	$X^2 = 0·346$ $P > 0·5$			$X^2 = 36·265$ $P < 0·01$			$X^2 = 17·399$ $P < 0·01$			$X^2 = 25·689$ $P < 0·01$		

and the reversal of that dosage can be taken as due largely to variation in the antigenic potency of the brands of A.P.T. The dosage was increased to 0·3 c.cm./4 weeks/0·3 c.cm., with brand C, accepted as having an Lf value of 50 units and proved satisfactory, and brand D of lower Lf value. A much improved conversion rate (Table I) resulted. In these 519 children brand C was used for 382, and brand D for 137, and they yielded conversion rates of 98·4% and 93·4% respectively. In view of the good conversion rate obtained from brand D of low Lf value and the possibility of avoiding reactions by the use of the less concentrated prophylactic, various dosages of this brand were tried (Table I). The results as judged by Schick-conversion rates were unsatisfactory, but Bousfield (1943) has shown that satisfactory conversion rates can sometimes be obtained with A.P.T. of low Lf value provided the dosage volume is adjusted in relation to the Lf value. He informs me that he would not advocate this procedure unless results could be controlled by posterior Schick tests. In 1942 the Ministry of Health announced that they were revising the tests for the antigenic potency of A.P.T. laid down under the Therapeutic Substances Act, and that meanwhile to provide a margin of safety the dosage should be increased to 0·2 c.cm./4 weeks/0·5 c.cm. By this time only brand C was being issued; and this, in the above dosage, has yielded the highest conversion rate so far obtained in this area (Table I).

Generally the Schick-conversion rates after two injections of A.P.T. recorded during the seven years (Table I) are lower than those of other observers in this country. Schick-conversion rates with any dosage will vary to some extent with the age distribution of the children tested and the period of time between the last injection and the test, but such variations cannot account for the relatively very low rates recorded here. The only explanation is that in the past the available brands of A.P.T. have varied in their antigenic potency. The medical officers engaged on this work think that individual brands of A.P.T. vary from time to time, but I am unable to find statistical evidence to support this impression. There is ample evidence that two injections of A.P.T. can produce, on occasion, a high Schick-conversion rate. Lewis (1941) found A.P.T. to be so reliable that he considered posterior Schick tests after two injections to be illogical and unnecessary. Fulton *et al.* (1942) state "for adequate immunisation a product of high antigenic potency is essential."

How is the worker in the field to know if he is using a suitable prophylactic? Until recent times, compliance with the requirements of the Therapeutic Substances Act could not be accepted as a criterion (Table I), though there is evidence that the A.P.T. now available is more reliable than in the past. Blood antitoxin titrations are impracticable in the field, and therefore only by posterior Schick tests can the worker assess the response to his injections of prophylactic. I (1943a) have shown that full reliance cannot be placed on the Schick test as applied to individual children. When carefully performed it still remains the only practical method of checking the potency of diphtheria prophylactics when dealing with large numbers of children. The final test of successful prophylaxis is not a negative Schick reaction but the absence of diphtheria among inoculated children. As Bousfield (1931) has pointed out, the Schick-negative state is not a criterion of absolute immunity but is evidence that the child has acquired a training in antitoxin production, which "constitutes the real basis of active immunity." It may be that in time the widespread inoculation of the child population without posterior Schick testing, which has been in operation for three years, will show that posterior Schick tests can be abandoned; but meanwhile it is proposed here to continue its use. It might be argued that a third injection of A.P.T. would involve less work; but while the prospect remains of immunising by two injections of A.P.T. it seems justifiable to persevere with posterior Schick tests, in the hope that practical methods for the assay of diphtheria prophylactic and/or a reliable and stable prophylactic may be forthcoming.

Some children will be found who show a very slow response to diphtheria prophylactics such as the following:—

A. C.—Born 15.10.32. Schick +ve 20.1.36. T.A.M., 1 c.cm., 20.1.36; 1 c.cm., 3.2.36; 1·5 c.cm., 17.2.36. Schick +ve, 29.6.36. T.A.M., 1·5 c.cm., 29.6.36; 1·5 c.cm., 13.7.36. Schick +ve, 26.10.36. T.A.M., 1·5 c.cm., 26.10.36. Schick +ve, 16.1.37. T.A.M., 1·5 c.cm., 16.1.37. Schick —ve, 12.4.37.

M. A. S.—Born 16.1.34. Schick +ve, 4.4.40. A.P.T., 0·5 c.cm., 4.4.40; 0·5 c.cm., 25.4.40. Schick +ve, 25.9.40. A.P.T., 0·5 c.cm., 25.9.40; 0·5 c.cm., 16.10.40. Schick +ve, 13.2.41. A.P.T., 0·5 c.cm., 13.2.41. Schick +ve, 16.5.41. A.P.T., 0·5 c.cm., 16.5.41. Schick —ve, 12.8.41.

Such children here form a negligible proportion of the child population.

Schick-conversion Rate in Relation to Age

Nash and Bousfield (1935) found that the response to active immunisation is more reliable before the age of five years than later in childhood. Maurice Williams *et al.* (1936) found that in children over ten years of age immunity, as measured by the Schick test, was more difficult to establish with any antigen. Lewis (1941) contends that children over eight years of age, as a result of latent infections, are more readily immunised than younger children and therefore require a smaller dosage of prophylactic. Fulton *et al.* (1942) found no obvious difference in the Schick-conversion rates of children of ages up to 18 years. Table I lends no support to the view of Lewis, and, allowing for the fact that some of the prophylactics used were unsatisfactory, tends to favour the suggestion that there is a dose-weight ratio for optimum response.

TABLE III
REACTIONS TO A.P.T.

Dose of A.P.T. c.cm.	0–4 Years: 1st Injection A	B	C	2nd Injection A	B	C	5–9 Years: 1st Injection A	B	C	2nd Injection A	B	C	10–14 Years: 1st Injection A	B	C	2nd Injection A	B	C	Total: 1st Injection A	B	C	2nd Injection A	B	C
0·1	917	21	2·3	356	4	1·1	503	27	5·4	173	4	2·3	210	25	11·9	70	3	4·3	1,630	73	4·5	599	11	1·8
0·2	970	9	0·9	74	—	—	800	18	2·5	37	—	—	290	20	6·9	11	—	—	2,060	47	2·3	122	—	—
0·3	524	13	2·5	1,071	23	2·1	312	21	6·7	628	16	2·5	129	17	13·2	247	10	4·0	965	51	5·3	1,946	49	2·5
0·4	147	—	—	133	3	2·3	76	7	9·2	59	1	1·7	20	2	10·0	30	—	—	243	9	3·7	222	4	1·8
0·5	1,552	62	4·0	2,316	33	1·4	1,528	133	8·7	2,129	47	2·2	521	85	16·3	716	28	3·9	3,601	280	7·8	5,161	108	2·1
Total	4,110	105	2·6	3,950	63	1·6	3,219	206	6·4	3,026	68	2·2	1,170	149	12·7	1,074	41	3·8	8,499	460	5·4	8,050	172	2·1

A = Number injected. B = Number of reactions. C = % of reactions

TABLE V
DURATION OF IMMUNITY AS MEASURED BY SCHICK RE-TESTS IN CHILDREN CONVERTED TO SCHICK NEGATIVE BY 3 INJECTIONS OF T.A.M.

Age at Date of Positive Primary Schick Test	Original Schick Conversion Rate %	Period between Negative Posterior Schick Test and Re-test: 2 Years No. Tested	No. Schick Neg.	% Schick Neg.	3 Years No. Tested	No. Schick Neg.	% Schick Neg.	4 Years No. Tested	No. Schick Neg.	% Schick Neg.	5 Years No. Tested	No. Schick Neg.	% Schick Neg.
0– 4 years	93·7	459	442	96·3	405	381	94·1	199	162	81·4	433	355	82·0
5– 9 "	90·3	477	446	93·5	508	475	93·5	302	267	88·4	282	239	84·7
10–14 "	89·1	45	42	93·3	21	21	100·0	10	10	100·0	6	2	33·3
Total	91·3	981	930	94·8	934	877	93·9	511	439	85·9	721	596	82·7

TABLE IV
INCIDENCE OF DIPHTHERIA, PROPORTION OF NATURALLY IMMUNE CHILDREN FOUND BY PRIMARY SCHICK TESTS AND PROPORTION OF CHILD POPULATION IMMUNISED 1930–43

Year	Diphtheria per 1,000 Population	Primary Schick Neg. 0–14 Years Per cent.	Proportion of Population Aged 0–14 Years Immunised Per cent.
1930	3·31	18·2	9·8
1931	0·81	18·3	16·4
1932	0·72	17·8	18·0
1933	0·59	10·7	18·7
1934	1·13	10·2	20·8
1935	0·79	9·0	22·6
1936	0·22	5·8	21·9
1937	0·18	4·4	21·8
1938	0·39	7·6	23·3
1939	0·50	6·1	25·2
1940	0·75	7·7	27·4
1941	0·40	5·2	36·5
1942	0·11	7·4	44·0
1943	0·03	6·4	55·9

Reactions to T.A.M. and A.P.T.

A proportion of children show some reaction to the injection of T.A.M. and A.P.T. This reaction is usually confined to the site of injection and varies from slight redness or swelling to swelling, stiffness, and tenderness. In some cases pyrexia and/or malaise occur with or without local reaction. Here records of reactions are not based on personal observation but on answers given by the mother or child to the question, "No trouble with the arm after the last injection?" The answers were given at intervals of one, two or four weeks or three months after the injection, and it is reasonable to assume that the reactions recorded were sufficiently severe to leave some impression on the memory. On this basis of enquiry 15,915 injections of T.A.M. yielded 2·2% and 16,549 injections of A.P.T. 3·8% of reactions. In Table III the reactions to A.P.T. are shown in relation to the dose, the order of the dose, and the age of the child. It will be seen that reactions were more frequent after the first injection, and that their frequency increased with the size of the dose and the age of the child. It is difficult to assess the severity of any reaction from the history given by the parent or child, but in the 460 cases reacting to the first injection of A.P.T. the medical officers used T.A.F. for the further injections in 52 cases and modified the subsequent dosage of A.P.T. in 13; the parents brought the child to the clinic within 48 hours because of local and/or general reaction in six cases, and in two cases private practitioners were consulted because of tenderness and malaise. No sterile abscess was encountered. Fulton *et al.* (1942) recorded reactions in 42% of primary Schick-positive children. This is in strong contrast to the findings in Table V, the 3·9% of reactions in 1,082 children recorded by Lewis (1941), and the 12·1% of reactions noted by Allen-Williams (1943) by close observation of children immunised while in hospital. Here in a small series the same dose of one brand of A.P.T. was given to alternate children by the subcutaneous and intramuscular routes, and reactions were more frequent with the former. Individual observers will vary in their views as to what is to be recorded as a reaction, but experience here has shown that in primary Schick-positive children a reaction severe enough to deter the parent from bringing the child for further injections is rare.

Duration of Immunity

It has been the practice here to try to Schick-test all children two years after immunisation. In addition, children rendered Schick-negative by three injections of T.A.M. have been Schick-tested at intervals up to five years. In this way information is now available on the rate of loss of immunity and the duration of the immunity produced by T.A.M. and A.P.T. Care must be exercised in using the Schick test as an indication of the duration of immunity produced by inoculation, because it is not possible to assess in the individual child the extent to which it has been exposed to latent infection in the interval. The incidence of diphtheria in the area, the extent of natural immunity found by primary Schick tests, and the proportion of the child population actively immunised (potential carriers), indicate broadly the part which latent infection

TABLE VI
SCHICK RE-TESTS IN CHILDREN CONVERTED TO SCHICK-NEGATIVE 2 YEARS PREVIOUSLY BY 3 INJECTIONS OF T.A.M. OR 2 INJECTIONS OF A.P.T.

Prophylactic	Dosage in c.cm.	Interval in Weeks Between Doses	Original Schick-Conversion Rate %	Age at Date of +ve Primary Schick Test: 0–4 Years No. Tested	No. Schick Neg.	% Schick Neg.	5–9 Years No. Tested	No. Schick Neg.	% Schick Neg.	10–14 Years No. Tested	No. Schick Neg.	% Schick Neg.	Total No. Tested	No. Schick Neg.	% Schick Neg.
T.A.M.	1·0/1·0/1·0 or 1·5	½	91·3	459	442	96·3	477	446	93·5	45	42	93·3	981	930	94·8
A.P.T.	0·1 + 0·5	2	93·3	56	45	80·4	29	20	69·0	5	2	40·0	90	67	74·4
A.P.T.	0·2 + 0·5	2	94·0	363	328	90·4	300	255	85·0	59	50	84·7	722	633	87·7
A.P.T.	0·5 + 0·5	2	87·8	728	647	88·8	679	572	84·2	146	130	89·0	1,553	1,349	86·8
A.P.T.	0·1 + 0·3	4	80·8	172	111	64·5	63	39	61·9	15	5	33·3	250	155	62·0
P.T.	0·3 + 0·1	4	78·2	114	69	60·5	43	21	48·8	12	7	58·3	169	97	57·4
A.P.T.	0·3 + 0·3	4	95·2	70	52	74·3	49	21	42·8	7	1	14·3	126	74	58·7
				$X^2 = 184·55$ $P < 0·01$			$X^2 = 164·244$ $P < 0·01$			$X^2 = 68·909$ $P < 0·01$			$X^2 = 356·887$ $P < 0·01$		

may have played during the period under review (see Table IV). Further, in this area there has been little movement of population in recent years.

In Table V the rate of loss of immunity in children rendered Schick-negative by three injections of T.A.M. is shown. The number of children in the 10–14 years group is too small to permit of any conclusion, but it will be noticed that retention of immunity is greater in the 0–4 years group in the second and third year when compared with the 5–9 years group, and that the position is reversed in the fourth and fifth year. The differences are very small, but it may be that the greater dose-weight ratio in the younger group retains its effect in the first year or so, but that the greater exposure to latent infection of the older group counterbalances this in the later years. In general the retention of immunity is good. Duke and Stott (1943) in this country carried out a similar investigation in a country area with a low incidence of diphtheria and where a high proportion of the child population had been immunised by three injections of T.A.F. or two injections of A.P.T. They found the percentage remaining Schick-negative to be 96 after two years, 88 after three years, 85 after four years, and 75 after five years; results closely comparable with Table V. In Canada, Fraser and Brandon (1936) recorded a Schick-relapse rate of 34% after five years in children immunised with formal toxoid and not exposed to infection. Schwartz and Janney (1938) in an area in the United States with a low incidence of diphtheria, found after seven years that 22% of children immunised with formal toxoid had reverted to the Schick-positive state. There is a fair measure of agreement in these various findings which show conclusively that immunity as measured by the Schick test is gradually lost with the passage of time in areas with little opportunity for latent infections. Fraser and Halpern (1937) found by serial antitoxin titrations of the blood that children immunised by three doses of toxoid showed a gradual loss of antitoxin with the passage of time. Lewis (1941), by blood antitoxin titrations found 37% of 51 children who had received three injections of T.A.M. 51–53 months previously, to be "potentially susceptible," but their average age was higher than that of the "immune" and "potentially immune." From this and Tables V and VI it appears that the age of the children is a factor to be considered in comparing the results obtained by different observers.

The retention of immunity two years after being rendered Schick-negative by three injections of T.A.M. or two injections of A.P.T. is shown in Table VI. Despite the higher original Schick-conversion rate in some cases, the Schick-relapse rate after two injections of A.P.T. is throughout higher than after three injections of T.A.M. The differences are much greater than would be expected to occur by chance. The retention of the Schick-negative state two years after the 0·1 c.cm. or 0·3 c.cm./4 weeks/0·1 c.cm. or 0·3 c.cm. dosages is much lower than was anticipated. It was known that some of the A.P.T. used in these dosages was of low antigenic potency, but each of the children tested had been converted from Schick-positive to Schick-negative by the two injections. It would appear, therefore, that the retention of immunity as well as the Schick-conversion rate must be considered in assessing the merits of a diphtheria prophylactic.

An epidemic of diphtheria occurred here in 1929, and during 1930–36, when T.A.M. was in use, the incidence of diphtheria was higher than during the A.P.T. period of 1937–43 (Table IV). This opportunity for latent infection might be claimed to account for the greater retention of immunity by the children immunised with T.A.M. I have shown elsewhere (1943a) that during 1930–36 only 3% of children aged 0–4 years were found Schick-negative on primary test. During 1937–43 only 2% of the same age group were found to be primary Schick-negative. It would appear, then, that in this area and during the two periods under review latent infection, as measured by primary Schick tests, has not been a significant factor so far as the 0–4 age group is concerned. Table VI must be accepted as evidence that, *ceteris paribus*, the immunity produced by three injections of T.A.M. will last longer than that produced by two injections of the type of A.P.T. available in the past.

Throughout Table VI the retention of immunity is highest in the youngest age group. This seems to lend further support to the view that the dose-weight ratio is a factor to be considered in obtaining the maximum response from any prophylactic.

Certain manufacturers are now abandoning the production of T.A.M. on the grounds that (*a*) it contains horse serum and may cause sensitisation to subsequent doses of antisera; and (*b*) that it is "now recognised as the least efficient immunising agent" and "more consistent results and higher conversion rates follow the use of either T.A.F. or A.P.T., particularly in the case of the latter." I cannot assess the risk in (*a*) or the efficiency of T.A.F. as an immunising agent, but experience here does not support the view that A.P.T. is fully reliable. At present A.P.T. is yielding a high conversion rate, but until it can be shown that this high rate will be maintained and that Schick re-tests will show a reasonable retention of immunity, it cannot be assumed that new methods of manufacture or assay have produced a real improvement.

To combat this loss of immunity as recorded by Schick tests or antitoxin titrations, Fraser and Brandon (1936), Parish and Wright (1938), Lewis (1941), Fulton *et al.* (1942), and the Ministry of Health (1942) recommend that children should receive a single dose of prophylactic three to four years later to stimulate their waning immunity. On the other hand, Dudley and his colleagues (1934), from observations on diphtheria in inoculated subjects, hold the view that once the Schick test has been found to be negative "relapses of Schick or antitoxin immunity are really of little consequence" because the subject possesses a high immunisability and would respond rapidly to contact with infection. On the experience gained here of the incidence and degree of severity of diphtheria in immunised children (Anderson, 1943), and on the duration of immunity from the use of a reliable and stable prophylactic (T.A.M.) in young children with little exposure to latent infection (Table V), I favour the latter view, and submit that it is better to render the child Schick-negative when he attends for immunisation than to count on being able to bolster up a doubtful immunity some years later. In actual experience little difficulty has been met in getting children to attend for posterior Schick tests, but, once some years have elapsed, considerable effort is required to ensure a reasonable attendance for re-Schick tests, and presumably the same would hold good for a further injection of prophylactic. Blood antitoxin titrations may be the yard-stick for the laboratory worker, but for the field worker the Schick test remains the only practical method of assessing the efficiency of the prophylactic and dosage employed. Only when it has been shown conclusively over a period of time that any prophylactic is stable and can be relied upon to produce a high conversion rate and reasonable duration of immunity, can posterior Schick tests be abandoned.

Summary and Conclusions

Over a period of seven years T.A.M. was found to be a stable and reliable diphtheria prophylactic yielding in three injections a good Schick-conversion rate (which might have been improved by longer intervals between the doses), and showing a high retention of the immunity so produced.

Over a period of similar length A.P.T. was found to vary considerably in antigenic potency and in one or two doses to yield a wide range of Schick-conversion rates, even when the dosage was higher than that recommended by the makers. At the end of two years the loss of immunity as measured by the Schick test was greater, no matter what dosage had been employed, than was found two years after three injections of T.A.M.

Reactions to A.P.T. were more frequent than to T.A.M., varied directly with the age of the child and the size of the dose, but were seldom of sufficient severity to deter the parent or child from completing the course of injections.

Now that the manufacture of T.A.M. is being discontinued and A.P.T. is the diphtheria prophylactic in general use, the importance of checking the potency of the prophylactic and the adequacy of dosage by posterior Schick tests is stressed.

There are indications of a recent improvement in the antigenic potency of A.P.T.

To assess the merits of a diphtheria prophylactic the Schick-conversion rate is not enough. It must be supplemented by observations on the degree of retention of the Schick-negative state after an interval of some years.

A preference is indicated for rendering the child Schick-negative at the time of the initial course of injections rather than omitting the posterior Schick test and giving a further injection of prophylactic some years later.

The system of records, Schick tests, and follow-up on which this investigation is based were introduced by the late Dr. E. H. T. Nash when he started diphtheria immunisation in this area in 1930, and have been maintained by Dr. Bousfield and other medical officers engaged on this work.

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VENEREAL DISEASES IN A LARGE PORT*

By A. O. FERGUSSON ROSS, M.D., D.P.H.,
Director, V.D. Clinics, Liverpool City and Port

In the past five years knowledge of the existence of venereal diseases has spread, by reason of radio talks and advertisement in the daily Press. The adage that an ounce of practice is worth a pound of theory may have something to do with the dissemination of knowledge, since it is unfortunate that, so far as the statistics of a non-notifiable disease can be accepted, there has been a considerable increase in the incidence of syphilis in this country. So to-day we have an educated public so far as venereal diseases are concerned, and as defenders of the public health we should consider how we can take advantage of the altered conditions, and lead opinion into channels of practical action for the good of the nation and of the generations to come. I will try to show the size of the peril in the country as a whole, and so far as civilian figures are available, the extent of the evil in a large port, with special reference to the female population. We must always remember that, while an uncured man is a menace to the public health for some five years, an uncured woman is a menace during the whole of her child-bearing life. A further point with regard to statistics of the disease in women is that it has been computed that for every woman who presents signs of clinical syphilis there are four or five in whom the disease is entirely latent. Pre-war statistics showed that about three women out of four found to be suffering from syphilis showed no signs of the disease, so the estimated figure of five latent cases to every clinical case is not an over-statement.

If we examine the summary reports of the last few years, prepared by the Chief Medical Officer of the Ministry, we find that, taking a unit figure of 100 to represent the incidence of early syphilis in 1939, the figure for 1942 is 220 (Service cases included). For civil clinic figures alone, the corresponding figure would be 100 for 1939, 161 for 1942. The armed forces have, of course, increased enormously since 1939, and the age groups enlisted are those most likely to be infected. Another interesting detail is the fall in cases of early gonorrhoea in the male in these four years—25%—and the fall in the ratio of early gonorrhoea cases to early syphilis cases. Most disturbing of all is the huge increase of both diseases in women—the increase in syphilis being nothing less than calamitous. I have prepared a series of tables to show how Liverpool compares with England and Wales as a whole, and also some data about sources of infection.

TABLE I (A)
EARLY SYPHILIS

	Females			Males		
	England and Wales	Liverpool	Ratio	England and Wales	Liverpool	Ratio
1939	1,412	25	100 : 1·8	3,574	187	100 : 5·2
1942	3,576	260	100 : 7·2	5,470	550	100 : 10·0

TABLE I (B)
EARLY GONORRHOEA

	Females			Males		
	England and Wales	Liverpool	Ratio	England and Wales	Liverpool	Ratio
1939	5,642	123	100 : 2·2	23,339	1,368	100 : 5·9
1942	7,644	249	100 : 3·3	17,056	1,772	100 : 10·4

The figures for cases treated at Allied Mercantile Marine Dispensaries in Liverpool for 1942 are incomplete, but in 1943, 276 cases of early syphilis and 246 cases of early gonorrhoea were treated. Liverpool has an inordinately high proportion of early syphilis in both males and females, and of gonorrhoea in the males. The increase in cases of gonorrhoea has been found at the Seamen's Dispensary male clinic, and not at the Royal Infirmary.

TABLE II (A)
ROYAL INFIRMARY—MALES

	Early Syphilis	Early Gonorrhoea
1939	46	339
1943	123	339

TABLE II (B)

Domicile	Analysis of 400 Male Cases at Royal Infirmary
Liverpool (White)	296
British Isles	80
Foreign ..	24

Infected in	200 Cases of Early Syphilis + 200 Cases of Early Gonorrhoea							
	No.	Prostitutes	Amateur	Wives	No.	Prostitutes	Amateur	Wives
Liverpool	143	44	71	28	152	43	90	19
British Isles	43	6	32	5	43	6	37	—
Elsewhere	14	10	4	—	5	5	—	—
Total ..	200	60	107	33	200	54	127	19

TABLE III (A)
SEAMEN'S DISPENSARY—MALES

	Early Syphilis	Early Gonorrhoea
1939	117	823
1943	384	1,559

Tables II and III illustrate the difference in personnel attending the two male clinics, and that the vast majority of the patients attending contracted the diseases in Liverpool. It would appear that the prostitute is the vehicle of infection to the stranger within our gates, but that the amateur and wife are stated to be the main sources of infection for the townsman.

* Summary of an address to the North-Western Branch of the Society.

TABLE III (B)

Domicile	Analysis of 400 Male Cases at Seamen's Dispensary	
Liverpool (White)	94	
British Isles	58	
Foreign ..	248	Chinese 148 Swedes 11 Coloured 34 French 14 Miscellaneous 41

Infected in	200 Cases of Early Syphilis + 200 Cases of Early Gonorrhoea							
	No.	Prostitutes	Amateur	Wives	No.	Prostitutes	Amateur	Wives
Liverpool	98	68	24	6	152	120	29	3
British Isles	39	18	20	1	30	21	9	—
Elsewhere	63	56	7	—	18	18	—	—
Total ..	200	142	51	7	200	159	38	3

Notification of infections contracted by Service men in Liverpool (1942–43) shows the same ratio of roughly ten gonorrhoea to three syphilis. I believe that this relative decrease in the ratio is due to the active curative properties of the sulphonamides, which have substantially reduced the number of uncured cases of gonorrhoea. Chronic cases of gonorrhoea, prior to the introduction of sulphonamides, were the chief disseminators of the disease.

RATIO OF GONORRHOEA TO SYPHILIS OF LESS THAN ONE YEAR'S DURATION

	1939	1942
England and Wales ..	6½ to 1	3½ to 1
Liverpool	7¼ to 1	3¼ to 1

Status of women attending Royal Infirmary clinic in 100 *instances.*—Seventy-one married, 26 single, 3 widowed; of these 20% were 20 years of age and under. Enquiry into the contact responsible for the infection in married women showed that the husband was nominated in 60% of cases.

The figures of congenital syphilis yield us little. There has been an increase in the birth-rate since 1939, and it is well known that special hospitals have always treated congenital syphilis according to their own particular interest, and that such cases have not been reported on any return to the Medical Officer of Health. With the depletion in staffs, many hospitals have referred cases of bone disease, eye trouble, and so on, to the venereal diseases centres, and these are now for the first time included in statistical returns to the local health authority.

33B.—The good effect of Regulation 33B is that we are now entitled to send a welfare visitor to call on all persons named on Form 1, on the receipt of one notification. Most women who have been visited have reported at the clinics. No compulsion can be exerted upon those notified once, but at least they are apprised of the fact that they are suffering from venereal disease in a communicable stage. A proportion of them have actually been defaulters from the clinics, and the appointment of welfare visitors has enabled us to contact defaulters more easily. The regulation affects infected women rather than men, and the reason is this: women do not appreciate when they have been infected, and therefore do not come to the clinic shortly after the infecting intercourse, whereas a man does. The result is that a woman does not come for treatment until she has infected at least one other person. She may be notified of this by the working of 33B, or by the contact slip method. The contact slip has been used in Liverpool for more than ten years, and good results have been obtained. Each man is questioned as to the place where he met his consort, name of town and public house, street, café, etc., the status of the woman, amateur or professional, whether he was under the influence of alcohol, and if he used prophylaxis. If he knows the girl he is given a contact slip, which is an invitation to the girl to come and see me at one of the female clinics, and quite frequently the invitation is received and accepted. In the last six months of 1943, 51 Forms 1, 33B, were received; 23 were traced; one refused to do anything about it; two preferred to see their own doctor; and 20 reported at the clinic. Under the contact slip system, in the same period, 128 slips were issued and 72 of the women reported. It is admitted that women do not default as readily as men, and therefore if 33B and contact slip methods were retained to inform women that they were infected, and a system of notification of defaulters were introduced, men and women would be equally affected. A known case of venereal disease ought not to be allowed to run loose. With treatment at its present state of efficacy, infectivity can be rapidly reduced, and in all probability nullified.

Causes of promiscuity.—What are the factors, beyond the ordinary emotional disturbances produced by war, that make for promiscuity? Lack of companionship—one is taken, the other left—and both are unhinged: this is not only true of man and wife and of sweethearts, but of friends of the same sex. Probably the worst sufferer is the person who has had to leave home and kindred. The homeless man or woman is always more easily tempted. The inhibitions of one's own neighbours, friends, and family, when removed lead to conduct which is not in keeping with one's general behaviour. One sees it in ordinary times at holiday resorts, on cruises, and so on. In every country involved in war this situation presents itself. But in our large ports it reaches its quintessence. Here we have young men of maritime countries that have been overrun by the invader. They are divorced for years from the safe anchorage of home and the joy of home coming. All, or almost all, ties that bound them to their kindred—the simple human ties of family relationships—wear thin, and finally utter ennui leads to snatching of the pleasures of the moment. It is very easy for a man to suggest to himself that he is losing the best of his physical life by sexual abstinence. In our large ports, where many of these allied seamen are set ashore for a longer or shorter period of time, conditions are very favourable for the development of liaisons. The woman on shore parted from her husband or sweetheart, the woman who feels that she is becoming passé, or simply the girl who has lost her girl friends and has become bored with the drabness of war and home life and longs for some flicker of romance or, perhaps, the more mercenary types who require fully fashioned silk stockings—in fact, all women whose moral sense is outweighed by other considerations find their opportunity, and a considerable proportion of them pay the price. A point which cannot be insisted upon too much is that it is not the prostitute who comes to the clinic for treatment, but the wife, the sweetheart, and the so-called good-time girl. Therefore, the enormous increase that has occurred in the attendances of new patients at the women's clinics is a reflection of the extent to which the ordinary rank and file of the womenhood of the country have become infected. It is indeed a sombre picture. More than ever we will have to make it a *sine qua non* of all ante-natal care that syphilis is looked for, and every means employed to exclude the possibility of infection in expectant mothers; and we must press for legislation to control the infectious defaulter.

"PROBLEM FAMILIES"*

By R. C. WOFINDEN, M.D., B.S., D.P.H.,
Acting Dep. M.O.H. and V.D. Medical Officer, Rotherham C.B.

Over 70 years ago Florence Nightingale said, "The secret of national health lies in the homes of the people." Perhaps no one realises the importance of this truth so much as health visitors. They have a unique opportunity for studying family life in its relation to health and they can look back over the last 25 years knowing that they have played a part in its improvement.

Conditions now are vastly different from those during the industrial revolution, when the population rapidly increased and migrated from the country to the towns. The people then lived in jerry-built dwellings with inadequate or non-existent water and sewage systems, flies bred on the decaying refuse heaps outside the houses, and women and children laboured in the factories for 12 hours a day. Gradually throughout the nineteenth century the social conscience of the country was aroused and attention was directed to the unsatisfactory environment in which the people lived. Chadwick showed how pauperism was closely associated with disease, and John Simon, Southwood Smith, Snow and Budd contributed to the foundation of public health. The importance of education was officially recognised towards the end of the century, and all the time economic progress was gradually raising the standard of living. With the dawn of a new century the stress was no longer so much on the improvement in environment as on personal health services, and the first 20 years saw the establishment of the school medical, maternity and child welfare, tuberculosis, and venereal disease services, and of National Health Insurance. Successive Housing Acts were passed with improvements in the housing of the people, Public Health Acts were consolidated, and in 1939, on the threshold of a new war, the accent had moved from the prevention and cure of disease to the promotion of positive health. There is no doubt that, looked at from the Benthamite angle of the "greatest good for the greatest number," all these measures have vastly improved the health and standard of living of the majority of the people.

* Address given before the South Yorkshire Group of Women's Public Health Officers at Rotherham.

Derelict Families

But there are still "derelict families," as they are sometimes called. These families for one reason or another have not kept pace with social progress and are a brake on the wheels. They are the despair of health departments, education authorities, N.S.P.C.C. inspectors, and indeed of anyone who attempts to improve their lot in life. It is difficult to define such families, but one is tempted to borrow from a description of feeble-mindedness and to call them those families with "social defectiveness of such a degree that they require care, supervision and control for their own well-being or for the well-being of others"; one might add "and the removal of children belonging to such families to a more satisfactory environment would be in their interest and the interest of the community."

It would be well to give a brief description of such a family and review some of the problems involved. Almost invariably it is a large family, some of the children being dull or feeble-minded. From their appearance they are strangers to soap and water, toothbrush and comb; the clothing is dirty and torn and the footgear absent or totally inadequate. Often they are verminous and have scabies and impetigo. Their nutrition is surprisingly average—doubtless partly due to extra-familial feeding in schools. The mother is frequently sub-standard mentally. The home, if indeed it can be described as such, has usually the most striking characteristics. Nauseating odours assail one's nostrils on entry, and the source is usually located in some urine-sodden faecal-stained mattress in an upstairs room. There are no floor coverings, no decorations on the walls except perhaps the scribblings of the children and bizarre patterns formed by absent plaster. Furniture is of the most primitive, cooking utensils absent, facilities for sleeping hopeless—iron bedsteads furnished with fouled mattresses and no coverings. Upstairs there is flock everywhere, which the mother assures us has come out of a mattress which she has unpacked for cleansing. But the flock seems to stay there for weeks and the cleansed and repacked mattress never appears. The bathroom is obviously the least frequented room of the building. There are sometimes faecal accumulations on the floors upstairs, and tin baths containing several days' accumulation of faeces and urine are not unknown.

The Children

The children, especially the older ones, often seem perfectly happy and contented, despite such a shocking environment. They will give a description of how a full-sized midday meal has been cooked and eaten in the house on the day of the visit, when the absence of cooking utensils gives the lie to their assertions. Simon truly said, "amongst the poorest as amongst the richest . . . childhood will be light-hearted in its bliss of ignorance, and youth, in spite of poverty, will have what Hobbes calls its own 'natural drunkenness' to sustain it." One can only conclude that such children have never known restful sleep, that the amount of housework done by the mother is negligible, and that the general standard of hygiene is lower than that of the animal world. How *can* children reared in these tragic circumstances rise above their environment? It is difficult to see how the best-intentioned social legislation in the world can offset the influence of such home life, unless the children are removed to more humane surroundings.

How Many Such Families

The question arises, How many of these families are there in this country? There are no national statistics, although records about them must lie in every health department in the country. An attempt has been made in Rotherham to list these families and evaluate some of the factors concerned. The figures are only an approximation, based on information supplied by health visitors and school nurses for the years 1939–44, but they make interesting reading:—

Number of families registered	243
Fathers invalid (low family income)	10
Fathers in Services	39
Widows	3
Parents separated: wife and family maintained ...	1
Parents separated: wife deserted by husband ...	5
Parents cohabiting	16
Motherless families	6
Mothers registered M.D.	8
Mothers appear feeble-minded (not certified) ...	42
Mothers known to have had a child before marriage	25
Mothers known to have had an illegitimate child after marriage	21
Families referred to N.S.P.C.C.	96
Convictions obtained	14
Families of children removed from custody of parents	16
Housing: Good, municipal or equivalent	99
Fair, pre-1914 standard	85
Poor, insanitary, overcrowded, and lodging-house standard	59
Number of children concerned:	
Pre-school, 311—*i.e.*, 5·18% of pre-school population.	
School, 590—*i.e.*, 5·09% of school population.	
Families persistently verminous	85
Families persistently scabietic	51
? Mentally defective children:	
Pre-school	19
School (*a*) examined and graded:	
(1) Imbecile	4
(2) Feeble-minded	10
(3) Dull and backward	19
Children known to be in Approved School ...	6

The first fact which needs attention is the proportion of children involved—no less than 5% of all the children under the age of 14 are living in these appalling conditions. There is no reason to suppose that Rotherham has more of these problem families than any other large town. There must, therefore, be tens of thousands of children in this country who will probably never achieve the full benefits of citizenship. As may be seen from the figures given, the average number of children in these families is high. Ignorance through inability to learn or lack of interest, unemployment in periods of industrial depression, and alcoholic lack of self-control, have contributed to these large families. There is reason to suppose that these children as they grow up will in turn marry irresponsibly early and produce large families, condemned once more to a repetition of the same hideous cycle.

The Parents

Low mental standard of the mother—either actual feeble-mindedness or mere dullness or backwardness—is apparent in one-fifth of these cases, and in this fact the extent to which family life revolves round the mother is well brought out. There is a world of difference between the home which is sub-standard because of lack of money and the home which is sub-standard because the mother is mentally below par. In the first there is obvious attempt to cope with difficulties. The children are washed, the clothing though poor is well repaired, the house is clean even though sparsely furnished,

and there is a brave attempt to maintain dignity. In the problem family there are no such attempts. There is no self help, and almost complete inability to improve with outside assistance. It is not the slum that makes the defective but the mental defective who makes the slum (Berry). The elementary lessons of hygiene are ignored with consequent vermin, scabies, and impetiginous infections.

In about one-quarter of such families there is evidence of irregular sexual relationships, either in the form of parents cohabiting or illegitimacy before or after marriage. Bearing in mind the impossible living conditions, often with overcrowding, and the fact that problem families in turn beget problem families, this is not surprising. Often the sleeping arrangements are such that children are not separated from parents or girls from boys, even to a late age. As Simon said half a century ago, "coupling in wedlock or otherwise takes place with every possible inconsiderateness. Young people . . . pass into conjugal relationships as lightheartedly as sparrows on the housetop, and with even less preparatory nest-making than the sparrows use, set themselves to multiply mankind. It is a sorry estate for which they beget inheritors."

In a few cases the father is incapacitated through illness or absent from home in the Services. In most such problem families he is working and, in these days, enjoying a wage he has rarely known in the past. To the extent that war-time has led to disruption of family life we should expect the number of these families to have increased, but in most cases there has been no such disruption, and the money coming into the home each week often far exceeds that of the average middle-class home. And still conditions do not improve. The husband may not give the wife enough money to provide a decent home life, but it is also possible that such families have never learned how to use money wisely. In pre-war years the father was often unemployed or earning a wage which barely provided subsistence. They never had the opportunity of learning how to spend, and now they waste their money on drink and useless and expensive commodities. We are all familiar with the home enjoying an income of £15 a week or so, where the conditions are little better than those previously described, where the children are sent to school unwashed, and dressed in disreputable, dirty clothing and hopelessly inadequate footwear. But such children often have a half-crown clutched tightly in their grubby hands. When asked about clothing the parents' plea is lack of coupons and large families. But other families in the same situation manage better.

Nearly half the cases in Rotherham are in good houses (municipal or the equivalent), but the conditions described above are none the less true. Removed from slum areas they proceed to rebuild another slum, and the practice of housing these families side by side with the honest triers on a new housing estate is to be deprecated.

Provisions for Assistance

What is being done to help solve the problems of these problem families? There are the general provisions made by the State and the Local Authority. From birth, through childhood to old age and death, provision is made through municipal midwifery, child welfare and health visiting, school and the school medical service, National Health Insurance, unemployment assistance, and old age pensions. They can, if they wish, avail themselves of other services such as public baths, libraries, parks, and nurseries. Some of these necessitate compulsory membership, but even the optional ones are rarely used by the problem family. Provision of cheap milk and vitamins, residential nurseries and nursery schools, meals and milk-in-schools schemes, free medical and dental services and so on, will not help these children unless the parents make use of such assistance. Health visitors, school nurses, moral-welfare workers, and the inspectors of the N.S.P.C.C. visit their homes, advise, suggest, inform them of the benefits or help they can receive from this or that social service. Specious promises are made by the parents—promises to try again, to accept advice and to act on it. Occasionally there is a genuine attempt at improvement, but it does not last long. Qualities of independence and moral vigour are absent; there is a feeble acquiescence in conditions as they are, and unwillingness or inability to make any sustained effort to improve. Much of the valuable time of health visitors and school nurses is wasted in these cases. Simon pointed out long ago that ". . . help from outside can hardly be of permanent value, except in proportion as it tends to develop the self-helping faculties . . ."; and this quality of self-help seems to be all too often absent. When repeated efforts to obtain improvement have failed, the N.S.P.C.C. is asked for assistance. The grossest cases of child neglect are prosecuted under the Children and Young Persons Act, the children are at last removed to a satisfactory environment and mode of life, and the parents after a brief sojourn in prison are free to start again the same vicious cycle.

This brief survey of problem families is by no means comprehensive, but some of the main points have been dealt with. More information is wanted on the part played by such factors as ill-health in the mother or father, morbidity and mortality rates, family incomes and the proportion spent on food, clothing, rent and other necessities, on the response to vaccination and diphtheria immunisation, on the incidence of venereal disease (although I do not think this is very high), on school attendance, and on the past hereditary and social history of the parents.

Post-War Planning

There is no simple short cut to a practicable solution of the problem. The first thing is to ascertain its size—the number of families in the country living in such deplorable conditions. This would necessitate detailed enquiry and study, but much of the basic information already exists scattered throughout the records of health departments—and even without further enquiry a correlation of the existing information would probably yield sufficient evidence on which to proceed. The work of collecting and correlating statistical information should be done by some central agency—a major task for any department of social medicine.

We have heard much about suggestions for an improved post-war Britain. Sir William Beveridge and the Government have published plans for social security on the principles of social insurance. Children's allowances, a guaranteed higher income, disablement and unemployment benefit of unlimited duration and without means test, housewives recognised as occupied persons with benefits adjusted to needs—all these possibilities are suggested on the assumption that mass unemployment will be avoided. The present Education Act proposes to raise the school-leaving age to 15, and later to 16, part-time education after leaving school, and many other improvements. It is hoped that children from an early age will be taught not only the elements of reading, writing and arithmetic, but also the importance of elementary hygiene—of regular washing, combing the hair, brushing the teeth, supplies of fresh air, of regular bowel movement, sleeping habits and so on. Nursery schools and classes provide the opportunity. Education in the elements of housewifery and citizenship is also desirable. Youth movements offer promise, but sometimes their help comes too late, and the early influence of unsatisfactory environment and education proves ineradicable.

The Government White Paper on Health Services suggests a form of medical service which makes medical, specialist, and hospital treatment available to all irrespective of means and free of cost. An occasional gleam illumines the darkness of post-war housing proposals. The practice of placing families with a low standard of cleanliness next door to a clean, well-run family on new housing estates is to be deprecated. There is much to recommend the segregation of such low-standard families in older houses and allowing them to occupy a new house when they have proved their ability to keep it and its occupants in a satisfactory hygienic condition.

Mental Defectives

In so far as individuals and families are capable of self-help, their lot in life will be very greatly improved. It is doubtful, however, to what extent the problem family will benefit. Where they have become problem families through sickness, unemployment, or poor wages they should certainly be taken out of this group. Where self-help is conspicuously absent, good food and habits of feeding, good houses, better facilities for open-air activities, social security and better education will be largely wasted. The fact that a proportion of the mothers of these families are known mental defectives, and that others certainly belong to the dull or backward group, suggests that the ascertainment and disposal of mental defectives should be improved. That a mentally defective woman is allowed to bear and attempt to rear a large family is a negation of social progress. Lewis estimated in 1929 that there were 105,000 feeble-minded children between the ages of 7 and 16 in England and Wales—potential parents of problem families. The lack of special schools and institutions means many feeble-minded children in elementary schools where no special provision can be made for them. Lack of special training facilities in the immediate post school years and insufficient institutional accommodation means that large numbers leave school without any guidance or subsequent control.

Sterilisation of mental defectives would reduce the numbers of the defectives in the next generation. If Parliament feels that "public opinion" would not stand such a measure, then it should ensure that cases of mental deficiency are segregated and prevented from propagating. Leaving aside the relation of mental deficiency and heredity, a mentally defective mother is not a fit person to make a home for children. If mental defectives were efficiently ascertained and adequately dealt with we should have progressed towards solving the slum problem.

Conclusion

"*Maxima debetur puero reverentia*": which means "you owe the highest respect to the young." It is in the cases where one has this concept most acutely in mind that prosecution finds its place. "The State ought by law to have the amplest discretion to treat as parentless and to take into its own charge all children whose natural parents or guardians cannot or will not bring them up otherwise than into pauperism." For Simon's "into pauperism" can be substituted "into a problem family." But it would not be possible to remove all such children; there are not sufficient homes in which to place them. A six-months' sojourn in prison by the parents is no solution. Therefore more children's homes should be provided. Parents who have proved unwilling or unable to look after their children satisfactorily should be prevented from having any more, and children should be removed from an undesirable environment as early as possible.

Medical education and the education of health visitors could profitably be re-orientated with the accent on the person and the home environment, and serious attempts made to teach the importance of the social factors in disease.

BOOK REVIEWS

Sex Education in Schools and Youth Organizations. Bd. of Education. Educ. Pamphlet No. 119. London: H.M.S.O. 1943. Pp. 22. Price 6d. net.

So You've Grown Up Now! By ARTHUR C. GEE. Bristol: John Wright & Sons, Ltd. London: Simpkin Marshall (1941), Ltd. Price 1s. Postage 1d. Pp. 31.

These are two more brochures on the vexed question of sex education. The pamphlet from the Board of Education is the cautious document we should expect, but is nevertheless of great interest. Much work is already being done in the schools and the various methods employed are described. The authors have recognised a fundamental fact which is too often missed—namely, that the problem is twofold. First, children should be taught the anatomy and physiology of sex, if possible as part of a general course in biology; secondly, an attempt should be made to enlighten them as to the nature of the sexual impulse and the moral and social problems which arise from it. Many mistakes in teaching about sex are made by an unwise attempt to combine these two aims and to deal with details of physiology with an emotional bias which does not make for romance but for the objectionable atmosphere of a rubber goods shop. Anatomy and physiology should be taught in scientific language and in an impersonal way. As to sex problems, these should probably not be segregated but dealt with together with the other moral problems of community life which it is the duty of every citizen to consider. Human problems of conduct are all analogous and can be solved by consideration for one's neighbour.

Dr. Gee, in his little book, takes the line of the kindly, breezy uncle, who describes the "female tummy" in a style somewhat reminiscent of the inimitable Radio Doctor. It is more comprehensive than most of these manuals, as he explains (without offence) all that his young readers need to know about contraception and the symptoms of venereal disease. If this kind of book is wanted it is quite a good one of its species.

MASS RADIOGRAPHY

The Ministry of Health has sent to the Medical Press a note on mass radiography, the main points of which are as follows:—

War-time difficulties have made it impossible rapidly to develop schemes for the general use of mass radiography throughout the country. Employers or other persons may be considering whether they should not make their own arrangements for the examination of their employees or patients by mass miniature radiography. There are, however, complications and dangers, perhaps not immediately obvious, involved in any departure at present from the standard methods of the official scheme. These difficulties ought to be generally recognised. The primary purpose of mass radiography is not diagnosis in the ordinary sense. Its true function is to discover in a group of ostensibly healthy persons those with signs of possible incipient disease, which should therefore be further investigated by more intensive means. Persons who do not suspect illness must be ready to be examined. Anything that might weaken public confidence in mass radiography would therefore impair its usefulness. Equally, anything that would lead the public to expect too much from the new development must be avoided.

In accordance with authoritative views the Government has ensured that the standard apparatus to be manufactured and supplied to selected local authorities is able to meet the much greater stresses to which such a unit is subject compared with ordinary X-ray machines. Some breakdowns must occasionally occur, but these can be dealt with by the operational teams specially trained by the Ministry. Any departure from the system by which the civilian population is examined by the standard apparatus and the methods laid down in the Advisory Committee's Report on the working of a mass radiography unit is deprecated.

Mass radiography has not made the diagnosis of pulmonary tuberculosis easier; on the contrary the method is bringing to light many symptomless minimal cases. Numbers of these recover spontaneously without treatment, and the prognosis in any given case can be assessed only by most careful clinical investigation and periodical supervision.

As a diagnosis of tuberculosis may involve change or loss of work for the individual, and may also prejudice his prospects in pension or life assurance schemes, it is essential that such a diagnosis, especially in minimal cases, should be undertaken only by those fully expert in tuberculosis, and with all the resources of up-to-date diagnostic procedures at their disposal. Full provision for this is made in the national scheme operated by the larger local health authorities as part of their tuberculosis service on the standardised lines recognised and recommended by the Ministry of Health and the Department of Health for Scotland.

The Government's mass radiography scheme includes arrangements for collecting far more information on the incidence of tuberculosis than has been available before. The collection of this evidence can be assured only through a uniform scheme and a standardised system of records. Mass radiography activities carried out independently of the national scheme, and by other than standard apparatus and methods, cannot help this object and might prejudice it.

TUBERCULOSIS IN HEALTH SERVICE

The Joint Tuberculosis Council has adopted the following resolution regarding the White Paper on a National Health Service (para. 1, page 40, lines 2-10):—

(*a*) That the Tuberculosis Officer should have beds under his direct control, preferably in a local general hospital, which would be available for differential diagnosis and assessment of his cases. It would not be in the interests of the adequate institutional treatment of patients that existing sanatorium beds should be divided among the visiting Tuberculosis Officers, as proposed in the White Paper.

(*b*) The Joint Tuberculosis Council by virtue of its long experience of the problems of the tuberculosis should be consulted on any proposed new measures arising out of the White Paper affecting the prevention, diagnosis, and treatment of the disease.

(*c*) That the Tuberculosis Service should be represented by

persons nominated by the Joint Tuberculosis Council on the Central Health Services Council, which, in the words of the report "is to be able to express the expert view on any general technical aspect of the service."

(*d*) That in the opinion of the Joint Tuberculosis Council tuberculosis in all its aspects should be treated as one specialty by the Tuberculosis Service, the Senior Officers of which should have the status of consultant.

(*e*) That Clinical Tuberculosis Officers and Medical Superintendents of Tuberculosis Institutions should be directly represented on the Local Health Services Council, and that such representatives should have the right of approach to Joint Boards and their appropriate Committees.

SOCIETY OF MEDICAL OFFICERS OF HEALTH
GENERAL PURPOSES COMMITTEE

A meeting of the above Committee was held at Tavistock House Tavistock Square, London, W.C.1, on June 23rd, with Dr. J. A Charles in the chair. There were present Drs. G. F. Buchan James Fenton, James Ferguson, J. M. Gibson, C. Herington, R. H. H. Jolly, Hugh Paul, Professor R. M. F. Picken, Drs. E. V. Saunders-Jacobs and J. A. Stirling. Apologies for absence were received from Professors J. J. Jervis and R. H. Parry, Drs. J. S. Anderson, J J. Buchan, F. Hall, Gordon Lilico, G. Lissant Cox, Scott Banks and F. T. H. Wood. The minutes of the meeting of 4th May 4th were approved and signed.

Sanitary Officers Regulations, 1938.—The President, Dr. G. F. Buchan, Dr. James Fenton and Dr. J. M. Gibson were appointed as a deputation to discuss with the Chief Medical Officer of the Ministry of Health certain points arising out of the Regulations.

Routine Medical Inspection of School Children.—Enquiries from the Board of Education relating to the future of routine school medical inspections after the war were referred for consideration separately and jointly by the School Medical and Maternity and Child Welfare Groups.

Municipal Staff College.—Proposals from the Association of Local Government Financial Officers for the establishment of a Municipal Staff College were deferred for consideration at the next meeting of the Committee.

White Paper Negotiating Committee.—In reply to an enquiry from the B.M.A., the Committee offered no objection to the representation of another examining body on the Negotiating Committee, provided such representative was a general practitioner.

National Milk Publicity Council.—It was agreed to consider the revised Articles of Association of the N.M.P.C. at the next meeting of the Committee, and that Dr. Thomas Orr, the Society's representative on the Council be asked to submit a memorandum on this matter for the information of the Committee.

Control of Venereal Disease.—A resolution was received from the Midland Branch submitting that the existing machinery for the control of venereal diseases is inadequate, and urging that legislation embodying the principles of notification and compulsory treatment should be introduced. Before reaching any decision on this matter it was agreed to ask Dr. A. B. Griffin to prepare a memorandum summarising for the Committee the information upon which the resolution of the Branch had been based.

Subordination of Technical Officers.—A resolution from the Yorkshire Branch drew attention to the undue predominance of administrative officers in the central Government Departments and local government services and the consequent relegation of technical officers to a subordinate position. It was agreed that this tendency should be considered by the Council, more especially in connection with the proposals of the White Paper. It was further agreed that the Principal Medical Officer of any authority should hold a position which is no less in status than that of any other officer.

Royal Sanitary Association of Scotland.—Sir Alexander Macgregor, Dr. G. V. T. McMichael and Sir George Elliston were nominated as delegates to the 69th Annual Congress of this Association to be held at Edinburgh, September 12th and 13th, 1944.

Association of County Medical Officers of Health.—A deputation attended from the Association of County Medical Officers of Health to discuss closer co-operation with the Society. It was agreed that a further meeting should be held when the officers of the Society should confer with four representatives of the Association for the purpose of formulating conditions on which the Association might accept constitution as a Group of the Society, without prejudice to the Association's relationship to the County Councils' Association.

The meeting then adjourned.

WEST OF ENGLAND BRANCH

President: Dr. W. J. Doyle (M.O.H., St. Thomas R.D.C. and Exmouth U.D.C.).

Hon. Secretary: Dr. I. G. Davies (Deputy M.O.H., Bristol).

A meeting of the West of England Branch of the Society was held at Bristol on July 19th. Nine members were present, and Dr. J. F. Davidson, the Acting President, was in the Chair. The minutes of the last meeting were read and confirmed.

The Hon. Secretary informed the Branch of the re-formation of the School Medical Officers Group of the Society and of the suggestion that a sub-group be formed. After some discussion it was decided that this was an inopportune moment to form a sub-group. Dr. Cookson referred to the suggestion made in London that the School Medical Group and the Maternity and Child Welfare Group should fuse.

The following officers were elected for the Branch for the 1944-45 session: *President*, Dr. J. F. Davidson, C.M.O.H., Somerset; *Vice-President*, Dr. I. G. Davies, Deputy M.O.H., Bristol; *Hon. Secretary and Council Representative*, Dr. I. G. Davies; *Hon. Treasurer*, Dr. J. Blackett, M.O.H., Bath; *Representatives on T.B. Group*, Dr. R. L. Midgley, Devon, Dr. J. S. Harper, Wilts.

The thanks of the Branch were accorded to the Hon. Secretary.

Dr. John Lishman read a paper on the future of the school medical officer in relation to the new Education Bill. This promoted a good discussion in which all present took part. The President thanked Dr. Lishman for his paper.

NORTHERN BRANCH

President: Dr. Ian McCracken (M.O.H., Durham C.C.).

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

A meeting of the Northern Branch was held in Newcastle-upon-Tyne, on April 22nd. The President and 25 members were present. The minutes of the meeting held on March 18th were read, confirmed and signed by the Chairman.

Dr. A. E. W. McLachlan (Clinical M.O., Joint Committee's Clinic, Newcastle General Hospital) and Miss H. M. Johns, M.A. (Liaison Officer, Tyneside Experimental Scheme, V.D.) opened a discussion on the Tyneside experimental scheme as regards venereal diseases. Dr. McCracken moved, on behalf of the Branch, a hearty vote of thanks to both speakers.

The Chairman then referred to the impending departure of Dr. Charles from Newcastle to take up his appointment at the Ministry of Health. He referred to the valuable services rendered to the Northern Branch over a period of many years by Dr. Charles in his office of Hon. Secretary and Treasurer; he would be greatly missed, not only in Newcastle but in the whole north-eastern area. On behalf of the Branch, the Chairman wished Dr. Charles every success. Dr. Tilley added that the Northern Branch should be honoured that one of its members had been chosen for the post of second Deputy to the Chief Medical Officer at such an important time in the history of the medical services of the country.

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The first lecture in the Autumn programme of the 32nd annual series of Chadwick Public Lectures is to be delivered on Tuesday, October 3rd, at 2.30 p.m., at the Royal Society of Tropical Medicine and Hygiene, 26, Portland Place, London, W.1, when the Right Hon. Lord Amulree (Medical Officer, Ministry of Health), will lecture on water supplies in peace and war. Admission to all the Chadwick Lectures is free; tickets are not required. On Tuesday, October 31st, Mr. Somerville Hastings will speak at the London School of Hygiene, Keppel Street, London, W.C.1, on the management of hospitals in peace and war. On November 14th, at the Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1, Mr. G. H. Humphreys will deliver the Bossom Gift Lecture on modern trends in sanitary engineering. The Malcolm Morris Memorial Lecture will be delivered on November 28th at the Westminster Hospital Medical School, 17, Horseferry Road, Westminster, S.W.1, by Dr. J. A. H. Brincker, the subject being research for the promotion of health and the prevention of disease. The last lecture of the series will be on December 12th at the Royal Society of Tropical Medicine, when Mr. G. H. Walker will speak on food and its adulteration in the present war. All lectures are at 2.30 p.m.

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