

Public Health

THE JOURNAL OF

69267

The Society of Medical Officers of Health.

No. 1.

OCTOBER, 1923.

VOL XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

	PAGE
EDITORIAL—	
Prevention of Venereal Disease	1
School Medical Service	3
House of Commons	4
OBITUARY—	
Dr. J. C. Jackson	4
SPECIAL ARTICLES—	
Scarlet Fever and Diphtheria: Variations in Incidence and Fatality (By C. O. Stallybrass, M.D. Lond. (State Med.), Assistant Medical Officer of Health, City of Liverpool) ...	5
NOTES FROM BRANCHES—	
The Metropolitan Branch	11
SOCIETY OF MEDICAL OFFICERS OF HEALTH—	
Council Meeting	14
Branch and Group Elections	17
Neech Prize	19
CORRESPONDENCE—	
The Attitude of the Medical Profession towards Anti-vaccination	19
Control of Infectious Diseases	20
NOTES—	
The Royal Institute of Public Health ...	1

THE ROYAL INSTITUTE OF PUBLIC HEALTH.

BORDEAUX CONGRESS, 1924.—The Council have accepted invitations from the Mayor of Bordeaux and the University of Bordeaux to hold their Congress in 1924 in that City from Wednesday June 4th, to Monday, June 9th (Whitsuntide) inclusive.

The President will be The Right Hon. Viscount Burnham, and the local Honorary Secretaries, Professor René Cruchet, M.D., Professor of Medicine in the University of Bordeaux, and Monsieur Edouard G. Faure, Treasurer of the Chamber of Commerce, Bordeaux. The meetings will take place in the University.

Editorial.

PREVENTION OF VENEREAL DISEASE.

With the publication of the Trevethin Report an end has been reached, we hope, of the unfortunate controversy with regard to the education of all interested persons in the practical methods of prevention, and likewise an end of the opposition which, up to the present, has successfully prevented interested persons from obtaining materials and instructions whereby effective prevention may be practised. The Trevethin Committee of Inquiry reports that

"A man, after exposure, who is properly and thoroughly disinfected by disinfectants of proper nature and strength, runs little risk of infection."

"An intelligent man, if furnished with reasonable instructions, can, in favourable conditions, effectively disinfect himself."

The history of the attempts to introduce practical preventive methods in the campaign against venereal diseases is a deplorable one, and the public have shown signs of becoming rather tired of the bandying of words by opposing bodies who respectively believe and disbelieve in practical prevention as a method of reducing the incidence of venereal diseases amongst us. The methods of

practical prevention were described and advocated by H. N. Robson in 1909,* but it received little attention. The enormous incidence of venereal diseases during the war revived public attention in this subject, but all suggestions which involved the use of preventives aroused the hostility of certain sections of the public who were sufficiently powerful to prevent any real being made of these methods either in the Army as a whole, or among the civilian population. Certain isolated efforts in the Army and Navy, however, convinced many people that in

* Sexual Disease and Its Medical Prevention" (see review in "Public Health," December, 1922, page 83).

69267

56

L15 m56, M88

M88.37

this method lay the true solution of the problem, and for some years these enthusiasts have preached a difficult and somewhat disheartening crusade.

Colonel Harrison (now Special Medical Officer for Venereal Diseases at the Ministry of Health), at a lecture at the Royal Sanitary Institute of Public Health, which is reported in the "Journal of State Medicine" in January, 1919, said:

"From the medical point of view the prevention of venereal disease is as easy as its cure is difficult. . . . I am sure that our greatest hope of exterminating venereal disease lies in the breaking of the chain at the male end, where the handicap is distinctly in our favour.

"The gonococcus and the spirochata pallida are the most delicate organisms in existence; they are planted on an exposed situation and easily liable to removal by urination or ordinary ablution. When natural agencies are assisted by the prompt application of antiseptics it can easily be proved that the chances of infection may be reduced to an infinitesimal amount. Promptitude is vitally necessary to success, and if the man is situated where he cannot obtain skilled assistance, he should have the means of self-disinfection with him."

The subject of practical prevention became the essential point of difference between the Society for the Prevention of Venereal Disease and the National Council for Combating Venereal Diseases, and this controversy, conducted more or less in public, gradually enlightened public opinion upon the facts of the case, with the result that a semi-public investigation of the subject was first of all made by "The National Birth Rate Commission." This Commission was composed of leading members of almost every church and almost every conceivable shade and grade of opinion. Some of them were bitterly opposed to any measure of self-disinfection, while others were in favour of it. They, however, arrived at the unanimous conclusion that,

"It is the recognised duty of every citizen who indulges in promiscuous sexual intercourse, and thereby exposes himself or herself to the risk of infection, to obtain and apply efficient disinfectants personally, immediately after intercourse, and in the event of the development of disease to seek medical advice at the earliest opportunity."

Dr. Addison, when Minister of Health, replying to a deputation which waited upon him in order to urge the advantages of preventive methods, voiced the main objection of the whole controversy when he said that,

"The Government might have to contend with a wave of public feeling which would take the line that the Government was really encouraging vice."

The stock argument amongst objectors to practical prevention is that promiscuous sexual intercourse would thereby be promoted, and therefore, venereal diseases would be increased. Lord Trevethin's Committee deals effectively with this contention and the Report states that there is no evidence of facts in support of the view that any system of disinfection would tend to increase the number of exposures and so raise the disease rate. In proof of this contention we have the undoubted fact that in those areas where practical prevention has been introduced so far as it is possible under the severe handicaps to which it is subjected by legal obstruction, the fall in the incidence of venereal diseases has been remarkable and has been greater than the fall which has taken place in the country generally.

By far the most important recommendation contained in the Trevethin Report is to the effect that the law should be altered so as to permit properly qualified chemists to sell *ad hoc* disinfectants, provided such disinfectants are sold in a form approved, and with instructions for use approved by some competent authority. This recommendation follows exactly the same lines, and is stated in almost the same language as was used by the Birth Rate Commission. At the present time the general public are not given a chance to make a trial of practical prevention on account of the fact that no chemist can, without a breach of the law, supply the necessary materials with instructions for use. Dr. Addison in his remarks to a deputation on the subject, said, "I think the campaign of instructions and public enlightenment which you are carrying on is all to the good. . . . The spreading of real knowledge on this subject can do nothing but good," but little practical result can be achieved by educating the public so long as the members of the public are unable to obtain the materials and directions easily. If the necessary material is put on sale at every chemist's shop, with clear instructions as to its use, we shall have gone a long way towards educating the public in a practical fashion, and real prevention will then have a genuine chance of proving its worth.

In connection with the proposal to put these materials on open sale as recommended by the Trevethin Report, Mr. Chamberlain, Minister of Health, replying to a deputation on July, 26th, 1923, said:

"It is clear that it would require an alteration in the law to permit the chemist to give printed or written instructions, and personally I think that if these things are to be sold printed or written instructions should be supplied with them." . . . "I am fully convinced of the very great national importance of this matter, and it will be my earnest desire while I hold office, to do something which will really advance the progress of those forces which can reduce its incidence and make it less a scourge in the future than it has been in the past."

The other two outstanding points in the Trevethin Report are the references to compulsory notification and to the public provision of facilities for disinfection. With regard to compulsory notification, the Report says:

"We think that in the present state of public opinion any system of general compulsory notification of venereal disease would tend to concealment and would prove a backward step."

The public provision of facilities for disinfection (disinfecting stations and such like) are evidently regarded by the Committee as a waste of public money and considerably inferior in results to personal disinfection, treatment, education of the public, and the improvement in the general conditions of life.

Everyone will welcome the announcement that the two great Societies dealing with the prevention of venereal diseases, namely, "The Society for the Prevention of Venereal Disease," and the National Council for Combating Venereal Diseases, have agreed to the formation of a joint Committee which, we understand, will meet in the early autumn to consider what steps can be taken to further the terms of the Trevethin Report. Both Societies have publicly announced that they agree to and support the whole of the Trevethin Report and so there seems to be every reason to hope and believe that in the near future the energies of these two active and enthusiastic bodies will be united in a combined attack upon venereal diseases. Up to the present, part of the energies of both Societies has been dissipated in opposing each other, and the result of that combined effort which we are all hoping for and looking forward to should be so great as to show almost immediate effects upon the incidence of venereal diseases in this country. We wish the combined Committee every success in its deliberations and its actions, but nothing effective can be done until the necessary alteration in the law is carried out.

At the recent interview between the Minister of Health and the Deputation from the Society for the Prevention of Venereal Disease some difficulty was made on the part of the Ministry with regard to the carrying out of the recommendation of the Trevethin Committee that the disinfectants to be sold at chemists should be approved and should be kept under some continuous supervision. We fail to see any difficulty at all in this matter. Experts are practically united with regard to the materials to be used and the use of an ointment containing 33 per cent. of calomel followed by a wash with potassium permanganate solution, 5 grains to half a pint, is generally advocated and has been proved to be effective. The supervision of the sale could easily be undertaken by the authorities administering the Food and Drugs Acts throughout the country. Samples would be purchased in the ordinary way and analysed, and by these means the quality of the material supplied would be constantly checked and kept up to the required standard. The public must look to the Ministry of Health to carry out their duty in the matter, namely the presentation of the necessary Amending Bill in Parliament, so as to get the materials and instructions on sale everywhere, and the issue of the necessary memorandum concerning the sampling by the local authorities concerned.

SCHOOL MEDICAL SERVICE.

The President of the Board of Education (Mr. Edward Wood) in the House of Commons, on May 31st, in presenting the Education Estimates, said:

"I would like also to refer to the question of the physical well-being of the school children. I think it is true to say that the value of the School Medical Service is being increasingly realised by all concerned—the taxpayers, the ratepayers, the parents, the teachers, the Authorities, right the way through. The total cost, for the results we get, is I think, not excessive. It works out at something like 4s. 4d. per child in average attendance. During the time I have been at the Board I have made it my business to inquire of those who have opportunities of judging—such persons as the Board's medical officers, school teachers, members of after-care committees, and so on—as to what they thought was the effect, if any, of the prolonged trade depression on the physique of the children, and I have been, I must confess, much relieved to learn from them that they do not think that the trade depression has adversely affected the condition of the children. I think that is very satisfactory. I could, if I had time, quote the opinion of more than one medical officer to that end. I pass to consider for a minute or two the position of those children whose physical condition is such that nothing the School Medical Service can do for them will really fit them for attendance at the ordinary elementary schools. For these children—the blind, the deaf, the physically and the mentally defective—provision can only properly be made

through the medium of the special school.' The attitude of the Board towards that question has excited a certain amount of anxious, and, I would add, legitimate concern, and I can assure the Committee that I am as alive to the reactions of the problem as any hon. Member in the Committee. But this is the problem with which the Board is confronted. I need not, I think, bother the Committee with figures, but there is a large number of children for whom at the moment we are making no provision for any special schools at all, and the dominant reason why we are making no provision is that the existing provision is so expensive that it has not been possible to develop it as we should wish. I think it is only by reducing the cost of these special schools to as low a figure as is compatible with efficiency that we can hope to make a substantial inroad into the great blocks of children who are at present being denied the benefits to which they are entitled. It is with that object, and that object only, that I have directed that a review should be made into the standard of staffing and in other directions, to see whether we can get comparatively the same efficiency at a slightly less cost, in order to enable us to discharge our liabilities better than we are doing to-day. But I do not hesitate to say, as I have often said in this House, that I shall keep the administration of that particular service under very close review, and, if I think it is justified, I shall not hesitate to reconsider it."

HOUSE OF COMMONS.

VENEREAL DISEASE.

1st August, 1923.—Question 71.

Mr. Peto asked the Minister of Health whether he has consulted the Law Officers of the Crown as to the effect of the Venereal Disease Act, 1917, in connection with the Report of the Committee of Inquiry on Venereal Disease under the Chairmanship of Lord Trevethin; and, if so, whether he can give the House their opinion as to the position of chemists under the Act, and the necessity for legislation if effect is to be given to the recommendations in Clause 14 of the Committee's Report?

Mr. Chamberlain: I have consulted the Law Officers of the Crown as to the effect of Sub-section (2) of Section 2 of the Venereal Disease Act, 1917, and I am advised by them that there is nothing in the Sub-section to prevent a chemist selling disinfectants for the prevention of venereal disease where no written or printed instructions are affixed to or delivered with the disinfectant, or from giving verbal recommendations of medicinal preparations intended to be used or applied for the purpose. In the light of this opinion it would appear that legislation would be necessary in order to permit written or printed instructions to be supplied with the disinfectant, or to restrict the existing powers of chemists by confining them to the sale of articles, the composition of which had been approved by a competent authority.

Mr. Peto: In view of the importance to the public health of written instructions being allowed to be sold with these disinfectants, will the right hon. gentleman take the necessary steps to make the law conform to the purpose of Lord Trevethin's Report?

Mr. Chamberlain: That matter is under consideration at the present time.

GRANTS FOR VENEREAL DISEASES.

2nd August, 1923—Question 42.

Mr. Albert Bennett to ask the Prime Minister, whether the Government will consider the allocation of the £12,000 annual grant for combating venereal disease between the Society for the Prevention of Venereal Disease and the National Council for Combating Venereal Disease; whether he is aware that the latter organisation is the only one in receipt of any State assistance; and why, seeing the Trevethin Report has been unconditionally accepted by both, there is any differentiation made in respect to the Government assistance given.

Mr. Chamberlain: As regards the first part of the question, the maximum grant which will be paid from the Ministry direct to voluntary organisations in aid of their work in combating these diseases is £7,500. The answer to the second part is in the affirmative. As regards the third part, the question of government assistance to the work of voluntary organisations will come up for review in connection with the recommendations in the Trevethin Report which is now under consideration.

OBITUARY.

DR. J. C. JACKSON.

Members of the Society and of the Metropolitan Branch in particular will learn with great regret of the death of Dr. John Charles Jackson, which occurred on Friday, 14th September, 1923, after an operation. Following cremation at Golders Green, burial took place on the 17th September, the Metropolitan Branch being represented by Sir William H. Hamer, M.O.H., London County Council (past President), Dr. James Fenton, M.O.H., Kensington (Hon. Treasurer), and Dr. A. Middleton Hewat, M.O.H., Fulham.

Dr. Jackson, who resigned office as Medical Officer of Health of the Borough of Fulham in 1922 after over thirty years' service, had been associated with the activities of the Metropolitan Branch for a great many years, and his passing will be lamented by a wide circle of colleagues in the Public Health Service.

SCARLET FEVER AND DIPHTHERIA: • VARIATIONS IN INCIDENCE AND FATALITY.*

BY

C. O. STALLYBRASS, M.D. Lond. (State Med.),
Assistant Medical Officer of Health, City of
Liverpool.

In recent years, Liverpool and the Merseyside boroughs, in common with certain Lancashire towns, have experienced an increased mortality from both scarlet fever and diphtheria.

The Registrar-General, in his annual reports, has commented on the greater mortality of these two diseases for a number of years in the North of England and in Wales in comparison with the Midlands and the South of England. He has also referred to the greater fatality of the cases in the North.

The older epidemiologists based their conclusions mainly on statistics of deaths; thirty years of notification of disease have given us information of the incidence of cases which can now be utilised. Death-rates are compounded of two variables, the attack rate and the fatality rate. Susceptibility to attack and liability to death when attacked are different. Before a person can be attacked by an infectious disease there must be:—

- The reservoir of micro-organisms which must be possessed of an adequate degree of infectivity and of virulence.
- The agent, vector, or adequate means of transmission.
- The susceptible individual.

All these factors are capable of independent variation. An epidemic is dependent on the same factors. The variation in these factors is presumably greatest in epidemic disease, least in endemic diseases. The sum total of these factors constitutes what one might term the "dispersability" of any disease at a given time and place. It is measured by the number of cases.

For death to occur after attack there must be again (a) an organism of adequate virulence, and (c) a susceptible individual. The total effect of these two factors in a given population and at a given time constitutes the fatality of a disease and is measured by the ratio of deaths to cases.

To take these factors in reverse order to that given above:—

(c) *Individual Susceptibility*.—The principal variation in individual susceptibility is that due to an

*Being a paper read at a meeting of the N.W. Branch, held at the University School of Hygiene, Liverpool.

acquired immunity ensuing on recovery from a previous attack. Hence arises the theory that epidemics are due to the accumulation in a population of a number of susceptible individuals, and that the epidemic ceases when the susceptible population is exhausted; the fire burns itself out for lack of fuel. Undoubtedly this is true in many cases, but in scarlet fever and diphtheria the number of notified cases never approximates to the number of previously unattacked individuals. In Thorshavn in the Faroe Islands in the year 1873¹ scarlet fever broke out after 57 years' absence; a virgin population, so to speak, was affected. In houses attacked only 38 per cent. of the inmates fell sick, compared with 99 per cent. when measles broke out. In Liverpool every year some 23,000 babies are born; but the greatest number of notified cases of scarlet fever in any year was 5,900. The proportion in diphtheria is even smaller. The Thorshavn epidemic shows the proportion susceptible to attack by scarlet fever is at least 38 per cent., and at that rate an annual average of 7,000 cases ought to occur in Liverpool.

To explain this deficit a further theory has been put forward, namely, that of "immunising sub-infections," that is, that persons may have an attack of an infectious disease of so mild a character that they may present no symptoms at all, or symptoms of so fugitive and indeterminate a character as to be unrecognisable, but which will protect them from a subsequent attack. The occurrence of large numbers of cases of "sore throat" at the same time is an outbreak of milkborne scarlet fever and confined to persons partaking of the incriminated milk supply lends support to this view.² Butter¹⁰ found a history of recent cases of sore throat in 31.2 per cent. of houses where scarlet fever was present, but only in 2.8 per cent. of other houses. So also, in diphtheria, we know that for every case notified there is probably one or more bacillus carriers. Graham Smith states 0.18 per cent. of the general population on an average were found to be carriers. He himself found 4.3 per cent. amongst 4,729 persons not known to be in contact with diphtheria.³ The results of the Schick reaction given by Park⁴ indicate that whilst at 1 to 2 years only 30 per cent. of the population are insusceptible to infection, by 20 years the proportion has risen to 85 per cent. This supports the theory of immunising sub-infections. And we know that missed cases of scarlet fever are extremely common. The alternative explanation is that a considerable proportion of the population are either never attacked or are entirely insusceptible to attack. The Thorshavn epidemic definitely contradicts this latter view, as 60 to 70 per cent. of children in houses attacked succumbed.

The influence of age on susceptibility to attack in a virgin population is shown for scarlet fever, by the Thorshavn figures; it remains high until about 20 years of age and then rapidly falls; at 40 to 60 years only 2.9 per cent. of those exposed succumbed.

Liability to death if attacked is shown in the statistics for Manchester for the past thirty years; in both scarlet fever and diphtheria the fatality rate is high at birth but drops rapidly after the first year of life, very much more rapidly than does susceptibility to attack.

TABLE I.
Fatality Rates in Diphtheria (13,928 cases) and Scarlet Fever (63,849 cases), Manchester average of 29 years, 1891-1919.*

	Diphtheria.	Scarlet Fever.
Under 1 year ...	63.9	16.9
1 to 2 years ...	50.0	14.7
2 to 3 " ...	35.4	11.0
3 to 4 " ...	28.7	8.7
4 to 5 " ...	24.3	6.5
5 to 15 " ...	11.8	2.3
15 to 25 " ...	4.0	1.8
Over 25 " ...	3.3	2.8
All ages ...	21.0	4.3

Another factor in individual resistance results from variations in the vitamin content of foods consumed. Kinloch has published⁵ figures showing that the fatality of several infectious diseases varies according as the patient come from 1, 2, or 3, or 4-roomed houses; thus for scarlet fever and diphtheria the figures were:—

Scarlet Fever.		Diphtheria.	
No. of Rooms.	Fatality Rate.	No. of Rooms.	Fatality Rate
1 ...	6.5	1 ...	8.6
2 ...	3.8	2 ...	8.9
3 ...	2.8	3 ...	5.9
4 ...	1.7	4 ...	4.2
		5 ...	4.7
All houses	3.01		6.7

Kinloch appears to believe that the variations depend upon the nutrition of the cases varying according to the character of the housing. No account, however, is given of the average ages of the cases in the different classes of house.

In Liverpool somewhat similar variations in fatality were found in the last two years between the central, middle and outer zones of the city; but variations in the proportion of cases among children of tender years were found to have occurred simultaneously, and these are sufficient large to account for these variations in fatality.

Zone of City.	Scarlet Fever, 1920.		Diphtheria, 1921.	
	Fatality Rates.	Proportion of children to total cases.	Fatality Rates.	Proportion of children to total cases.
Central ...	3.1	33.0	14.1	53
Middle ...	2.1	24.9	8.4	37
Outer ...	1.9	20.9	6.5	18
Whole City	2.1	24.6	8.7	32

In order to test whether these differences of fatality depend on differences of age at attack⁶ I have applied a method similar to that used in obtaining corrected death-rates. The cases in each district were multiplied by the fatality rate at corresponding ages for the city as a whole, which is therefore a standard fatality rate. On totalling these expected mortalities at each age period in any one district the total expected mortality is obtained; the actual mortality divided by the expected mortality gives the figure which might be termed the *corrected fatality index*—corrected that is for variations in the age of cases. The results for diphtheria in 1921 are:

Zone of City.	(A) Indices of Fatality. (Corrected for age).	(B) Observed Fatality Rate expressed as a fraction of that for the whole City.	Excess or Defect of B over A.
Central ...	1.20	1.62	+0.42
Middle ...	1.28	0.97	-0.31
Outer ...	0.77	0.87	-0.10
Whole City	1.00	1.00	

After allowance is made for variations in the age at attack there remain differences in fatality which might be caused by differences of social status, nutrition, etc., or—in diphtheria—by the day on which antitoxin is administered.

Another, and to my mind, more probable explanation is that in the poorer districts a large proportion of mild cases fail to be notified, thus increasing the apparent fatality.

(b) *The Influence of the Transmitting Agent.*—In the case of the insect-borne diseases and the intestinal infections this is all important. But in scarlet fever and diphtheria, apart from milkborne outbreaks, we know little of the influence of this factor. The associated prevalence of fleas and scarlet fever appears to me to be probably due to the conditions suitable for the multiplication of both being similar, rather than the one being the cause of the other. Diphtheria was shown by Sir A. Newsholme⁶ to follow a series of dry summers.

(c) *The third factor, that of variations in virulence and infectivity of the organism*—in some cases perhaps we ought to say organisms—is of the greatest importance, but little is known of them. Laboratory observations have been made on the virulence of single strains of diphtheria bacilli, but what is wanted is an average of a large number of strains taken at the same time and place; this work should now be possible as the method of testing virulence discovered by Dr. O'Brien, of the Wellcome Research Laboratories, allows of the virulence of 10 to 15 strains being tested on one guineapig.⁴ But with regard to the virulence of scarlet fever and the infectivity of both diseases, knowledge can only be gained inferentially from collected statistics.

The common belief that severe cases are the most infectious is probably only true of certain diseases. In septicæmic insect-borne infections such as plague and typhus, the degree of septicæmia will obviously have a direct influence upon the infectiousness of the patient, as the reservoir of germs is the larger. But in diphtheria, scarlet fever and measles, etc., the conditions are not the same, although the more severe septic cases of scarlet fever and diphtheria often give rise to the most persistent infectivity. Topley⁴ has recently founded a theory of epidemics based on the belief that virulence and infectivity vary inversely. It may be epitomised thus:—

The theory applies only to the intestinal infections and the common infectious diseases of these latitudes, and *not* to the insect-borne infections or to wound infections such as anthrax, both of which require a breach of the epithelium. In the former class of case the organism first reaches a mucous membrane and proceeds to grow there; during the stage it is extra-corporeal and essentially saprophytic in nature.* In the course of its growth it passes between the cells; it excites inflammation and is bathed in tissue fluids containing anti-bodies; its career has suddenly been transformed into that of a parasite. During both stages it is subjected to natural selection of a high degree of stringency, and the fittest will survive; those that are best adapted to a saprophytic existence will exhibit high infectivity and low virulence; those that are best adapted to a parasitic existence will exhibit high virulence and low infectivity. It must be conceded that such selection is possible; 50 generations of bacteria might succeed each other in 24 hours, nearly as many as there have been human generations since the Christian era.

That the inverse relationship of virulence and infectivity has a solid basis of fact was shown by Vaughan. He compared the lethal amounts of dead protein material of pathogenic and non-pathogenic organisms.

"We injected into the abdominal cavities of guinea-pigs the cellular protein of the tubercle bacillus in quantities both large and small without causing death in a single instance, while on the other hand a fraction of a milligram of the protein of the bacillus prodigiosus kills." "The guinea-pig is highly immune to infection with the bacillus prodigiosus because the animal's body cells supply secretions which are immediately destructive to this organism, and the first of these bacilli to find their way into the animal's body meet with immediate and complete destruction, but when the b. prodigiosus is grown *in vitro* and a sufficient amount of the cellular substance, dead or alive, is thrown into the abdominal cavity, the same agency which has given the animal immunity to infection with the organism now causes it to fall a victim to the cleavage of the bacterial protein."

Brownlee regards variations in infectivity as spontaneous, depending upon cycles of change in

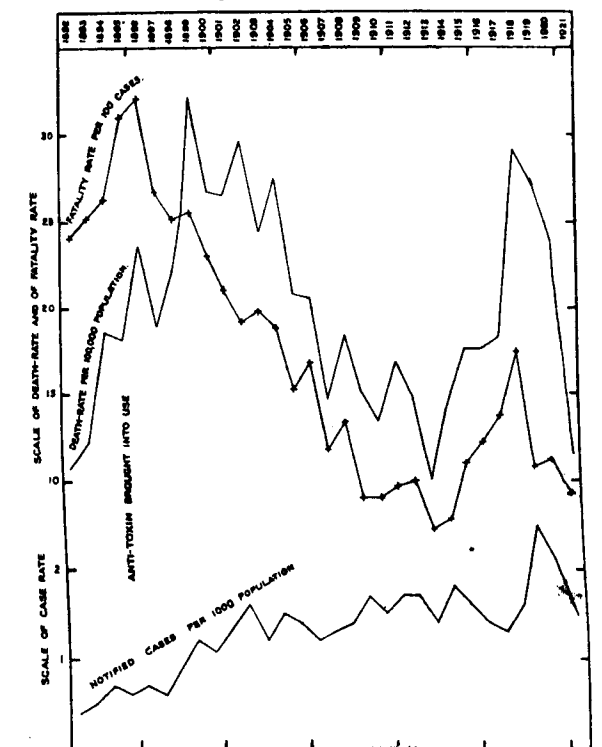
* Vaughan has applied the term *syssitic* for organisms living commensally with their host on an epithelium, but without invading deeper tissues.

the metabolism of the organism rather than in its environment.

DIPHTHERIA.

Mortality from diphtheria has fallen largely in recent years. This despite of, since notification came into force, an increase in the attack rate in the country generally; in Manchester the prevalence of diphtheria has varied little. The decrease in mortality is therefore due to a decline in fatality which is generally, and I believe on the whole correctly, attributed to the beneficial use of anti-toxic sera. This decline in fatality, if we take four

GRAPH 1. Diphtheria (and Membranous Croup) in City of Liverpool during 1892-1921. Death rate per 100,000 Population, Notified cases per 1,000 Population, and Fatality rate per 100 cases notified.



typical Lancashire towns, was most marked in St. Helens, less so in Liverpool, least in Manchester and Bolton, where in the first decade of this century the fatality rate declined at a slower rate. Then in 1912 in St. Helens there was a rise in the fatality rate followed in 1915 by a large rise in the notification rate which reached in 1918 the high figure of 8.3 per 1,000. In Liverpool the fatality rate began to rise in 1915 and the attack rate in 1918, in which year the *attack rate* also rose considerably in Bolton and Stoke-on-Trent. Manchester and London showed a rise in the attack rate in 1920, but no rise in the fatality rate. Bootle showed a rise simultaneous with that in Liverpool, but in Birkenhead and Wallasey the maxima were attained slightly earlier. In the districts of the Central and Middle zones of Liverpool the maxima were attained in 1918, but in the Outer zone not till 1920.

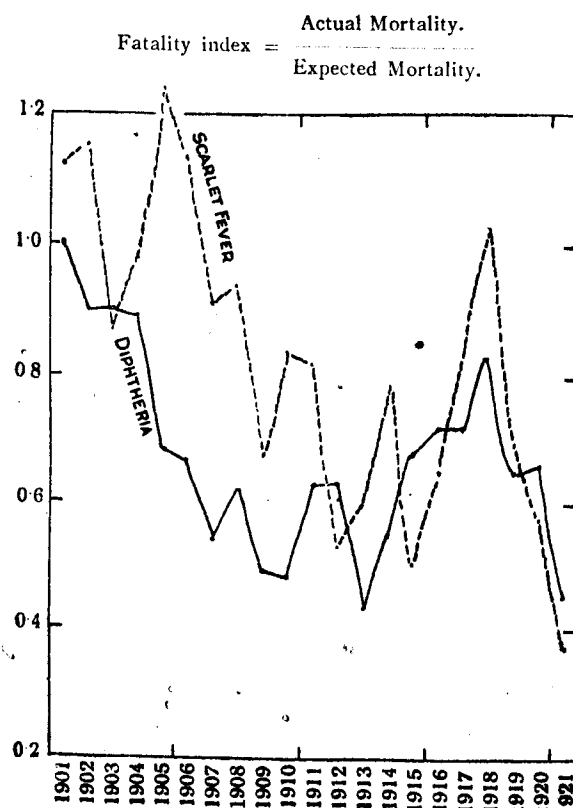
The evidence points to an outbreak affecting St. Helens first, and Liverpool and the other Merseyside boroughs later, in which the fatality rate began to rise three years before the attack rate in turn showed a rise. The rise in the fatality rate appears to be the fundamental factor.[†]

What are the causes of these variations in the fatality rate of diphtheria?

(a) *Anti-toxin*.—The value of anti-toxin is undoubted; but it is insufficient to account for all the phenomena. Why should the fatality rate in St. Helens fall from 38 to 6 per cent. between 1901 and 1910 (a fall of 32 per cent. in ten years), in Liverpool from 22 to 9 per cent. (a fall of 13 per cent.), but in Manchester only from 30 to 20 per cent. in the same period. It can hardly be believed that these differences are due to variations in the efficiency of anti-toxin treatment even when allowance is made for the not inconsiderable proportion of cases which are not treated until too late for it to be of much use.

(b) *Age of Attack*.—There has been an advance in the average age of attack occurring first in St. Helens, next in Liverpool, and lastly in Manchester, if the proportion of cases under five years of age is taken as the standard. In the last town there was a

GRAPH II. City of Liverpool. Indices of Fatality in Diphtheria and Scarlet Fever, 1901-1921. Corrected for variation in ages of cases.



[†] Since this paper was written outbreaks of diphtheria, of apparently increased virulence, have occurred in Bristol and other centres.

considerable rise in the proportion of cases under 5 from 1903 to 1909, the effect of which was to raise the fatality rate; the recent considerable fall in the fatality rate corresponds to a fall in the proportion of cases among children under 5 years from 59 to 21 per cent. This in turn corresponds to the fall in the birth rate.

In order to eliminate the effect of age at attack I have calculated the indices of fatality for each year from 1901 to 1921 for the City of Liverpool. As a standard fatality rate I took the fatality rates for all cases occurring in the City of Manchester for the past 29 years divided into 5 age periods, namely 0-1, 1-5, 5-15, 15-25, and 25 and over.

The index of fatality fell from unity in 1901 to 0.43 in 1913, then it rose steadily to 0.83 in 1918 and fell again to 0.45 in 1921. Clearly differences in age of attack will not explain the increased fatality; in St. Helens there was no variation in age at attack.

(c) It is necessary therefore to believe that the present outbreak was due to *increased virulence* of the diphtheria bacillus, and this is borne out by clinical experience. Dr. Rundle, of Fazakerley Hospital, and Dr. Clarke, of the City Hospital East,¹² both found that the cases required much large doses of anti-toxin than would have been required in earlier years, and they were at first inclined to blame the anti-toxin. But it was found that the sera of various makers were all equally affected in this respect. Clearly it was the organism that had varied and not the sera. Dr. Rundle also reported that lately the cases have developed paralysis in much larger proportion than formerly. This is of importance as it points to increased toxogenic powers on the part of the bacillus, although if there was delay in receiving anti-toxin the same effect would be produced.

Park and Bolduan say⁹: "First of all it is necessary to appreciate clearly that poison production and infectivity are two entirely independent properties. Thus a marked capacity for producing a severe attack of a disease may be associated with a very low degree of infectivity, while the presence of great power of infectivity in an organism or mixture of associated organisms does not imply that the average type of disease produced will be necessarily severe."

"J. Eross (1904) finds in studying the statistics from a large number of Hungarian cities that the case mortality in diphtheria is greatest at the height of the epidemic, and that as soon as the disease loses its epidemic character, the case mortality drops to a low level."

"Brownlee (1905) states that in England the disease is as a rule most fatal in towns where it is least prevalent." "We think that in some instances this is due to the fact that in years when the disease is not epidemic the proportion of laryngeal cases is greater than usual."

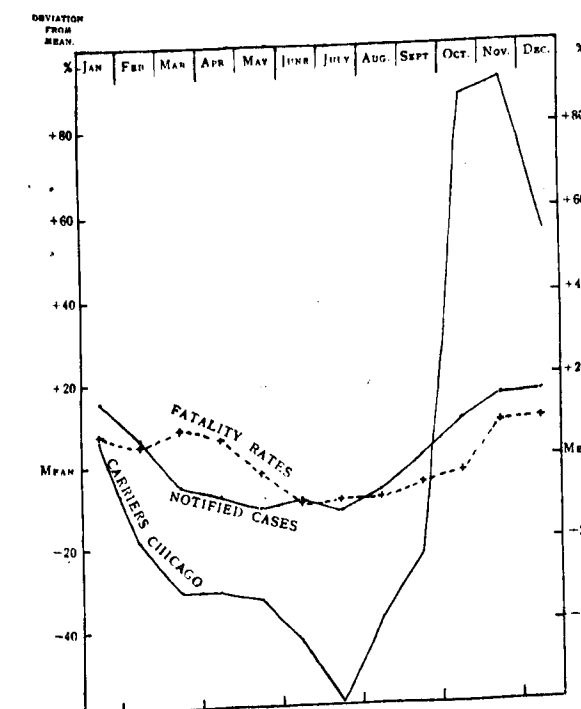
Sir A. Newsholme⁶, dealing with the period antecedent to the introduction of antitoxin, says, "A study of the figures in connection with the epidemic curve for Hamburg shows that the fatality was greatest during the years of greatest epidemicity, while in portions of the Berlin and Scandinavian curves the experience is the reverse of this."

The recent epidemic in Lancashire, therefore, conforms to the majority of previous observations

in that increased spread and increased virulence went together.

I have also examined the matter in another way by plotting the percentage deviations of the monthly averages of the number of cases and of the fatality rates in Liverpool for the years 1896 to 1918. The deviations are in the same sense but the fatality rate shows less variation than the number of cases.

GRAPH III. Diphtheria and Membranous Croup. Notified Cases and Fatality Rates in the City of Liverpool, 1896-1918. (21,078 cases and 3,393 deaths) and Carriers (21,283) in the City of Chicago, (1911-1918). Plotted by Bloxam's Method.



This appears to be in opposition to Topley's theory. But it should be recognised that in diphtheria the number of notified cases is only a proportion of the persons infected, the remainder being carriers. An increase of the virulence of the organism will probably not only raise the number of deaths, but will at the same time raise a number of infected persons from the status of carriers across the border line into the status of a notified case. This, however, cannot explain the very large increase in the number of cases which occurred in St. Helens.

SCARLET FEVER.

Like diphtheria, the mortality from scarlet fever is very much lower than in former years. Variation in fatality in scarlet fever was recognised even before the Notification Act of 1889. Before notification came into force severe epidemics recurred about every four years in Liverpool; the fatality rate there has fallen in 30 years from 16.5 to 1.5 per cent., i.e., to one-tenth.

This is still slightly higher than in London where it was 1 per cent. in 1921. The Registrar-General

has pointed out that fatality rates are higher in the North of England than in the South. In his annual report for 1918 he says:—

"The increase upon 1917 is entirely due to a rather severe outbreak in and around Liverpool. The County Boroughs recording the highest death rates are Birkenhead, Bootle, St. Helens, and Liverpool. Deduction of the 232 registered for these boroughs leaves 267 for all the other county boroughs in the country. . . so that the four boroughs mentioned account for practically the whole of the excess. But the outbreak in them did not commence in 1918 except in the case of Birkenhead. It has been in progress for one or two years previously, mortality in St. Helens having been very high from 1916 onwards." "The rise, such as it is, from the phenomenally low rate of 1917 is entirely accounted for by increased severity of the cases, the deaths per thousand cases notified having risen from 15.0 to 20."

Again, in his annual report for 1919 he says:—

"The rate in the North was high as compared with the rest of the country, in all classes of area. . . . The English county boroughs returning the highest rates were West Hartlepool (259) and Birkenhead (209). . . . The four neighbouring county boroughs which headed the list in 1918, all again returned high rates in 1919."

The rates in different districts in 1919 were:—

	Fatality Rates.	Cases per 10,000 Population.
North . . .	19	28
Wales . . .	15	31
Midlands . . .	12	19
South . . .	10	21

The phenomena with regard to scarlet fever are different from those of diphtheria in several essentials. As regards Liverpool:—

(a) Although fluctuating a good deal from year to year the average level of incidence shows a slight fall over the last thirty years.

(b) Although fluctuating slightly from year to year, the fatality rate has, as in the country generally, shown a constant tendency to fall.

(c) In recent outbreaks both in St. Helens and Liverpool the rising incidence has been accompanied (not preceded as in diphtheria) by a rise in fatality.

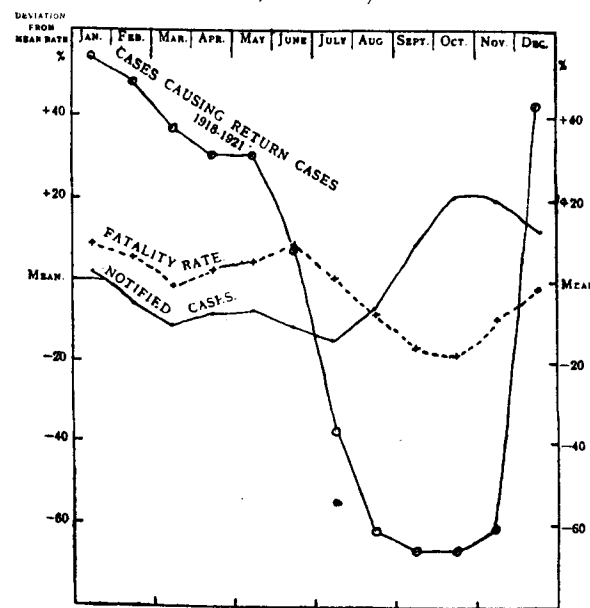
But whereas the diphtheria outbreak in St. Helens was a striking one unexampled, in the towns investigated, for the past thirty years, the scarlet fever outbreak was in no way exceptional. A coefficient of correlation between the attack rates and fatality rates in Liverpool for 1891 to 1921, gave the low figure of 0.011 ± 0.12 ; this would appear to show that the attack rate and fatality rate are independent variables.

(d) But the general fall in the fatality rate in the past 20 years is clearly related to some extent to an increase in the average age at attack. Accordingly, as with diphtheria, the indices of fatality were obtained. These indicate a fall from 4.15 in 1902 to 0.37 in 1921, i.e., to one-third, whereas the observed fatality rate had fallen from 6 to 1.5 in the same period, i.e., to one-fourth. The greater part of the decline in fatality is, therefore, due to some factor other than the altered age incidence of the cases.

In 1916 the actual mortality again began to rise and in 1918 reached the level of the expected mortality; the rise in real fatality was largely obscured by the greater average age of the cases; it seems likely that the outbreak was due to an increased virulence of the organism. There was a wave of variation of fatality occupying the years 1916 to 1921; a similar wave occurred in the six years 1904 to 1909 with a maximum in 1905, and six years intervened which show a double wave. This suggests that periodic variations of true fatality—the effects of age of cases being discounted—have occurred at six year intervals, which appears to be the period of recurrence of waves of scarlet fever in the country generally.

(e) The fatality ratio when plotted shows a rise in each year in which the attack rate has a rise. Dispersability and corrected fatality, therefore, appear to vary together. Can we infer from this, in opposition to Topley's theory, that virulence and infectivity also vary together? It is possible that when the type of scarlet fever is more severe a number of cases cross the borderland between the unrecognised or unrecognisable sub-infections and the clinically recognisable cases. A greater proportion of cases would be recognised and notified and the number of cases notified would be greater in years of greater fatality than in years of lesser fatality. This appears not improbable.

GRAPH IV. Scarlet Fever. City of Liverpool, 1899-1918. Monthly curves of cases and fatality rates and of cases giving rise to return cases as a ratio of cases discharged from hospital. Plotted by Bloxam's method (65,970 cases and 3,220 deaths).

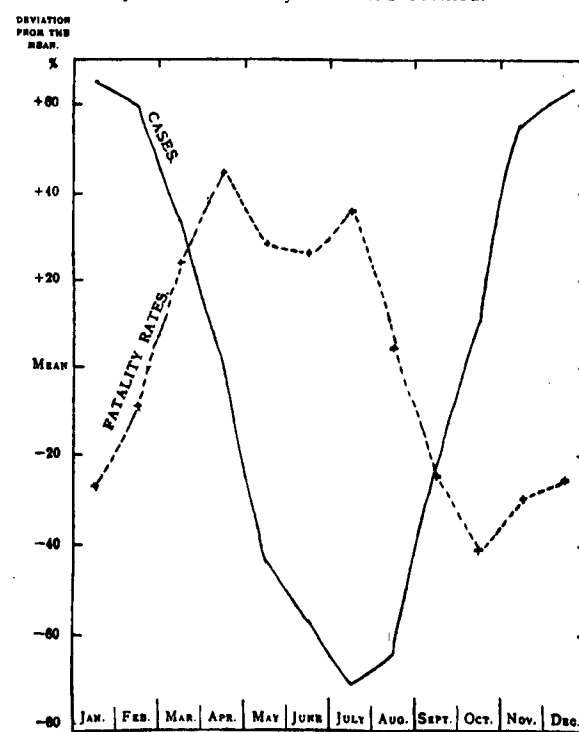


It is therefore necessary to test the question of the relationship of dispersability and fatality in another way, namely, as with diphtheria, by plotting the seasonal curves of numbers of cases and of fatality

rates. The average interval between onset and death is short (about 16 days in scarlet fever and eight days in diphtheria) and no statistical error of consequence arises. The cases and fatality rates are expressed as percentages above and below the monthly mean so that the curves are comparable in proportion as well as direction. It will be seen at once that the two curves are similar but inverse; the one is nearly the mirror picture of the other. The seasonal variations of dispersability and fatality in scarlet fever support Topley's theory.

Taking the notification of measles in Aberdeen¹³ during 20 years we obtain an exactly similar and even more pronounced inversion of the two curves.

GRAPH V. Measles. City of Aberdeen, 1883-1902. Monthly curves of cases and fatality rates (40,374 cases and 1,346 deaths) in percentages above and below the mean of the year. Plotted by Bloxam's Method.



We have therefore a progression in the three diseases:

- (1) *Diphtheria*.—Large numbers of sub-infections, slight seasonal fluctuations, fluctuation, dispersability and fatality move together.
- (2) *Scarlet Fever*.—Sub-infections probably not so numerous, large seasonal dispersability and fatality move oppositely.
- (3) *Measles*.—Sub-infections probably rare, well-marked seasonal fluctuation, and the inverse relation of dispersability and fatality well-marked.

With regard to return cases, Sörenson finds the fatality rate among them double that of the average, but states that the severity of the cases giving rise to them was not abnormal. This latter point will, I think, be contrary to the usual experience. It is

largely the septic cases that give rise to return cases. The proportion of return cases under 5 years of age I find to be much larger than the normal proportion and this is sufficient to account for the increased fatality observed among them.

Several explanations of the cause of the declining fatality of scarlet fever might be put forward, but the matter is one for further investigation.

SCARLET FEVER AND DIPHTHERIA.

CONCLUSIONS.

(a) For a considerable time the fatality (case mortality, of both diphtheria and scarlet fever has been higher in the North than in the South of England, and this has raised the mortality of the diseases correspondingly.

(b) Since the outbreak of war this difference became accentuated. In both scarlet fever and diphtheria there was a rise in both prevalence and fatality affecting St. Helens first and most seriously, and the Merseyside Boroughs later, and less severely. In diphtheria fatality began to rise three years before prevalence, but in scarlet fever the two rose simultaneously.

(c) Differences in apparent fatality, according to character of housing of the cases, in Liverpool were found to depend in part upon the age at attack of the cases. The remaining differences might depend upon defective notification rather than, as has been suggested, upon defective nutrition.

(d) By a method resembling that adopted for obtaining corrected death rates the effect of age at attack in varying fatality was eliminated, and a fatality index was thus obtained showing for both diseases in Liverpool since 1901, first a fall till 1918-15, then a rise up till 1918, and a second fall till 1921. These appear to indicate that the recent epidemics were due to organisms of increased virulence.

(e) Taking the fatality index as a guide, prevalence and fatality of scarlet fever have varied together in Liverpool for the past 20 years.

(f) By plotting the seasonal curves of cases and fatality for the monthly average of the past 30 years in Liverpool it was found that in (a), diphtheria, prevalence and fatality varied together, but in (b), scarlet fever and measles, they varied inversely.

¹Notnagel's *Encyclopædia of Practical Medicine*, English Edition, Vol. Diphtheria, etc., p. 381 (1902).

²Newsholme, Sir A. Outbreak of Scarlet Fever and Scarlatina Sore Throat due to infected Milk. *Public Health*, Vol. XIX, p. 756 (1906).

³Graham Smith in *Bacteriology of Diphtheria*, pp. 192-194 (1908).

⁴Copeman, S. M., Report on Diphtheria, Ministry of Health Reps. on Public Health No. 10 (1921).

⁵Kinloch, T. Parlance. Metabolism and Disease; *Proc. Roy. Soc. Med (Sect. of Epidemiology)*, Vol. XV, Jan., 1922, p. 31.

⁶Newsholme, Sir A. *Pandemic Diphtheria* (1900).

⁷Topley, W. W. C. Spread of Bacterial Infection, *Lancet*, 1919, Vol. 2, pp. 1 and 45.

— Do. — *Journal of Hygiene*, Vol. XIX, p. 350 and, XX, p. 103 (1920 and 1921).

⁸*Annual Report of Manchester M.O.H.*, 1920, pp. 100 and 104.

⁹Park and Bolduan in *Bacteriology of Diphtheria*, p. 689.

¹⁰Butler. Intermittent Infectiousness of Scarlet Fever (1908). *Proc. Roy. Soc. Med (Epidem. Sect.)*, 1909, ii. 62.

¹¹Vaughan. *Epidemiology and Public Health*, Vol. I, p. 30 (1922).

¹²*Report of Medical Officer of Health for the City of Liverpool*, 1920, pp. 19-20.

¹³Wilson, G. N. Measles its Prevalence and Mortality in Aberdeen. *Public Health*, 1905. 2. p. 65.

NOTES FROM BRANCHES.

THE METROPOLITAN BRANCH.

THE LONDON REPORTS.

The majority of the reports of the London Medical Officers of Health on the health and sanitary circumstances of their districts during 1922 are now to hand. Before passing on to points from the individual reports it may be well to note briefly several features common to a number of them.

IN GENERAL.

In many are embodied additional statistical tables containing local data extracted from the Census Returns of 1921, and in certain of these comparison is made with the previous census figures and various deductions drawn. The loss in population—nearly 400,000—to the Administrative County is most marked, Lambeth and Woolwich alone showing an increase. Mention is invariably made of the housing problem, and instances of difficulties in taking action under the recent Housing Acts are not lacking. Overcrowding has persisted, and owing to the shortage of accommodation little has been possible in securing its abatement. The question of the use of preservatives in foodstuffs, and the need of regulations as to the substances that may be used for the purpose and the amounts permissible, is referred to in several cases. So also is the high percentage (42 % in Stepney and 30 % in St. Pancras) of wrongly dispensed prescriptions procured and analysed at the request of the London Insurance Committee. The delay in notifying cases of tuberculosis is causing anxiety in certain districts and an appeal is made to local practitioners to make notification as early as possible. The following items from the reports it is hoped may be of general interest.

VENEREAL DISEASE MORTALITY.

Dr. F. E. Scrase (Hampstead) considers that until a different method of registering the causes

of death is instituted it will be impossible to arrive at an estimate of the number of deaths due to venereal diseases. That this number is larger than the present system of registration shows he has no doubt, and if to it is added the number of deaths due to the long-delayed sequelae of venereal diseases and the mis-carriages and stillbirths, so many of which are attributable to such diseases, it will be apparent, says Dr. Scrase, that this is a matter that demands serious consideration. While there is a division of opinion on the question of notification of venereal diseases it does not appear to him that any reasonable objection could be taken to the extension of the notification of birth to that of death, the doctor notifying the cause of death to the medical officer of health direct; the procedure being quite distinct from registration by the relative.

"SECTION 28."

Dr. A. Middleton Hewat (Fulham) issues free of charge leaflets on the early signs and symptoms of cancer, for the information of the public. These are distributed through the health visitors, the infant welfare centres and other institutions, and several doctors in the borough keep a supply at their surgeries. During the year nearly 700 notices under Section 28 of the Housing, Town Planning, etc., Act, 1919, were issued in Fulham, and after two years' experience of the working of the section, involving a total outlay by the Council of over £2,000 in property repairs, Dr. Hewat sets down in detail the difficulties met with both as to the carrying out of the work and as to the recovery of the expenses. During 1922 two Ministry of Health enquiries were held, and ten summonses taken out in the police court for recovery of expenses. Owing to the unworkable nature of Section 28 as it at present stands, the Council has decided only to make use of its provisions in most exceptional cases, and as a general rule to deal with all housing repairs under the Public Health Act.

THE MILK MINIMUM.

In the analyst's section of the Stepney report (Dr. D. L. Thomas) the view is expressed that the legal minimum for fat in milk is too low and could be raised to at least 3.5 per cent. for nine months of the year, with a slightly lower minimum for the spring months.

FOUNDLING HOSPITAL FEVER OUTBREAK.

Dr. T. Shadick Higgins (St. Pancras) gives in detail an account of a scarlet fever outbreak at the Foundling Hospital during 1921-1922. In this he points out that the buildings are old and in

a central part of London, and the repeated outbreaks of infectious disease provide an additional reason for carrying into effect as soon as possible the scheme for removing the children permanently to the country, which it is understood has been determined upon by the Governors. The housing stringency, writes Dr. Higgins, renders the work of the medical officer's department much more difficult, and in St. Pancras—as in many another district—constitutes the gravest public health problem.

PUBLIC HEALTH PUBLICITY.

Propaganda is made to play a large part in the health work of St. Marylebone (Dr. Charles Porter) and in the Foreword to the 1922 report is to be found an account of the several "Weeks" celebrated in the Borough during the year; of lectures given on various aspects of health; and of the publicity obtained by means of the series of leaflets and posters issued to the public.

OPHTHALMIA TREATMENT.

Dr. Howell W. Barnes (Camberwell) emphasises the need of early treatment of ophthalmia neonatorum and expresses agreement with the view that the attention of medical practitioners should be drawn to the advisability of the routine application of a suitable silver nitrate preparation to the eyes of all newly-born children.

SCHOOL MEDICAL INSPECTION.

Referring to the medical inspection and treatment of children in elementary schools, Dr. Barnes voices the opinion—held by other metropolitan medical officers of health—that the system of dual control whereby one authority looks after the health of the children at school and another supervises the home conditions is not such that the best results are likely to be obtained.

SMALL-POX FEARS.

Dr. Reginald Dudfield, O.B.E. (Paddington) views with some alarm the risk of an epidemic of small-pox, having regard to the increasing neglect of vaccination. While, he adds, the vigilance of the health authorities has, up to the present, been successful in circumscribing the spread of the disease, it is to be feared that with the continued occurrence of sporadic cases in widely separated areas a time will come when such vigilance will prove unequal to the task of coping with the danger arising from the presence of unrecognised cases in a population very imperfectly protected by vaccination.

CITY ITEMS.

Dr. W. J. Howarth, C.B.E. (City of London),

in a report of unusual interest, states that while the night population has decreased from 112,063 in 1861 to 13,706 in 1921, the day population has increased from 170,133 in 1866 to 364,061 in 1911 (latest day census figures). In the section on Smoke and Atmospheric Pollution are detailed the arrangements made for registering rainfall and the soot and dust washed from the air, the City figures being compared with those of the London County Council recorded at the Archbishop's Park, Lambeth. In June alone no less than 54 tons of avoidupois of deposit fell in the city. Of this mass of dirt approximately 18 tons were soluble and 36 tons insoluble (tar, carbon and grit). Cremations in the United Kingdom in 1885 numbered 3; in 1922, 2,009. In the former year one centre only—Woking—existed; now there are 15 crematoria in this country. During last year 124 lead coffins and 94 boxes of loose bones were removed, under Home Office licence, from the crypt of a City church and re-interred in a special enclosure at Ilford Cemetery.

MEAT INSPECTION.

An excellent section on Meat Inspection gives the information that 463,074 tons of meat, or nearly half of the total amount imported, passed through the City Markets at Smithfield; an amount unapproached by any other markets in the world. Regret is expressed that of this quantity only 15.4 per cent. of the beef, 14.2 per cent. of the mutton, and 30.3 per cent. of the pork, were from home-bred animals. The amount of diseased meat which is found on the markets, the report proceeds, shows that as yet the Recommendations of the Departmental Committee on Meat Inspection have not received the attention they deserved. The lesions observed in some carcasses show that no examination by an inspector had taken place and that the senders were entirely ignorant of disease. A better system of inspection and, in addition, education of fanners of animals intended for food on the subject of disease are advocated. Having regard to the stringency of our Foreign Food regulations, surprise is expressed that the attention given to the inspection of carcasses in many parts of the country appears to be nil. Of fish, 242,385 tons, of which 210,914 were land-borne and 31,471 water-borne, were received at or near Billingsgate Market during the year. In order that itinerant ice-cream vendors may have an opportunity of changing the water used for rinsing glasses, wafer frames, etc., arrangements have been made for them to obtain supplies at the public conveniences in the City.

RAT REPRESSION.

During 1922, 855 premises, involving 2,367 firms, were found to be rat-infested. Dr. Howarth is of opinion that rat investigation and repression should be regarded as coming under the heading of general sanitary work, and that it should be referred to the district and factory and workshop inspectors to report on rat-infested premises. There should be attached to the department an inspector competent to supervise the execution of the remedial measures necessary. The idea that a ratcatcher should be appointed by each municipal authority he considers almost useless. Their work should be encouraged by private firms, and they should be registered with the local authority and be subject to controlling regulations. A local authority, he adds, would be better advised to increase its inspectorial staff rather than involving itself in liability for rat-catching work by the appointment of a rat-catcher. Interesting details and statistics are set out in the report as to the work of the venereal disease centre.

CHILD WELFARE RECORD KEEPING.

Dr. James Fenton (Kensington) draws attention to the exceptionally high proportion of females to males (159-100) in the Royal Borough as revealed at the last census, and refers to the important bearing this has on the vital statistics of the district. The birth-rate in 40 years has dropped from 26.1 to 17.6. In a paragraph on illegitimate births, the legitimate infant death-rate is given as 78 and the illegitimate as 135. Special arrangements have been made with the medical superintendent of a local hospital for cases of puerperal fever to be received at the institution on suspicion before the diagnosis is definite in order that early treatment may be given. During the year much valuable work was accomplished by the Advisory Committee (representing the various welfare centres) to the Council's Maternity and Child Welfare Committee, and a scheme of record-keeping was worked out with much care and, after being put into operation in Kensington, was largely adopted by the Ministry of Health for use throughout England and Wales. For the first time, as far as is known, there is no milk being produced in the borough, the last cow-keeper having discontinued business. The compulsory registration of premises where ice-cream is manufactured, stored or sold and of itinerant vendors is recommended.

FOULING OF FOOTWAYS BY DOGS.

As a result of the passing of a bye-law making it an offence to allow a dog on a lead to deposit

its excrement upon the public footway, the conditions of the pavements are said to have improved considerably, and it was found necessary to send a warning in only two cases. Pamphlets have been posted up in various parts of the district and delivered to a large number of dog owners.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, September 21st, 1923. The President (Dr. T. Eustace Hill, O.B.E.) was in the chair and there were present: Lt.-Col. F. E. Fremantle, M.P., Lt.-Col. Herbert Jones, Drs. Howarth, Buchan, Cates, Buck, Pearce, Snell, Gibbons Ward, Evans, Garstang, Rees-Jones, Stocks, F. H. Thomson, Jolly, Veitch Clark, Barlow, Nash, Peyton, and Clements.

Messages of apology for absence were received from Dr. R. A. Lyster, Dr. Wheatley, and Prof. Harold Kerr.

Correspondence: (1) From the Medical Department of the Board of Education forwarding a draft circular in reference to proposed changes in the model statistical tables drawn up by the Board for the use of School Medical Officers, and inviting criticism and suggestions. It was agreed that in the first instance the draft should be referred to the School Medical Group, with a request to report to the Council Meeting on October 19th. (2) From the Southall-Norwood U.D.C. submitting proposals for amended legislation in regard to Milk and Food Supplies.—Referred to Special Committee on Foods. (3) From the President forwarding a circular in reference to Travel Scholarships offered by the American Child Health Association. The Executive Secretary was instructed to write and inquire if the Society could assist in the nomination of scholars from the United Kingdom. (4) From the Association of County Medical Officers of Health forwarding a resolution disapproving the proposal circulated by a county council suggesting that medical inspection of school children in the intermediate age-group should be discontinued. It was agreed that the Society should oppose any such proposal as retrograde and contrary to the interests of public health. (5) From a Fellow in reference to the appointment of Tuberculosis Officers as honorary consultants at Poor Law infirmaries.—Referred to Tuberculosis Group with request for report to Salaries Committee. (6) From the Sanitary In-

spectors' Association in reference to salaries of sanitary inspectors in London. Referred to Salaries Committee. (7) From the U.K. Paper Bag Manufacturers' Association asking the Society to recommend the Ministry of Health as to the necessity of requiring hygienic wrappings for bread and other foods. Referred to Special Committee on Foods. (8) From Dr. Thos. Orr reporting as representative of the Society on the Pasteurisation Conference Committee. The Executive Secretary was directed to thank Dr. Orr for his report.

Representation of the Society.—Dr. T. W. Naylor Barlow and Dr. E. H. Snell were elected to represent the Society on the Public Health Committee of the British Medical Association. Dr. G. F. Buchan was re-elected to the B.M.A. Insurance Acts Committee.

Local Authorities and the Scale of Salaries.—Notice was received that the conference with Association representatives of Local Authorities would be held at the Middlesex Guildhall on October 9th at 2.30 p.m. It was decided that the B.M.A. representatives should be accompanied by Drs. Barlow, Howarth, Kenwood, Lyster, Herbert Jones, Peyton, Buchan, and Joseph on behalf of the Society.

The Rockefeller Institute of Hygiene.—Dr. W. J. Howarth drew attention to the pending appointment of a Director for the Rockefeller Institute of Hygiene, and suggested that the Society should bring to the notice of the Minister of Health the desirability of securing an experienced Public Health administrator for this important post. The success of the Institute must depend very largely on the support it secured from the Public Health Service, and it would be a serious reflection on those who had made sanitary administration in Great Britain a model for the world if they were passed over when this post came to be filled. He found that members of the Society felt very keenly on this matter, not in support of any personal aspirations to what should be a great position, but in defence of the prestige of the Public Health Service. It had been suggested that the Minister might be advised to appoint a clinician, a bacteriologist, or a specialist in some branch of medicine, to show how an institute of preventive medicine should be organised. He would respectfully submit that in founding this institute the Rockefeller Trustees intended to recognise the pioneer work in health administration of a long line of English hygienists so that those who carried on their work might impart to students from all over the world the traditions of the English Public Health Service. Any outsider, however distin-

guished, could not bring to the Institute the comprehension of those traditions that had been handed down to those who had made public health administration their life work. In conclusion Dr. Howarth said he was sure that the Society would extend loyal confidence and support to any experienced health administrator who might be appointed to the post regardless of any preference they might have for some other colleague. But he did feel that, if the Director was sought outside the Public Health Service, the appointment would be regarded as an unjustifiable slight on those who had chosen Preventive Medicine as their career.

Dr. Naylor Barlow and others having strongly supported the opinions expressed by Dr. Howarth, it was agreed unanimously that a letter be forwarded to the Minister of Health urging the appointment of an experienced public health administrator as Director of the new Institute.

Public Health Propaganda.—The Special Committee appointed to draft recommendations for the consideration of the Ministry of Health in regard to Public Health Propaganda submitted a memorandum which met with unanimous approval. It was agreed to forward a copy of the memorandum to the Ministry as requested by them (see "Public Health," May 1923, p. 227, September 1923, p. 343), and to answer an inquiry from the Insurance Committee of the County of London in the same connection by reference to the terms of the memorandum. Dr. James Wheatley (Chairman) and his colleagues on the committee, Drs. Barlow, Joseph and Veitch Clark, were thanked for their prompt services in dealing with this matter.

Maternity and Child Welfare.—Dr. Stocks, on behalf of the Maternity and Child Welfare Group submitted reports on (a) The Duties of Medical Officers of Infant Welfare Centres, and (b) The Hours and Holidays of Health Visitors. After minor amendments, the reports were approved and adopted by the Council. The President asked Dr. Stocks to convey the thanks of the Council to the M. & C.W. Group for their useful work, and it was decided that the reports should be published in "Public Health."

Certification of Mental Deficiency.—The following resolution was received from the Cheshire Local Medical and Panel Committee: "That the Certification for the purposes of the Mental Deficiency Bill should be as for cases of lunacy, viz.: certification by any two practitioners and not as proposed by a practitioner and a specially appointed official."—It was agreed that the present system of certification is proper and satisfactory,

and that the Society should not support the proposal contained in the above resolution.

The Official Journal.—The President reported a complaint regarding an article in "Public Health" which was liable to cause offence in certain quarters. Drs. Snell, Barlow and Veitch Clark were asked to arrange a meeting with the Editor, to discuss the matter and to report to the next meeting of the Council.

The Duties of Medical Officers of Health.—A draft memorandum was forwarded by the Ministry of Health for the criticisms and suggestions of the Society. Dr. Clements, on behalf of the Non-County Group, asked that consideration of the memorandum might be deferred until the next meeting of the Council in order that his Group might have an opportunity of submitting some observations. This was agreed to, the Executive Secretary being instructed to notify the Ministry that any suggested amendments would be forwarded by October 22nd.

Disciplinary.—The Council accepted the resignation of a Fellow who had failed to support the policy approved by the Society in connection with a recent appointment. Another Fellow attended by request to explain his failure to co-operate with the Society in the interests of the Public Health Service. The Council not being satisfied with the explanation offered decided to take further steps at their next meeting.

Annual Report of the Council.—The following report of the work of the Council during the Session 1922-23 was approved and adopted:

REPORT OF THE COUNCIL.

SESSION 1922-23.

Your Council report:—

(1) That the membership of the Society has shown a further increase during the Session 1922-23. One hundred and fifty-four candidates have been elected as Members and Associates, against the loss by deaths and resignations of sixty Fellows, Members and Associates. The nett increase on the Roll of Members at the opening of the new Session will be 94. The majority of the resignations were from members who are leaving the Public Health Service for other branches of medical practice, the remainder were due to retirements. Three members were invited to resign in accordance with No. 11 of the Society's Articles of Association, after failure to co-operate with their colleagues in support of the policy of the Society;

(2) that the deaths recorded during the Session include several Fellows who have rendered the Society conspicuous service, notably Sir Shirley

Murphy, K.B.E., Dr. R. J. Ewart, Dr. P. Caldwell Smith, C.B.E., and Dr. J. Scott Tew. Others who were formerly active in the work of their branches were Dr. J. O. Littlewood, Dr. T. A. Murray, Dr. Harry Shore, Dr. E. J. Steegman, O.B.E., Dr. G. I. T. Stewart, Dr. A. Maxwell Williamson, and Dr. A. E. Harris;

(3) that the following papers were read at meetings of the Society:

Dr. T. Eustace Hill, O.B.E. (Presidential Address): "Public Health: Some points as to its Progress and Hindrances."

Prof. John Robertson, C.M.G., O.B.E.: "The American Milk Supply: Its control and distribution."

Dr. E. Colston Williams: "Pit Head Baths and other Amenities in Colliery Areas."

Prof. E. Mellanby: "Some reasons why Diet is an important factor in Preventive Medicine."

Dr. Major Greenwood: "The Medical Officer of Health as a Prophet."

Dr. R. J. Ewart: "The relationship between the Economic Circumstance of the Country as a whole, and the various Rates by means of which Health is measured."

Dr. A. H. Bygott: "Death Registration more especially as it affects the office of Coroner."

Dr. S. H. Daukes, O.B.E.: "The Bearing of Preventive Medicine in the Tropics on Home Problems."

(4) that the Annual Provincial Meeting of the Society was held at the School of Art, Hull, on August 3rd;

(5) that ten meetings of the Council have been held during the Session. Committees of the Council have met on 27 occasions. The proceedings of the Council which have been fully recorded in "Public Health," have again concerned the interests of every branch of the Public Health Service;

(6) that they have had official communications with the Ministry of Health, the Board of Education, the Ministry of Agriculture and Fisheries, the Home Office, the Board of Inland Revenue, and other Government Departments on numerous matters affecting Public Health Administration and officials;

(7) that they have been in communication with a number of representative bodies concerning principles and details of public health administration, including the League of Nations, the American Public Health Association, the General Medical Council, the British Medical Association,

the Association of Public Vaccinators, the British Dental Association, the Royal Sanitary Institute, the Royal Institute of British Architects, the National Association of Local Government Officers, the Association of Municipal Corporations, the Institute of Municipal and County Engineers, the Labour Party Executive, the British Dairy Farmers' Association, the National Union of Teachers, the National Association for the Prevention of Infant Mortality, the College of Nursing, the Central Midwives Board, the Sanitary Inspectors' Association, the Women Sanitary Inspectors' Association, and the Fever Nurses' Association;

(8) that the Special Committee on the Remuneration of Medical Officers of Local Authorities have held frequent meetings. Under the supervision of this Committee action has been taken in a great number of cases to safeguard the interests of the Public Health Service in relation to salaries, bonus awards, security of tenure, superannuation, office and travelling expenses. The labours of the Committee were consummated on July 20th, when the Society's Scale of Salaries was adopted by the Representative Meeting of the British Medical Association as the policy of the whole profession. Your Council note with satisfaction that at the Annual Provincial Meeting a resolution of congratulations and thanks was passed to the Committee on the successful issue of their campaign, and more especially to their chairman, Dr. George Frederick Buchan, for his untiring persistence on behalf of the Public Health Service;

(9) that other Special Committees have reported to the Council on Propaganda for the Prevention of Dental Caries, on the Working of the Midwives Acts, on the Duties of Medical Officers of Maternity and Child Welfare Centres, on Public Health Propaganda, and on the Hours and Holidays of Health Visitors;

(10) that representatives of the Society have been nominated to the Central Midwives Board, and to Committees of the British Medical Association, the National Association of Local Government Officers and numerous other bodies dealing with matters affecting Public Health administration;

(11) that by request of the Ministry of Health, a committee of the Society was appointed to arrange a Course of Instruction for Foreign Health Officers visiting England and Scotland under the auspices of the Health Section of the League of Nations. The course extended from February 24th till April 11th, and was much appreciated by the visitors. The thanks of the

Society are due to Dr. W. J. Howarth (Chairman), and the committee responsible for the arrangements, and to Drs. Hope (Liverpool), Butterworth (Lancaster), Kerr (Newcastle), Eustace Hill (Durham County), Chalmers (Glasgow), J. J. Buchan (Bradford), J. R. Kaye (West Riding), J. Robertson (Birmingham), Hamilton Wood (Warwickshire), Veitch Clark (Manchester), Meredith Young (Cheshire), and Willoughby (Port of London), who acted as local directors of the course. In view of the success of this first visit, your Council has accepted responsibility for a further course to be held during the coming Session and also for specialist courses for foreign Tuberculosis Officers and School Medical Officers to be nominated by the Health Section of the League of Nations;

(12) that the Special Committee for the Revision of the Society's Articles of Association have successfully completed their work, and the revised Articles have been approved, adopted and registered with the necessary formalities. At the Extraordinary General Meeting held for the adoption of the Articles a resolution was passed recording the thanks of the Society to Prof. H. R. Kenwood (Chairman), and the members of the Committee for their services in accomplishing the prolonged and difficult work of revision. In this connection your Council would point out that the constitution of the Society is now on a thoroughly democratic basis, and that it is the bounden duty of every member of the Public Health Service to support their representative organisation. In the new Session it will be necessary to reach agreement with the British Medical Association in regard to the scheme for enforcement of the Scale of Salaries and it is essential that the Society's membership should include every medical official likely to be affected by the working of the Scale. Your Council therefore appeal to every member of the Society to accept personal responsibility for the enrolment of colleagues who are not yet in membership;

(13) that the annual exchange of officers involves the retirement from the Council of Dr. R. Veitch Clark, Dr. Thomas Horne, Dr. Buck, Dr. W. Bertram Hill and Dr. T. Shadick Higgins, the last-named having taken up his new appointment in South Africa. Their colleagues desire to commend to the Society the loyal services rendered by these gentlemen;

(14) that cordial thanks are due to Dr. Thomas Eustace Hill, O.B.E., for his devotion to the affairs of the Society during his year of office as President. Dr. Hill has allowed no consideration of time or distance to prevent his attendance at

the meetings and deputations of the Society, and no trouble has been too great for him when he could render a service to any branch of the Public Health Service. Like his father and his brother before him, Dr. Hill has worthily upheld the dignity of an office which is only bestowed on those whom the Society wish especially to honour.

(15) that the Council desire once more to record their appreciation of the devoted labours of the Executive Secretary in the interests of the Society.

Honorary Fellowship.—On the proposal of Dr. G. H. Pearce, seconded by Lt.-Col. Herbert Jones, and supported by Dr. Buck, it was agreed unanimously to recommend Dr. James Mitchell Wilson for election to the Honorary Fellowship at the annual meeting of the Society. In putting the proposal to the meeting the President said it would be a fitting recognition of one who had rendered conspicuous service in the advancement of Preventive Medicine and Public Health Administration.

The Council then adjourned.

BRANCH AND GROUP ELECTIONS: SESSION 1923-24.

METROPOLITAN BRANCH.

President ...	Dr. F. H. Thomson.
Vice-Presidents ...	Sir W. H. Hamer.
	Dr. W. M. Willoughby.
Hon. Treasurer ...	Dr. James Fenton.
Hon. Secretary ...	Dr. C. Porter.
Representatives on	
Council of Society	Dr. H. R. Kenwood.
	Dr. James Fenton.
	Dr. C. Porter.

SCOTTISH BRANCH.

President ...	Dr. J. Maxwell Ross,
	M.B.E.
Vice-Presidents ...	Prof. Matthew Hay.
	Dr. A. Robb.
Hon. Secretary and	
Treasurer ...	Dr. T. Adam.
Representatives on	
Council of Society	Dr. A. K. Chalmers.
	Dr. T. Adam.

MIDLAND BRANCH.

President ...	Dr. A. Hamilton Wood.
President-Elect ...	Dr. R. W. Stocks.
Vice-Presidents ...	Dr. Bostock Hill.
	Dr. G. Reid.
	Dr. J. Robertson.
	Dr. Ridley Bailey.
	Dr. E. H. Snell.
	Dr. H. Gibbons Ward.

Hon. Treasurer ... Dr. Ridley Bailey.
 Hon. Secretary ... Dr. R. H. H. Jolly.
 Hon. Auditor ... Dr. W. H. Davison.
 Representatives on
 Council of Society Dr. E. H. Snell.
 Dr. R. H. H. Jolly.
 Dr. H. Gibbons Ward.

NORTHERN BRANCH.

President ... Dr. A. G. R. Cameron.
 Hon. Secretary and
 Treasurer ... Dr. Harold Kerr, O.B.E.
 Representatives on
 Council of Society Dr. Cameron.
 Dr. Harold Kerr, O.B.E.

NORTH-WESTERN BRANCH.

President ... Dr. G. Lissant Cox.
 Hon. Treasurer ... Dr. H. H. I. Hitchon.
 Hon. Secretary ... Dr. G. W. N. Joseph.
 Representatives on
 Council of Society Dr. G. Lissant Cox.
 Dr. G. W. N. Joseph.
 Dr. James Wheatley.
 Dr. E. W. Rees-Jones.

WEST OF ENGLAND BRANCH.

President ... Dr. George Adkins.
 Vice-President ... Dr. R. A. Askins.
 Secretary ... Dr. P. H. Stirk.
 Assistant Secretary Dr. B. A. Peters.
 Treasurer ... Dr. J. F. Blackett.
 Representatives on
 Council of Society Dr. Herbert Jones.
 Dr. P. H. Stirk.

SOUTHERN BRANCH.

President ... Dr. Lockhart Stephens,
 C.B.E., D.L.
 Hon. Secretary ... Dr. W. J. Hart.
 Representative on
 Council of Society Dr. R. H. Wilshaw.

WELSH BRANCH.

President ... Dr. C. E. Humphreys.
 Hon. Secretary and
 Treasurer ... Dr. Thos. Evans.
 Representative on
 Council of Society Dr. Thos. Evans.

HOME COUNTIES BRANCH.

President ... Dr. W. Benton.
 Hon. Treasurer ... Dr. A. E. Porter.
 Hon. Secretary ... Dr. H. J. Milligan, M.C.
 Representatives on
 Council of Society Dr. W. Benton.
 Dr. Joseph Cates.
 Dr. A. B. McMaster.
 Dr. H. J. Milligan, M.C.

YORKSHIRE BRANCH.

President ... Dr. A. E. L. Wear,
 C.M.G.
 Hon. Secretary and
 Treasurer ... Dr. Cyril Banks.
 Representatives on
 Council of Society Dr. Wear.
 Dr. G. H. Pearce.
 Dr. Banks.

EASTERN BRANCH.

President ... Dr. B. D. Z. Wright.
 Vice-President ... Dr. H. H. Back.
 Hon. Secretary and
 Treasurer ... Dr. J. T. C. Nash.
 Auditor ... Dr. H. Cooper Pattin.
 Representative on
 Council of Society Dr. J. T. C. Nash.

TUBERCULOSIS GROUP.

President ... Prof. S. Lyle Cummins,
 C.B., C.M.G.
 Hon. Secretary ... Dr. Ernest Ward.
 Hon. Librarian ... Dr. J. Sorley.
 Representative on
 Council of Society Dr. Ward.

NAVY, ARMY AND R.A.F. HYGIENE GROUP.

President ... Maj.-General W. W. O.
 Beveridge, C.B., C.B.E.,
 D.S.O.

Hon. Secretary ...
 Representative on
 Council of Society Col. H. W. Grattan,
 C.B.E., D.S.O.,

SCHOOL MEDICAL GROUP.

President ... Dr. C. J. Thomas.
 Hon. Secretary and
 Treasurer ... Dr. A. Ashkenny.
 Representative on
 Council of Society Dr. C. J. Thomas.

NON-COUNTY M.O.H. GROUP.

Chairman ... Dr. Herbert Jones.
 Hon. Secretary ... Dr. J. M. Clements.
 Representative on
 Council of Society Dr. J. M. Clements.

MATERNITY AND CHILD WELFARE GROUP.

President ... Dr. Harold Scurfield.
 Vice-President ... Dr. H. C. Cameron.
 Hon. Treasurer ... Dr. Flora Shepherd.
 Hon. Secretary ... Dr. R. W. Stocks.
 Representative on
 Council of Society Dr. R. W. Stocks.

FEVER HOSPITAL MEDICAL SERVICE GROUP.

President ... Dr. E. W. Goodall, O.B.E.
 Hon. Secretary ... Dr. A. F. Cameron.
 Representative on
 Council of Society Dr. F. H. Thomson.

DENTAL OFFICERS' GROUP.

President ... Mr. George Thomson,
 L.D.S.
 Hon. Treasurer ... Mr. G. Thomson, L.D.S.
 Hon. Secretary ... Mr. Grantley Smith,
 H.D.D., L.D.S.
 Representative on
 Council of Society Mr. R. Denison Pedley,
 F.R.C.S.Ed., L.D.S.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NEECH PRIZE.

Members of the Society of Medical Officers of Health are reminded that entries for the *Neech Prize* for the Session 1922-23 should be forwarded at once to the Executive Secretary. The conditions of the award, as embodied in the deed of settlement, are as follows:—

1. The prize shall be called the Neech prize.
2. It shall be awarded annually for the best paper contributed to the Branch Meetings of the Society in the United Kingdom during the year—the year being Medical Officers of Health Society's year, i.e., October to September.
3. No such paper shall be eligible for award unless two typewritten copies are formally sent to the Executive Secretary of the Society.
4. The amount or value of the prize shall be the annual interest arising from the investments for the time being and if in any one year no prize shall be awarded the amount shall be added to the next year.
5. The paper must have reference to Public Health subjects, and originality and research shall be taken into consideration. No consideration of seniority of membership or professional standing shall influence the award of the prize which shall be open to all members of the Society.
6. The assessors shall be the president and editor of the Society for the time being, with two members of the Council—the latter to be elected annually by the Council at the first Council Meeting of the year. Dr. James Thomas Neech shall be entitled to nominate a fifth assessor if and when he thinks fit.
7. The decision of the assessors shall be final.
8. It shall be within the power of the assessors to delegate one or more of their number the duty of perusing and making a list of the papers from which shall finally be selected the winner of the prize, such selection being made at a full meeting of the assessors.
9. The award shall be made known within a period of three months of the close of the Society's year.
10. The successful paper shall be offered for publication to the "International Journal of Public Health" or such other representative journal as may be decided by the Council from time to time and such Journal shall have free right of publishing the paper.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

THE ATTITUDE OF THE MEDICAL PROFESSION TOWARDS ANTI-VACCINATION.

From Dr. K. MILLARD, M.O.H., Leicester.

Sir,—May I be allowed to make a gentle protest against the tone of the paragraph which you quote from the "London Mail" under the caption, "Conscientious Objectors" ("Public Health," August, page 298).

The paragraph in question runs as follows:—

"It may be very forbearing and magnanimous, and all that, to impose silly little fines upon the criminal lunatics at Gloucester who are flatly refusing to take ordinary precautions against the small-pox outbreak which, thanks to the anti-vaccinators, is raging in that city. But if they succeed in distributing the disease all over the country, we may wake up too late to the fact that they are rather expensive idiots to pamper. The ordinary sane citizen, by the way, has a conscientious objection to being put in peril of a loathsome scourge by the selfish obstinacy of a gang of fanatical fools."

I wish to suggest that it is a great mistake for a dignified profession to associate itself with hyperbolic effusions of this kind, equally as the subject is a highly controversial one. It is language like this which provides the Anti-vaccinist with justification and excuse for the still more extreme phraseology which he makes use of.

As a matter of fact the tone I am complaining of is particularly inopportune and unjustifiable as applied to Gloucester for the following reasons:—

(1) The outbreak which is (or, rather, was) "raging" in Gloucester is not a "loathsome scourge." It was an outbreak of small-pox so extremely mild that it would be quite reasonable to describe the average case as resembling a mild attack of influenza, followed by a scanty eruption of pimples, and unaccompanied by complications or sequels.

However much the business men of Gloucester may have wished to stamp out the epidemic (and I quite admit that universal vaccination of the whole population would have quickly cut short this or any other outbreak of small-pox), I cannot regard the parent who preferred the risk of his child catching such a mild complaint to the risk

of vaccination as a "criminal lunatic." (Judging by what other M.O.H.'s have said to me, I do not think I am alone in taking this view.)

It may be right and proper for M.O.H.'s to continue to advocate universal vaccination of infants until it is known whether the present mildness of type of small-pox can be depended upon as a more or less permanent characteristic, but that is no reason why we should hurl cheap abuse at those who think differently. To do so is both unjustifiable and undignified, and only lowers our prestige as a profession in the eyes of the public.

(2) In spite of the start which the disease had been allowed to get, and of the fact that the bulk of the working-class population in Gloucester continued to refuse vaccination for their children, the epidemic has quickly responded to the usual measures of isolation, etc.

(3) How the outbreak in Gloucester actually began has not yet been discovered, nor whether it originated in a vaccinated or an unvaccinated person. But we do know that the reason it got such serious hold on the town—and but for which it would probably have remained an insignificant outbreak such as has occurred in many other communities where infant vaccination has also been neglected—was the fact that the responsible public health official (one of ourselves) in common with other medical men in the city, most unfortunately failed to recognise the real nature of the disease.

(4) The paragraph states that the "ordinary sane citizen, . . . has a conscientious objection to being put in peril of a loathsome scourge, etc."

Surely the "ordinary sane citizen," if he chooses to get vaccinated, has no need whatever to be afraid of small-pox even if it were of a much more serious type than that at Gloucester. Why, then talk of his being "put in peril?"

(5) The real tragedy of the Gloucester epidemic which has caused it to be a disaster—from a financial though hardly from a health point of view—was the organised press campaign which took place. How far this campaign was necessary or justifiable I will not now discuss, though I have my own views about it, but it can hardly be denied that it was out of all proportion to the true character of the outbreak. Moreover, the press notoriety which proved so disastrous to Gloucester was certainly due in part to the fact that some medical men (not only anti-vaccinists) persisted in their refusal to admit that it really was small-pox.

(6) We, as a profession, have repeatedly prophesied that when small-pox in epidemic form did visit a town where infantile vaccination had

been seriously neglected there would be a heavy price to pay in lives of unvaccinated children, and that those victims who escaped with their lives would carry their scarred and pock-marked faces with them to their graves. The Gloucester epidemic has shown us how unsafe it is to prophesy.

In view of all the circumstances attending the outbreak I suggest it ill-becomes the medical profession to sling mud at or bandy epithets with the Anti-vaccinists. We have still something to learn as well as they. (N.B.—I hold no brief for the Anti-vaccinists. They are entirely wrong when they deny the efficacy of vaccination, and they exaggerate and resort to special pleading even more than the Vaccinists.)

Lastly, may I suggest, as an alternative to and much more profitable activity that we should agitate for regulations to be made by the General Medical Council calling for far more attention to be paid to the subject of small-pox diagnosis, in both the medical and public health curricula, than has hitherto been the case. In view of the fact that the majority of serious outbreaks of small-pox originate in mistakes in diagnosis it would surely be better that the precious time which medical students are at present compelled to spend on "learning vaccination" should be devoted instead to "learning small-pox."

I am,

C. KILLICK MILLARD.

CONTROL OF INFECTIOUS DISEASES.

From Dr. A. H. BURTON, M.O.H., Ilford.

Dear Sir,—With reference to my letter published in your September issue, I see that a mistake has been made in the last paragraph which should read "an atypical mild case of Scarlet Fever," not "a typical mild case of Scarlet Fever" as printed. The latter alters the meaning of my remarks.

Yours faithfully,

A. H. G. BURTON.

Dr. Norman Macfadyen, who resigned the position of Medical Officer at Letchworth in order to stand as one of 14 candidates at the Urban Council election, headed the poll.

The Food Education Society, 329, Vauxhall Bridge Road, London, S.W.1, has issued as a leaflet some interesting notes upon "How to Choose Sugar." A specimen copy can be obtained on application.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 2.

NOVEMBER, 1923.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

EDITORIAL—

	PAGE
The Panel Practitioner	21
Unification of Health Control	23
Prevention of Venereal Disease	24
The Insurance Act and Prevention	24
Mental Deficiency Act Defects	24
Health Week in the West Riding	25
School Medical Inspection in Ireland	25
Precautions against Smallpox	25

SPECIAL ARTICLES—

Public Health Propaganda	26
Association of County Medical Officers	26
Passing Thoughts on Some Public Health Questions (By T. W. Naylor Barlow, O.B.E., M.R.C.S., L.R.C.P., D.P.H., of Lincoln's Inn, Barrister-at-Law, M.O.H. Wallasey, President of the Society of Medical Officers of Health)	27
Health Officers in America.—League of Nations, Third Interchange (By Charles Porter, M.D., B.Sc., Medical Officer of Health, St. Marylebone)	33
Maternity and Child Welfare Centres	35
The Hours and Holidays of Health Visitors	37

NOTES FROM BRANCHES—

Midland Branch	38
Metropolitan Branch	41

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Council Meeting	42
Special Council Meeting	44
Annual General Meeting	44
Annual Dinner	45
Plan of Table	52
Northern Branch	46
North-Western Branch	48
Yorkshire Branch	49
Eastern Branch	49
Midland Branch	49
Metropolitan Branch	50
Home Counties Branch	50

CORRESPONDENCE—

Prevention of Venereal Disease	51
--	----

NOTES—

Correction	32
Milk as Food	51

Editorial.

THE PANEL PRACTITIONER.

As the result of the decision arrived at by the Annual Conference of Local Medical and Panel Committees on October 18th last the British Medical Association is now engaged in the greatest battle in its history. It is not too much to say that the future of the medical profession for the next few generations is in the balance, and will be decided largely as the result of the struggle which is now being commenced between the British Medical Association on the one side and the Ministry of Health on the other. Although, nominally, the quarrel circles round the pay of the panel practitioner the scale of remuneration of the whole profession for a long time to come will be based on the results of this contest. We have always claimed that the basis of professional remuneration must obviously be determined in this country by the rate of pay of the panel practitioner, because the panel practitioners constitute the great bulk of the medical services employed by the State. Every branch of the profession, therefore, is interested in the fight, and every section ought to take an active part in it. The proposals now made are economically unjust and socially disastrous; they are detrimental to the honour of the profession, and should be fought by every member of the profession.

The British Medical Association may rest assured that the whole force of the Public Health Service is on their side in this struggle. We realise that an underpaid panel service must inevitably result in an underpaid and sweated public health service and, on the other hand, it is obvious that a reasonably well-paid and satisfied service of panel practitioners will sooner or later result in a properly paid and satisfied public health service. The one depends on the other and their interests are inseparably intertwined.

The whole Public Health Service being committed to the fight, it behoves every member of it

to become acquainted with the facts of the case. The pre-war panel fee was 7s. 3d. per insured person on the panel list. This was offered by the Government in 1911, after consideration of the report of an eminent accountant, as the lowest fee at which a reasonably sufficient service could then be obtained. Before 1920 the cost of living and the cost of practice had risen to such an extent that arbitration was demanded, and the arbitrators in March, 1920, awarded 11s. per person. This amount was not regarded by the majority of insurance practitioners as sufficient, but it was loyally accepted because it was the result of an arbitration to which they had agreed. The existing fee of 9s. 6d. was accepted subsequently for 1922 and 1923 under the assurance, and in the belief that national circumstances necessitated a sacrifice, and in ignorance of the fact that the National Health Insurance fund was sufficient to meet the amount required to pay the full capitation fee without placing any further burden on either the State, the employer, or the insured person. It was definitely understood, moreover, that the acceptance of the reduced fee of 9s. 6d. would not be used in prejudice of any revision of the financial terms of service in the future.

The recent negotiations between the B.M.A. and the Ministry of Health afford a significant warning as to the kind of treatment that the profession is likely to receive at the hands of any Government Department if it is insufficiently organised. The profession has been treated by the Minister of Health in a way which no politician would dare to treat a well-organised trade union. A statement of the case for the profession was asked for and was presented, and in due course the ministerial reply was received. The case for the profession adduced convincing reasons why the capitation payment should not fall below 10s. 4d., and that that sum should be regarded as the lowest which could be justifiably offered for the purpose of securing a really adequate general practitioner service of a high type in the various classes of practice throughout the country. The ministerial reply to this closely-reasoned statement was to the effect that the best offer that could be made was either a capitation payment of 8s. to remain fixed for five years or, as an alternative, a capitation payment of 8s. 6d. to remain fixed for three years. The British Medical Association definitely rejected the first of these alternatives, and appealed for arbitration upon the second. The Minister declined to accept the suggestion that arbitration offered a method of arriving at a peaceful agreement and adhered

to his decision, with the result that his offer has now been definitely rejected, and members of the British Medical Association are being called upon to place their resignations as panel practitioners in the hands of the Committee. This refusal to submit the case to arbitration constitutes the essential cause of the struggle.

During the progress of the negotiations, and subsequently, it became evident that the question of remuneration was by no means the only problem to be solved, and the present dispute is crystallizing into one which will settle whether the approved societies are to have the final word in the amount to be paid for the medical services under the National Insurance system. The money for that system is found not only by the insured person, but by the employer and by the taxpayer, and the medical profession is, practically to a man, determined that it will not recognise the approved societies as having the right to determine this important question. Part of the great controversy in 1911 raged round the question of control by friendly societies, who had at that time succeeded in reducing their payments for medical services to an absurdly low figure. By successfully playing off one practitioner against his neighbour, and by playing upon the short-sighted selfishness which is inherent in all human beings to a greater or less extent, they had established a medical service grossly underpaid and largely existent only on paper. The medical services given were of a most trivial description and could not compare in any way with the panel services given at the present time. The whole friendly society service was subject to abuses which, by 1911, the profession were unanimous in deciding to abolish. Parliament by deliberate judgment during the passing of the Act of 1911, took out from the Bill, as it then was, the power of the approved societies to interfere with the administration of medical benefit, and placed it in the hands of insurance committees. These societies are now striving in every possible way to retrieve the position they lost in 1911 of being masters of the medical profession. Of course they claim to represent the insured person, but our contention is that they are not in any real sense of the word representative of the insured person. There is no ambiguity about the claims the societies are now making through their spokesmen. They state definitely that the Minister of Health has no right to alter the terms and conditions of service, and that he has no authority to negotiate about a capitation fee without their permission, and that they, and they alone, are the persons who can properly say what are the con-

ditions of service and terms. The medical profession is willing at all times to negotiate with properly constituted representatives of the community, but is unanimous in its decision never again to submit to friendly society control, as such control is regarded as being entirely against the interests of the community and against the establishment of an efficient medical service.

Unfortunately, there seems very little reason to doubt that the Minister of Health has been influenced considerably by the approved societies. Politicians are always influenced by votes, and the friendly societies claim to wield enormous political power. Provided, however, that the medical profession stands true to itself and the members remain loyal to each other, there is no power which can enforce upon it terms of service which are so obviously unsatisfactory. The present time is a test of loyalty, and we most earnestly appeal to every member of the profession to stand firm in this matter. In some ways the present emergency is welcome as imposing a test upon every member of the profession, so that we may know in future those who are with us and those who are against us.

If the nation is to continue to have a highly trained and efficient medical profession it must afford such an average remuneration as will make it possible for members of that profession to live in the way in which they ought to be able to live, and to bring up their children so educated that they will be able to take a position in life not inferior to that which their parents had achieved. The arduous and highly skilled nature of the work done by the profession, the long training required to prepare for it, and the conditions involved in carrying on medical work from day to day are such that the result of any economy or reduction in remuneration either in connection with public appointments, or private practice, or insurance work, would tend to produce an insufficient entry into the profession, and a lowered character of those who enter it. Such a result would be nationally disastrous. A relatively high remuneration is absolutely necessary in order to enable the nation to be served by a highly trained profession. The general education and technical training required are most expensive, and are more prolonged than in any other calling. The age at which earning power begins is very late. The work is dangerous and in many respects highly disagreeable. Its responsibilities and anxieties are enormous, and the need for continuous study is insistent. Unless remuneration is adequate and sufficient to balance the great handicaps to which professional life in medicine

is subjected, the above facts may easily result in the best minds and most suitable personalities being attracted into other professions or callings, with deplorable results upon the national health.

If the aim is to furnish the industrial population with a medical service staffed by the less successful and less skilful members of the medical profession, then the fee suggested by the commercial intelligence of the approved societies may have some arguments in its favour. If, on the other hand, the aim is to secure the willing co-operation of a sufficient number of the decent average practitioners of England, fees will have to be offered that strike them as reasonably attractive compared with those which they can obtain under conditions of perfect freedom from patients in a position to pay their own bills. If panel practice is to do the work which it could do and ought to be expected to do then it must attract a fair proportion of the more competent and ambitious practitioners. When a satisfactory remuneration has been fixed it will be a matter for the collective honour and pride of the profession to provide, and to see that individual members provide, a thoroughly satisfactory service. An unwilling, dissatisfied, forced service is worse than none. If statesmanship rather than sordid haggling had been brought to bear upon this problem there would have been no question of any reduction of the existing scale of pay, but rather the whole force of the Ministry of Health and the friendly societies would have been directed to securing vitally important improvements in the services that were being given, on an average, for that pay.

UNIFICATION OF HEALTH CONTROL.

Some interesting correspondence between Dr. F. E. Fremantle, M.P., and the Prime Minister, dealing with the re-organisation of certain Government Departments, has been published. We must confess, after reading the correspondence, that we are unable to understand exactly what Dr. Fremantle's suggestions amount to in practice, but we agree altogether with many of his contentions, particularly when he states that "The knotty problem of the medical services under the Ministry of Health and the Board of Education—still awaiting solution—would be solved by fusion of the two Departments." We welcome this evidence that Dr. Fremantle still bears in mind the effort the Society of Medical Officers of Health has made and is making to secure the proper carrying out of the wishes of Parliament concerning the Ministry of Health

Act, in connection with which it was undoubtedly a House of Commons decision that the medical work under the Board of Education should be absorbed by the Ministry of Health. It will be remembered that the Society of Medical Officers of Health joined with the British Medical Association in a deputation to the Minister of Health on this subject, when arguments which ought to have been convincing were put forward in support of the inclusion of the school health service definitely into the Ministry of Health.

PREVENTION OF VENEREAL DISEASE.

We understand that the Joint Committee composed of representatives of the National Council for Combating Venereal Diseases and the Society for the Prevention of Venereal Disease has been appointed and that the first meeting has been fixed for October 30th, and we take this opportunity of again expressing the hope that these two Societies will agree to work on the common ground of the Trevethin Report. Both Societies have openly supported the Report, and, as a matter of fact, both have claimed its issue as a great victory. It should, therefore, be entirely satisfactory to both and a combination of effort, with rapidly successful results, may be reasonably expected.

A correspondent has called our attention to the fact that the quotation made in our last issue from Colonel Harrison's lecture published in the "Journal of State Medicine" in 1919 may be misleading in view of the statements made by Colonel Harrison at a Conference held at Scarborough this year when, according to our correspondent, Colonel Harrison "expressly referred to this opinion of his in 1919 and the known fact that his present opinion has quite altered, and categorically stated that careful study of later statistics had caused him to reverse his former opinion." We are not quite sure in what direction Colonel Harrison has altered his opinion as the quotation referred to is mainly a simple statement of scientific facts about which there is little or no dispute, but we gather that the main fact is that Colonel Harrison has changed his views with regard to the relative value of immediate disinfection, and we have much pleasure in publishing this addition to the quotation made from his lecture.

Upon controversial subjects such as the relative value of immediate self-disinfection, and birth control, the Society of Medical Officers of Health has not yet expressed any official opinion and undoubtedly different Members of the Society hold entirely opposing views upon both these subjects.

We hold no brief for either side, but we take the view that no public benefit is to be obtained by any attempted *suppression* of scientific facts. Opponents of certain policies are, unfortunately, not always content with registering their opposition and arguing the case, but there is occasionally a dangerous tendency on their part to try to suppress facts which if generally known may lead the public to adopt the views of the other side. "Prohibition" of any kind is at present repulsive to the views of the great majority of persons in this country, and the pages of this Journal continue to be open for the expression of all facts, views or opinions which claim to be likely to improve the public health.

THE INSURANCE ACT AND PREVENTION.

Sir William Glyn Jones, in his presidential address to the National Association of Insurance Committees sitting in London, complained that the provisions in the Insurance Act for reducing sickness by removing the preventable causes had been practically a dead letter. Great promises were held out by the Government of the improvements in the health of the community which would result if the country accepted the Insurance Bill but, whatever might be said about the work of the scheme in the direction of insurance or treatment, the other promises had been unfulfilled. Parliament intended that insurance committees should be more than organisations for the administration of medical benefit, and each Committee owed a statutory duty to insured persons and to the approved societies to regard itself as a statutory health authority.

MENTAL DEFICIENCY ACT DEFECTS.

The Annual Report of the Board of Control for 1922 contains references to certain defects which have been revealed in the Mental Deficiency Act. It is pointed out that though the Act undoubtedly aimed at creating machinery by means of which unity and continuity of control might be secured, yet, in practice, this is not the result. The chief difficulty arises from the lack of co-operation between the authorities responsible for mental defectives. The Board of Education is responsible for feeble-minded children from 7 to 16 years of age; the Home Office is responsible for those dealt with under The Children Act, and also through the prison service for adult mentally defective criminals; while the Ministry of Health, through the Poor Law, deals with very large numbers of all types and ages of the mentally defective.

These central authorities have corresponding local authorities and, although the Mental Deficiency Act created an elaborate system whereby a defective could be transferred from one authority to another, the Board of Control has found that, in practice, it is most difficult to secure complete co-operation between the various local authorities. They feel that it is still to a large extent true that "mentally defective persons pass from one authority or institution to another, helped or detained a little in each, but permanently cared for by none."

HEALTH WEEK IN THE WEST RIDING.

Health Week was celebrated in the West Riding of Yorkshire on an unusually large scale. The Education Committee of the County Council granted permission for addresses to be given to school children throughout the county area during Health Week, and these, as far as possible, were given by medical practitioners. No less than 142 medical practitioners (of whom 138 are insurance doctors) consented to give these voluntary addresses to the scholars. Where no such medical services were available the addresses were given by the head teachers, and the final arrangements showed the astonishing totals of 244 addresses given by medical practitioners and 588 addresses given by head teachers.

Dr. Kaye, the County Medical Officer, prepared skeletal notes and suggestions for the addresses and these were circularised to those concerned. At the conclusion of the addresses health cards were given to the children, one being a scholar's "Health Creed," and the other an acrostic on the motto for the year, "Self Help in Health." Some 214,000 of each of these cards were distributed to the scholars of the West Riding.

SCHOOL MEDICAL INSPECTION IN IRELAND.

To the Council of the County Borough of Cork must be accorded the distinction of being the first public body in the Irish Free State to formulate, and put into operation, a scheme for the medical inspection of school children. In a recent report by the M.S.O.H. (Dr. D. Donovan) the Council were advised to make provision in the yearly estimate for the carrying out of the provisions of the Public Health (Medical Treatment of Children Ireland, Act, 1919. The City fathers were quick to see the advantages which must accrue to the rising generation by the adoption of the provisions of this Act, and as a result

a comprehensive scheme for school medical inspection has been submitted to the Minister of Local Government for his approval. As a preliminary to the establishment of a permanent service the Council propose to appoint a whole-time School Medical Officer, at a salary of £500 per annum, to be assisted by a whole-time school nurse. The function of these officials will be to make a health survey of the primary schools within the Borough and to report thereon to the Council, who will then be in a position to proceed with the appointment of the necessary officers, including a whole-time Dentist and additional nurses. It is confidently hoped that the good example set by Cork will be followed in the near future by other Urban and Rural Councils throughout the Free State.

PRECAUTIONS AGAINST SMALLPOX.

The Scottish Board of Health have issued Regulations making chickenpox compulsorily notifiable in Scotland. The Regulations came into force on July 23rd and will continue in force until the end of the year.

It is understood that the spread of the serious epidemic of smallpox which is in progress in Gloucester has been due in some instances to its being mistaken for chickenpox. Cases of smallpox are occurring also in many other parts of England, and this step of making chickenpox a notifiable disease in Scotland is taken because of the possibility of the introduction of smallpox into this country. Every doctor who is attending a person suffering from chickenpox is required by the Regulations to notify the case to the Medical Officer of Health of the district. This should prevent cases of smallpox slipping through as chickenpox and so spreading the disease.

Mild cases of smallpox are sometimes confused, also with infections other than chickenpox. Several instances of this came to the notice of the Board of Health during the epidemic of smallpox in Scotland in 1920-21. To prevent a repetition of this, the Board have suggested to the local authorities that they should ask the medical practitioners in their district to seek the co-operation of the Medical Officer of Health in dealing with any illness that has even a remote resemblance to smallpox.

Every medical practitioner is being supplied through the local authorities with a copy of the Regulations.

PUBLIC HEALTH PROPAGANDA.

At the meeting of the Council held on April 20th, 1923, it was agreed on the proposal of Dr. James Wheatley to write to the Minister of Health urging the establishment of a Propaganda Department at the Ministry. (See PUBLIC HEALTH, May, 1923, p. 227.)

In reply to the Society's letter, the following communication was received from the Ministry:—

Ministry of Health,
Whitehall, S.W.1.
May 12th, 1923.

Sir,

With reference to your letter of April 24th on the subject of the Society's proposals for the publication by Local Authorities and by this Department of information on questions relating to health, I am directed by the Minister of Health to say (1) that as regards the suggestion that work of this character should be made a duty of Local Authorities, the Department would be glad to learn (a) whether the Society have in mind the imposition of a duty in general terms, and if not, in relation to what specific matters, (b) from what source it is proposed that the requisite funds should be derived, and (c) whether the Society would suggest any statutory limitation of the amount to be spent on such work; and (2) that as regards the proper functions of a central authority in relation to such work, the Department would be glad to receive the more detailed proposals with which the Society are so good as to offer to furnish them.

I am, Sir,
Your obedient Servant,
MICHAEL HESELTINE.

The Executive Secretary,
The Society of Medical Officers of Health.

This letter was referred by the Council to a special committee consisting of Dr. Wheatley (chairman), Drs. Barlow, Joseph and Veitch Clark, who were asked to draft a memorandum embodying the views of the Society.

The Memorandum as amended and approved by the Council, and forwarded to the Ministry of Health on September 24th, 1923, reads as follows:—

The points raised in the letter are dealt with consecutively:—

- (1) (a) The duty to be imposed upon local authorities must be almost necessarily in the first instance in more or less general terms.
- (b) It is suggested that the funds should be provided by Local Authorities with a grant from the Exchequer.
- (c) In the opinion of the Society the Local Health Authority is the only body that can efficiently undertake health propaganda and if funds became available under Section 60 of the National Insurance Act, 1911, these should be placed at the disposal of the Local Health Authority for that specific purpose.
- (d) Although in the opinion of the Society, education in health is one of the most important means of improving the health of the nation and is likely to increase in future years, the expenditure might for the present be limited to one-third of a penny rate.
- (2) The principal functions of a Central Authority in relation to propaganda appear to the Society to be:—
 - (a) The encouragement and stimulation of Local Authorities to undertake this work efficiently and in the case of backward and recalcitrant authorities, the application of effective pressure.
 - (b) The accumulation in a central office of information relating to this work which would be available for the use of Local Authorities. As the central office would

be conversant with the work carried on throughout the whole country and abroad, they would be in a position to give most valuable advice.

(c) To collect information with regard to competent lecturers throughout the country and make this available for Local Authorities, and to encourage the enrolment of a class of persons whose principal work would be health lecturing and teaching.

(d) To facilitate the provision of travelling cinemas and exhibitions and the importation of films for the use of Local Authorities; also to help by stocking films.

(e) To issue posters, leaflets and pamphlets for the use or guidance of Local Authorities.

(f) To issue reports from time to time showing what is being done in health propaganda in this and other countries.

The Society is of opinion that a propaganda scheme to be successful must make the fullest use of those avenues of teaching that have already seized upon the popular imagination, such as cinemas, broadcasting, etc. At the same time, the educational possibilities of all the existing services and organisations should be developed to the fullest extent.

If a detailed scheme applicable to the whole country is to be formulated, the Society suggests that it might be advisable to form a joint Committee of representatives of the Ministry and the Society to draft such a scheme.

ASSOCIATION OF COUNTY MEDICAL OFFICERS.

PRESENTATION TO DR. KAYE.

An interesting function took place at the Annual Dinner of the Association of County Medical Officers on Friday, October 12th. Dr. Kaye, the Secretary to the Association, was the chief guest, and there were also present as visitors, Dr. Barlow, President-Elect of the Society of Medical Officers of Health, Sir Henry Gauvain, Dr. George F. Buchan, M.O.H. Willesden, and Dr. Alfred Cox, Secretary to the British Medical Association, and Captain G. S. Elliston, Executive Secretary of the M.O.H. Society. The health of Dr. Kaye was proposed by Dr. Rocyn Jones, County Medical Officer for Monmouthshire, and supported by Dr. Robert A. Lyster, County Medical Officer for Hampshire, one of Dr. Kaye's first Assistant County Medical Officers in the West Riding of Yorkshire. The presentation was made by Professor Bostock Hill, Chairman of the Association, and consisted of a very fine pair of candelabra bearing the following inscription:—

“Presented to Dr. J. R. Kaye, County Medical Officer, West Riding, Yorkshire, by the Association of County Medical Officers of England and Wales, in affectionate regard and gratitude for the work he has done for them as Honorary Secretary during the past 21 years.

“12th October, 1923.”

PASSING THOUGHTS ON SOME PUBLIC HEALTH QUESTIONS.

BEING THE PRESIDENTIAL ADDRESS OF

T. W. NAYLOR BARLOW, O.B.E., M.R.C.S., L.R.C.P.,
D.P.H., of Lincoln's Inn, Barrister-at-Law, M.O.H.,
Wallasey, President of the Society of Medical
Officers of Health.

My first duty is to thank you most sincerely for conferring upon me the greatest honour which it is within the power of the Society to bestow upon one of its members; that of elevating him to the office of President.

Having been for many years a member of the Council, and having filled several offices in the Society, no one knows better than I the increasingly varied and onerous nature of the duties of the office I have just assumed. At the same time I am very conscious of my own limitations and am very diffident as to my ability to carry out the duties successfully, but I can but give you of my best. When I cast my eye down the list of distinguished men who have preceded me I labour under still more misgiving, but even to these, in one respect, I will not yield one iota, viz., in my zeal for promoting the best interests of this Society. One of my candid friends (the Medical Officer of Health of a medium-sized county borough) said to me not long ago, when congratulating me upon my preferment, “Your election will be popular with a very large number because you are looked upon as one of us.” He proceeded to explain that what he meant was that I had not the added prestige behind me of holding office in one of the very large towns or counties. The Public Health Service of this country is the admiration of, and the model for, the whole world. It is obvious that the backbone of that Service, and the section of it which has advanced the reputation of the Service, at least as much as any other section, is that represented by the Medical Officer of Health and his assistants working in the medium-sized and smaller districts throughout the country. I look upon the honour conferred upon me as a recognition of that fact, and I am proud, therefore, to be considered “one of us.”

My second duty is to deliver a Presidential Address. A President is allowed a very large discretion as to the question or questions upon which he may address you, and I shall avail myself of that privilege to the full, and since I have not been engaged in any special enquiries into any special subjects and have no material of sufficient importance to form the subject of a set paper, I propose to write a little on several questions rather than a lot upon one question. Let me begin with an extract from Sir John Simon's book “English Sanitary Institutions.”

“While systematic efforts, on a large scale have been made to widen the streets, to remove obstructions to the circulation of free currents of air, to extend and perfect the drainage, and sewerage, and to prevent the accumulation of putrefying vegetable and animal substances in the places in which the wealthier classes reside, nothing whatever has been done to improve the condition of the districts inhabited by the poor. These neglected places are out of view, and are not thought of; their condition is known only to the parish officers and the medical men whose duties oblige them to visit the inhabitants to relieve their necessities and to attend their sick; and even these services are not to be performed without danger. Such is the filthy, close and crowded state of the houses, and the poisonous condition of the localities in which the greater part of the houses are situated from the total want of drainage, and the masses of putrefying matters of all sorts which are allowed to remain and accumulate indefinitely, that during the last year, in several of the parishes, both relieving officers and medical men lost their lives in consequence of the brief stay in these places which they were obliged to make in the performance of their duties. Yet in these pestilential places the industrious poor are obliged to take up their abode; they have no choice; they must live in what houses they can get nearest the places where they find employment. By no prudence or forethought on their part can they avoid the dreadful evils of this class to which they are thus exposed. No returns can show the amount of suffering which they have had to endure from causes of this kind during the last year; but the present returns indicate some of the final results of that suffering; they show that out of 77,000 persons (in- and out-door paupers), 14,000 have been attacked with fever, one-fifth part of the whole, and that out of the 14,000 attacked nearly 1,300 have died. The public, meantime, have suffered to a far greater extent than they are aware of, from this appalling amount of wretchedness, sickness and mortality. Independently of the large amount of money which they have had to pay in the support of the sick, and of the families of the sick, pauperized in consequence of the heads of those families having become unable to pursue their occupations, they have suffered still more seriously from the spread of fever to their own habitations and families.”

What I have read to you is not, as you may reasonably surmise, a lurid description of the sanitary condition of a town in the Far East on the arrival of the first Englishman, but an extract from a report on the sanitary conditions prevailing in London, the Metropolis of the British Empire, in the middle of last century. So recently as 1871 a report by the

then Medical Officer of Health to the Marylebone Borough Council summarised the advance in sanitation recently made in that Borough. It records, among other matters, the closing of several of the parish pumps, the water from which was found to be impregnated with sewage and other organic impurity; the filling in of over 4,000 cesspools; the acquisition of certain highways owing to the abolition of turnpike tolls; the improvement in the lighting and ventilation of the district churches by the adoption of "the sun light"; and concludes with the gruesome intimation that vaults under various churches and other places had been bricked up and coffins to the number of 1,791 embedded in dry earth mixed with charcoal. A great improvement is stated to have taken place in the quality and quantity of water supplied by the West Middlesex and Grand Junction Water Companies, which, together with that supplied by other companies apparently had previously been stated to be "extensively diluted sewage" . . . If conditions so grossly insanitary prevailed in London, one may with confidence assert that, if possible, worse conditions prevailed in the large towns outside London. Some, especially the younger members among us, are very apt to think that progress in health matters is far too slow, and that we are not making sufficient headway. I would ask them to compare the above conditions with those obtaining now, unsatisfactory as some of these may be in various places. I think all will agree that the improvement has been little short of marvellous. You are all familiar with the mortality statistics of both periods, of the very remarkable decrease in the gross death-rate and infantile mortality-rate, and with the increased average duration of life, and it is quite unnecessary for me, therefore, to quote any statistics to show the results on the health of the community which have followed the great improvements in the sanitary condition of the people. For the last two years, owing to bad trade and the large amount of unemployment, a wave of economy has passed over these islands and there is a strong demand on the part of the people for lower imperial taxation and lower local rates. While the war was on loud were the cries that we must have an A1 population in the future. Alas! when Peace! came the lessons of the war were soon forgotten. Last year (and, indeed, they have not ceased at the present time) very serious efforts were made to cut down expenditure on all public services, including the Public Health Service, and Medical Officers of Health, and even the Ministry of Health, were at pains to show that the money spent on improving the health of the community was well spent, and so save their schemes from the operations of the Geddes' Axe. In this connection, Sir George Newman showed that

Maternity and Child Welfare, Tuberculosis and Venereal Disease schemes cost only 1.1 per cent. of the total amount of rates of England and Wales, and described public expenditure on health as a "long termed investment yielding its interest with absolute certainty a thousand-fold, but only in the course of years, and sometimes only in the course of generations." These efforts were so far successful that successive Ministers of Health, and other Ministers in high offices, and even Sir Eric Geddes himself, have declared more than once that not only must the activities of Health Departments not be curtailed, but that the health of the nation is of such paramount importance that schemes essential for the improvement of health may even be developed in certain directions. So far so good. The work for the improvement of the Public Health has been abundantly justified and the axe of the executioner ward off, but what of the personnel responsible for the organising, administering and successful running of the various schemes. This personnel has collectively been euphemistically described as the Public Health Service. As existing at present it does not deserve so dignified a title, it is not a service in the same sense as the Army and Navy Medical Service, or the Indian Medical Service, it is but a chaotic conglomeration of units. Is it not a fact that we have individual doctors doing almost identically the same work, work which demands the same amount of skill and experience, and performed in towns and districts in many instances almost identical in size, and yet under conditions far less favourable in one district than in another, and at rates of remuneration differing as the poles and which depend entirely on the goodwill, or otherwise of a body of councillors, very few of whom have the slightest conception of the character of the work to be done, or the amount of study and experience necessary to be gained before one is even qualified to take up the duties. The work of the Medical Officer of Health is to all intents and purposes the same in every County Borough, although differing in volume according to the size of the County Borough. The work of the Tuberculosis Officers, the Venereal Disease Officers, the School Medical Officers, etc., differs in character very little, if at all, in the various towns and districts, except that it is perhaps carried on under better environment in, e.g., a place like Eastbourne than in the poorer parts of a large town, and yet up to a few weeks ago it was possible to point out that the salary paid to the Medical Officer of Health of a town containing half a million inhabitants was less than that paid to the Medical Officer of Health in several towns less than one-eighth its size. There exists to-day all over the country glaring anomalies, Medical Officers of Health,

School Medical Officers and Tuberculosis Officers are paid widely differing salaries. Again, in some towns and counties there are superannuation schemes, in others there are not; some Medical Officers of Health have security of tenure, some have not. But it may very pertinently be asked, of what use is security of tenure unless accompanied by security of salary, and that a reasonable salary. There is nothing to prevent a Local Authority engaging a medical officer to-day at an agreed salary, and at some future period, even a short period, dismissing him and re-engaging him at a smaller salary, which he is not willing to accept, but which he is perhaps obliged to accept through force of circumstances. This is not a chimerical example, what I have outlined has actually happened. In a recent case I am extremely glad to find that the Ministry of Health refused to sanction the dismissal of a Medical Officer of Health when that dismissal was merely a means for breaking the existing contract and forcing a less favourable one upon him. While perhaps we may differ as to the advisability of the Ministry of Health taking any part in the fixing of a salary we shall all agree, and it is our earnest hope, that once a salary has been fixed, and a contract entered into, the Ministry will refuse to sanction the dismissal of an officer when that dismissal is merely the means of forcing an individual to agree to accept another, and less favourable, contract. If the Ministry would let it be known that it would adopt that course of action in the future, and if at the same time a reasonable and uniform rate of pay for the same kind of work could be secured, allowances being made for increased responsibilities on basis of population, or any other suitable basis, then indeed would we have travelled a long way towards the provision not only of a contented, but a real Public Health Service. Then, also, and only then, there will be attracted to the Service a type of medical man who may be relied upon to add fresh triumphs to those already won in the field of Preventive Medicine.

The economy stunt has, however, had one good result; it has caused us to take stock of our activities, and of the relative expenses incurred under each. That brought out some startling facts. These showed, as you all know, what an exceedingly small amount relative to the gross expenditure of Health Departments was spent on Maternity and Child Welfare work, and the large amount, in proportion, on infectious hospitals and the prevention of infectious diseases. In the Borough of Wallasey if one excludes the collection of house refuse and its burning at the destructor, I find that no less than 84 per cent. of the total expenses are spent on the last named. It costs a considerable sum per week to maintain a patient in hospital. On the average about 50 per cent. of the

total cases in the infectious hospital were scarlet fever. Now the type of scarlet fever which has prevailed in Wallasey of late years, as indeed in other places, has been so mild that in the last three years there have been but five deaths in 904 notifications, or a death-rate of .5 per cent. The question naturally arises: Is it worth while providing hospital accommodation for a disease so mild? In my view it certainly is not a justifiable procedure to isolate a case of scarlet fever in hospital merely because it is scarlet fever, without any regard to its severity or the conditions under which it would be if it remained at home. There would be more justification for the expenditure if the removal of cases to hospital resulted in a lessened incidence of the disease, but I think most of us are agreed that the effect in that direction is very small. In Wallasey, strange to relate, a lowered incidence has followed a reduced percentage of removals to hospital. Someone is certain to point out to me that the removal of the first case in an overcrowded house must of necessity remove, or considerably reduce, the risk to those remaining. Of course it does, but even when the first case is promptly removed it is quite common to find the second, third and often more cases occurring, at varying intervals, in the same house. The truth is we do not know all there is to be known about the means of infection in scarlet fever. Indeed our knowledge from the point of view of infection with regard to not only scarlet fever but the other two infectious diseases more common and far more deadly than scarlet fever, viz., measles and whooping cough, has advanced very little if any during the last 25 years. Many points require elucidation. What is the cause of scarlet fever? Is there such a thing as delayed infection? In other words, can a person be infected to-day and show manifestation of the disease two, three or four weeks afterwards? We know the incubation period is usually short, but how can we explain the recurrent cases in houses just referred to? Are there carriers? What part, if any, do (1) fleas, bugs, etc., (2) the domestic animals play in the spread of the disease? Of one thing I am quite clear, viz., that with our present methods and our present knowledge we do little or nothing in the direction of the prevention of these diseases. Our methods of dealing with most infectious diseases are largely empirical, and yet they are stereotyped to a degree, and far too inelastic. The Medical Officer of Health who discharges his scarlet fever cases from isolation in on an average three weeks, and has discontinued house disinfection, is looked upon as something of an iconoclast; I suppose because we have read in text books that the period of isolation should be six weeks, and that house disinfection is always mentioned as one of the things which must follow removal to hospital.

There is not sufficient recognition of the fact that some diseases have changed in type enormously, and consequently some modification of our methods of dealing with them may be desirable. As one who saw the cases of smallpox in Gloucester, I have no hesitation whatever in saying that if we could rely absolutely that the type of smallpox of the future was to be the Gloucester type, our administrative measures would have to be reviewed. With the exception of smallpox and the brilliant work in regard to certain tropical diseases our direct attacks upon infectious diseases from a preventive point of view must be written down, if not as failures, then as not very successful. We might also claim the inoculation against typhoid as a success, and point to the remarkable absence of that disease amongst the troops in France, but it should be remembered that during the same period there was almost a complete absence of the disease at home among the civil population, who were not inoculated. It is possible that in the Schick Test we have a valuable means of immunization against diphtheria.

Without any doubt Child Welfare work yields the best results of all Municipal health undertakings, and is going a long way towards providing an A1 population for the future. There seems to be some doubt in the minds of certain people as to the value of some of the lives saved, and it is alleged that we are saving the lives of weaklings who would be better dead. I, personally, do not subscribe to that opinion. The answer to the question appears to me to be obvious. A diminished death-rate connotes better health in the survivors. The infantile mortality rate has diminished in a very remarkable manner, and while there are many fewer deaths under the age of one (incidentally, there are also many fewer deaths between the ages of one and five), which means that the factors at work which tend to death are less potent, perhaps less numerous, and, therefore, the survivors are healthier on the average. Under any conditions which we can envisage we shall always have weaklings, for some children will die and some will just stop short of death and survive; among these will be the weaklings. The only difference to my mind is that although nowadays many survive who twenty years ago would have died, and some of these are weaklings, twenty years ago while many more died many more just stopped short of death and consequently there were many more weaklings, but owing to the improved average health of to-day many who would formerly have been weaklings are now transferred to the healthy class. As to the causes which have contributed to the fall in the infantile mortality-rate during the present century, it is possible that there are almost as many opinions as there are Medical Officers of Health, but as one

who was in office during times of excessive infant mortality, I well remember the discussions which took place at conferences, and the chapters in the Annual Reports of Medical Officers of Health dealing with the causes of this excessive mortality. There was practically unanimity in regard to certain causes, and certain measures were evolved to combat these causes, which were put into operation. The infantile mortality-rate, which had just begun to show some suggestion of falling, began to fall with remarkable rapidity. Is it not somewhat ungenerous to say now, and one has often heard it said, that these special measures designed for this special purpose have played no part in the drop? I presume when venereal diseases have been stamped out, and tuberculosis has been reduced even to a fraction of what it now is, some sceptic will still be doubtful as to whether the special measures devised had the result which they were set up to accomplish.

I presume we must rely for future improvement in the health of the community on those measures which have already wrought such a wondrous change in the past. We must (1) continue to improve the environment of the people, especially in the direction of the removal of slums and the provision of more and better houses; the lack of these is doing more to retard the progress of public health than any one single factor. Our outlook on housing is truly Gilbertian. There seems no lack of money to provide and maintain "Homes for the Fallen," "Sanatoria," and "Hospitals" and the like, but there is no money for the building of houses which, if provided, would short circuit the necessity for most of these institutions, for do not bad and overcrowded houses lead to immorality, ill-health and disease, and tend to that loss of self-respect of those living in them which produces the slummer? We must (2) take advantage to the utmost of any increase in medical knowledge, and here one must confess to a little disappointment that, having regard to the brilliant successes in the fields of tropical medicine, and having regard to the immense amount of research work undertaken, bacteriology has not, up to the present, been able to help us more in the field of preventive medicine, especially in regard to our common infectious diseases. And we must (3) continue to educate the people in the laws of health, not only by continuing our present methods but by a wise development of them. However perfect one's environment may be that, in itself, will not ensure health; to ensure this the individual must do his part, and that, probably the greater part. How can the individual do this without the knowledge? He must be given the necessary knowledge by every means at our disposal. By educating the individual, you at the same time, help to formulate public opinion, and without public opinion behind

you, you will never travel far; for example, you will never get much "förräder" in so urgent a matter as the prevention of the gross pollution of the air by smoke, until public opinion definitely demands it should cease, but incidentally public opinion will not demand this until a method of heating houses is found which is cheaper than that of burning coal in open grates.

May I, at this point, express my astonishment at the utter lack of appreciation (by many) of the fact with which one might reasonably expect them to be acquainted, that in the Public Health Service there exists in every county, county borough, borough, and indeed in almost every village in this country, an expert organisation well fitted in every way to undertake (1) propaganda work on all matters relating to the health of the people, and yet at the Royal Society of Medicine not long ago it was seriously suggested that the aid of the Red Cross Society should be enlisted to educate the people on some points in connection with cancer; (2) to obtain and supply any information which, e.g., the Medical Research Committee might from time to time desire in order to assist them in the solution of a particular problem which may have arisen in connection with their work.

The machinery I would suggest may also be useful for the performance of a little research work off our own bat so to speak; for example, in the elucidation of the relative value of the causes in operation in regard to malnutrition of children by the provision of nutrition clinics. Dr. W. P. Emerson, of Boston, U.S.A., in the preface to his book on "Nutrition and Growth in Children," says:—

"Looking back through thirteen years' study of this problem I find the following ideas to have been considered in turn as primary causes of malnutrition, only to have been discarded or relegated to a position of secondary importance, one after the other:—

- (1) Poverty and insufficient food supply.
- (2) Improperly cooked food and consequent indigestion.
- (3) Bad air.
- (4) Heredity.
- (5) Syphilis.
- (6) Tuberculosis.
- (7) Self abuse."

After practical investigation into each of these he asserts that the five chief causes of malnutrition in the order of their importance are:—

- (1) Physical defects, especially naso-pharyngeal obstruction.
- (2) Lack of home control.
- (3) Over-fatigue.
- (4) Improper diet and faulty food habits.
- (5) Faulty health habits.

The requisites for good health in the growing child,

he says, are good air, simple food, rest and proper exercise. We shall all agree with these requisites at once, but certainly some of the suggested causes of malnutrition are novel, and although they may be true as regards America it may be that under the different conditions obtaining in this country findings here may not completely tally with the above. In any event the subject is most important and the experiment well worth making.

Included in the programme for the coming Session is a paper on the place of Mental Deficiency in Public Health. I do not wish to anticipate this paper in any way, but I must give it as my opinion that mental deficiency as an influence undermining the mental and physical health of the nation has not received, up to the present, the attention of Medical Officers of Health which its importance deserves.

The reason probably is due to the fact that Mental Defectives of school age are the concern of Education Committees, and thus come under the notice of the Medical Officer of Health only in his capacity of Schools Medical Officer (in this connection it must be remembered that there are still places in which the Schools Medical Officer is distinct and separate from the Medical Officer of Health), and outside the school age are the concern of a special Committee with which the Medical Officer of Health may or may not be associated. I have attended one or two conferences on mental deficiency, and have been much struck by the number of people connected with Boards of Guardians who have attended, and by the paucity of Medical Officers of Health among those present. Since intelligence tests have become more commonly used our knowledge of the extent to which mental deficiency flourishes has become fuller, but we are far behind America in this respect. Terman in his book, "The Measurement of Intelligence," gives many startling results of enquiries. Let me quote just one:—"At the State Reformatory, Jeffersonville, Indiana, Dr. Von Klien-Schmid, in an unusually thorough psychological study of 1,000 young adult prisoners, finds the proportion of feeble-mindedness not far from 50 per cent."

He also gives some examples of heredity studies of degenerate families. Let me again quote just one:—"Martin Kallilak was a youthful soldier in the Revolution War; at a tavern frequented by the militia he met a feeble-minded girl, by whom he became the father of a feeble-minded son. In 1912 there were 480 known direct descendants of this temporary union. It is known that 36 of these were illegitimate, 88 were sexually immoral, 24 confirmed alcoholics, and that 8 kept houses of ill-fame. Of the 480 descendants 148 were known to be feeble-minded, and that many of the others were of questionable mentality."

A few years after the war the same Martin Kallilak married a respectable girl of good family. From this union 496 individuals have been traced in direct descent, and in this branch there were no illegitimates, no immoral women and only one man sexually loose, no criminals, no keepers of brothels, only two alcoholics, and no feeble-minded individuals.

Again the experience of the United States, when mobilising for war, showed that of those examined 22 per cent. were mentally below the age of 9 years and 47 per cent. below age of 13. Dean Inge, in his Outspoken Essays, comments on these figures thus:—"America then, the classical land of democracy, is governed by voters, about half of whom are, in intelligence, children of less than 13 years old. It will hardly be maintained, either that our population is more intelligent than the American, or that the addition of female voters would raise the standard. We have, therefore, come to this—our legislators are chosen by a body, half of whom would be scientifically classed as high-grade morons." I take it that it is still the duty of the Medical Officer of Health to inform himself . . . respecting all influences affecting, or threatening to affect, injuriously the public health within the district, and that public health includes both the physical and mental health of the community.

What I have just written is sufficient to show that mental deficiency is an influence affecting injuriously the public health of any district; anything which tends towards the degeneration of the race must be such an influence. I shall look forward with great interest to Dr. Young's paper, but must permit myself to say this, that it is to be regretted that the Medical Officer of Health as Medical Officer of Health was not brought in to deal directly with this question from the outset, and not as now either indirectly or perhaps not at all.

In conclusion, it has long appeared to me, and I have often voiced the opinion, that much ill-health and many of the disabilities in adult life tending to casual labour and poverty are caused by the incomplete convalescence from the so-called minor ailments of childhood. It would, therefore, be economical in the long run to take steps to ensure complete convalescence. Owing to present housing conditions, some provision is urgent, for if overcrowding and bad housing cause ill-health, as they do, they must interfere with convalescence after illness. There is no need for elaborate institutions for this. Some of us at some time or other have blocks in our infectious hospitals empty for months at a time, and many more will have if the admissions of scarlet fever cases are restricted. Here we have at hand the ready-made article, and ready-made staff. The only obstacle in the way is the danger of cross-

infection, and this, in my view, is so slight as to be negligible, provided means are available for ensuring that the different classes of patients do not come into contact with one another. I quite admit there would at first be a sentimental objection on the part of parents to allow their children to enter even the grounds of an infectious hospital, but that would soon vanish when it was found by experience that nothing untoward happened.

Here endeth the address. Stormy times lie before us, storms which will take all the patience, tact, firmness and wisdom we possess to weather. If we are loyal to one another, and do not place petty personal advantage before the advancement of the service as a whole, we cannot help but succeed in our aims. It behoves each one of us to impress upon our respective Authorities that, although in presenting the scale it may appear that we have no other object than attempting to obtain a modest remuneration for services rendered, there is something more we are aiming at, the ideal of a real public Health Service, a service which one may enter with the confident assurance that, even if one may not succeed in obtaining one of the higher posts, one may at least look forward to a modest reward for a life spent in work of extreme value to the health of the community, and that this ideal can never be attained until the conditions of service and remuneration are placed on some uniform basis. I have great hopes that once this conception of a service is assimilated by Local Authorities, the opposition in front of us will be greatly modified. No attempt is being made to deny Local Authorities the mastership in their own house, but we do suggest that it is highly undesirable, and not to the advantage of the community, that specialist medical services, identical in character, should be assessed at such widely varying values throughout the country, and should be rendered under such varying conditions.

CORRECTION.

Two obvious misprints occurred in the article by Dr. J. Graham Forbes published in our September issue. At the foot of p. 336, "black spaces for August," should have read "blank spaces." On p. 337, right-hand column, the last paragraph but one, should have read, "The mortality from diphtheria in New York City fell from 2.2 per 10,000 in 1919, and 1.8 in 1920, to 1.6 in 1921 and 1.5 in 1922."

BIRMINGHAM UNIVERSITY APPOINTMENT. Dr. R. Woolsey Stocks, Medical Officer of Health for West Bromwich, has been appointed an Assistant Lecturer on Public Health at Birmingham University.

HEALTH OFFICERS IN AMERICA.

LEAGUE OF NATIONS, THIRD INTER-CHANGE.

BY

CHARLES PORTER, M.D., B.Sc., Medical Officer of Health, St. Marylebone.

It is not unlikely that representatives of other interchanges, past and future, will claim that great importance attaches to the particular mission to which they belong; unquestionably, however, there is a peculiar importance attaching to this, the third of the series. For one thing it is the first to be held outside the confines of Europe; it appears to be something more of a venture and it is to be held in the United States of America, the land of the nation to which not only health-workers but everybody else seems to be looking for guidance.

Though perhaps not so numerous as the personnel of previous interchanges, the members of this, as the list shows, are drawn from a much wider area, if not quite from China to Peru, then nearly, Russia on the one hand sending three and Brazil and Chili between them also three. The party numbers twenty-five in all, and with two exceptions only, Dr. Sanneman, the German representative being already in the States, and M. Voeykoff, the third from Russia, who was only included at the last moment and had not time to secure all the necessary visas. The European representatives travelled together on the United States Liner, President Roosevelt, which sailed from Bremen and touched at Southampton and Cherbourg, picking up members of the party at each of the three ports. The presence of so many medical members on board caused something of a mild sensation when the passenger list appeared, but just as most of the passengers acquired sea legs in the course of a day or so also they became habituated to the medical quality of the atmosphere.

Travelling together for a week in the intimacy inevitable in a ship so extraordinarily friendly as this, an excellent opportunity offered the delegates of becoming acquainted; of learning something of the arrangements in the various countries, of the point of view of European colleagues, and of the matters each desires particularly to study. Fortunately there was little sickness, only one, Dr. Kuhn, the representative of Yugo-Slavia, being incapacitated for more than a day or two. In his case the trouble was more serious than mere sea sickness and deprived his colleagues of all

opportunity of seeing him after the first day. How remarkably polyglot the party was, came home more definitely to the English representatives than was the case when the first interchange brought colleagues to Great Britain. Then, the association was much less intimate, certainly was not of the nature of a living *en famille*. The majority, no matter what the country of origin, have some English, many a very great deal; few indeed have so little that they prefer to converse exclusively in their own language. Even with these, interchange of views, ideas and information is possible using the snippets of various languages acquired so laboriously at school and otherwise. The representatives from Northern European countries, and those from Poland, Russia and Greece, of whose language there has been no opportunity of obtaining a knowledge, by a wise dispensation, know English wonderfully, and if there is any difficulty there is always at disposal a word or two of French or of German even. The members from Italy and from Spain are both well up in English but, of course, also speak French fluently. At the British interchange there was no Spanish representative, nor was there one from Greece, Holland and Switzerland, and it is very pleasant that they have been included in this. They, like the majority of the members from European countries are officers in charge of particular districts including, it may be, one or more towns. Probably, so far as their duties are concerned, they may be regarded as corresponding to inspectors of the English Ministry of Health or to medical officers of health of a country, rather than of an urban district.

During the passage a great amount of diligence has been displayed by practically all. Dr. Lothian of the League of Nations, who is shepherd, guide, philosopher and friend, has had little leisure. Individuals have worked no less hard. Dr. Batko, the Polish representative, set himself the task of writing out from interviews with other members a description of the health organisation in the countries represented, and completed his self-imposed task well before the end of the voyage. It is to be hoped there may be some opportunity of studying his efforts.

One of the duties of Dr. Lothian has been to get it decided as far as possible by each member before reaching New York exactly the itinerary he desires to follow and the matters he wishes particularly to investigate. This has been no easy task. The general scheme is that there shall be three groups, though the separation does not actually take place until after the party has been in the United States for about two weeks.

After arrival in New York, all proceed to Washington, possibly direct or more probably, since the ship is due on Thursday, 6th September, and work in the capital does not begin till Monday, 10th, after a day or two in New York.

The course in Washington is to last for two weeks and will include addresses of instruction from a variety of specialists and heads of the central Government departments; also, of course, there will be visits to institutions of health interest. In this, in addition to the members who crossed the Atlantic, will participate representatives from Brazil, from Canada, Chili, Mexico and Salvador. The representative of Germany, Dr. Sannemann, of Hamburg, who preceded the party arriving on the *President Roosevelt*, and M. Voeykoff, the Sanitary Engineer from Moscow, and the only new medical representative, it is hoped will also be able to take part. On Sunday, 23rd September, the various groups go south; the first to Virginia to spend about four weeks, three in study of work generally in a rural county and ten days in seeing the health organisation and administration in Richmond. The Southern State chosen for the second group is North Carolina and for the third Alabama. The amount of time to be given by each is the same; the city to be visited by group II. being Raleigh, and by group III. Montgomery. The Northern State visit begins in each case on 25th October. Group I. passing on to Massachusetts to see rural areas and work in a small city and a large city, in this instance Boston. Group II. visits New York State and sees the work in Albany, Syracuse and New York City. Pennsylvania is the northern state chosen for the members of group III., visits being paid to Harrisburg and Philadelphia. At the close of the course in the Northern States all members repair to New York City to study the quarantine and immigration methods in operation. At the end of the week here, on November 30th, a return is made to Washington for final conferences, etc. These are expected to end on December 9th; after which members are to be permitted to devote a period of two weeks to individual study, visiting such towns and institutions as they desire to see. It is hoped that all the European members will make the return journey together and will be enabled to accept an invitation of the League of Nations, Health Section, to proceed direct to Geneva for the purpose of reporting as to the work done, and submitting each a short statement or some matter to which particular attention has been given. In the course of the passage, the members had from Dr. Lothian an interesting description of the organisa-

tion and activities of the Health Section of the League. The purpose of this being to provide accurate information to individual members on these matters, in the hope that there might be some uniformity in the statements given to interviewers who are understood to be particularly ubiquitous on these shores. Having regard to the situation in Greece and the curiosity, in the beginning at least, as to the part to be played by the League of Nations, it was expected that the personnel of the interchange, bearing a label of the League would be particularly liable to receive attention from the reporters.

Though a considerable part of the time was given to work, discussions and speculation as to what would be seen and done when the States were reached, recreation was not neglected. Indeed ample provision is made on board to prevent passengers from suffering from boredom. For those who rely upon walking for exercise, there is the promenade deck and "11 times around is one mile." Many of the members it is alleged have never walked so many miles nor so quickly. Also there is deck tennis, a game calling for little in the way of appliances but much in the way of energy. More sedate and dignified recreation may be obtained from deck quoits and shovel board; the English delegates preferred, one at least excelled, in the more exciting and strenuous exercise provided by deck tennis. In this they were frequently joined by the children, of whom, mercifully, there were many on the passenger list and all very friendly, happy and energetic. After the first day a newspaper appeared daily on the breakfast table and we learned a great deal as to the happenings in Greece and in Yokohama. Midday provided its excitement when the length of the previous day's run was announced and old travellers indicated the exact moment of arrival at New York; also the name of the winner of the "auction pool" was declared. This carried satisfaction to at least one person aboard. Each evening there were "moving pictures," the screen being erected aft in such a position that all classes of passengers could share in the pleasure to be obtained from dramas, comics and topical. In the "social hall" there was generally dancing, though the dancers, particularly amongst the members of the interchange, did not appear to be numerous. On Sunday there was a religious service at 10.30; this—truly—was attended by practically all members. It was conducted by the purser, and included a short address by an English clergyman. Quite a good deal of musical entertainment was provided, the orchestra playing at meals and in the evenings and at inter-

vals during the day. On one evening during a part of the entertainment Dr. Lothian told the passengers all about the mission, and the members, to the great delight of certain of the passengers who had been endeavouring to find one who could speak English but had succeeded only in running into "a buzz-saw of Russian, Spanish and Greek."

The ship being a United States liner was, of course, dry, the supply of iced water was, however, generous and the habit of consuming quantities at all the chief meals—including breakfast—soon became general, even amongst those of the delegates from countries in which wine is customarily drunk. Because the articles on the menu were American meals provided a considerable amount of interest and entertainment. To some, curiously enough, grape fruit was new, and to all "sweet potatoes," "noodles" (a form of macaroni), "weak-fish," and the bulk of the long string of "cereals" included with "Kellogg's Bran" in the breakfast menu. It was noted with interest that "stirred eggs, country style" meant two fried eggs in a round dish (oeufs sur le plat) separated by a sausage and covered with a rich brown sauce. The various pies and of course the ice-creams in endless variety proved immensely fascinating. The tea habit which, it is understood, is obtaining a strong hold in America, is fostered on board, though it caused the English delegates, at least, to marvel on finding that so far as afternoon tea was concerned the method of dispersing involved a reversal of the ordinary practice at home, being from an open topped silver jug or pitcher, while the milk was served from what appeared to be a teapot. The tea used is apparently supplied in "makings," each contained in a small muslin bag, and each individual lump of sugar appears wrapped in a piece of paper. These remarks are made, it must be said, not in any sense critically, but only to show that English methods are not, as some imagine, universally adopted. Indeed it would be ungrateful to offer criticism of anything done on this ship, where every member of the staff, from the highest to the lowest, appears to be engaged exclusively in trying to make each passenger believe himself the most honoured guest. Amongst the officers, one with whom the group members came closely in contact was the medical officer, Dr. Bolling. To him all were most grateful for an invitation to accompany him on a sanitary inspection of the ship. His statement that "the one thing which I insist on this ship is cleanliness" appeared to be true, both in substance and in fact.

MATERNITY AND CHILD WELFARE CENTRES.

[At the request of the National Association for the Prevention of Infant Mortality, the following scheme for the conduct of Maternity and Child Welfare Centres, has been drawn up by the Maternity and Child Welfare Group of the Society of Medical Officers of Health for the guidance of Medical Officers of these Centres.]

In drawing up the scheme the Maternity and Child Welfare Group have kept in mind RECOMMENDATION 10 of the Report, on the value of Maternity and Child Welfare Work in Relation to the Reduction of Infant Mortality issued by the Medico-Sociological Committee of the British Medical Association in June, 1921, and have followed closely the points emphasised in PARA. 10 of that report. The Scheme was approved by the Council of the Society at their Meeting on September 21st, 1923.]

SCHEME.

SECTION 1.—Clinical Duties.

A. Pre-natal Consultations.

Medical consultations for expectant mothers.

- (1) Normal Cases.—To be advised on hygiene of pregnancy and instructed in the care of Infants.

Provision should be made for:—

- (1) Following up;
- (2) Subsequent Examinations;
- (3) Routine testing of urine. (This need not always necessitate the personal attendance of the mother.)

- (2) Abnormal Cases.—(a) Those who are found to require out-patient treatment, to be referred primarily to

- (1) Own family doctor or dentist, or, failing them,
- (2) Special hospital if they so desire, or
- (3) Treatment Clinic of the Centre if existing.

- (b) Those who require in-patient treatment to be referred primarily to own family doctor, or, failing him, to

- (1) Hospital if they so desire, or
- (2) Maternity Hospital, if complicated obstetrical case.

Notes.

1. The co-operation of doctors and midwives should be sought by the Health Visitor and Medical Officer in encouraging expectant mothers to attend the Centre, and in obtaining specimens of Urine for Routine Testing.

2. Doctors and Midwives sending cases to the Centre, or subsequently engaged should be notified of the result of the examination.

3. All abnormal cases referred from the Centre for treatment as above should be accompanied by a letter explaining as completely as possible the findings of the Medical Officer of the Centre, and the reasons for the reference.

4. No cases should be admitted to a Municipal Maternity Home without previous attendance at the Pre-natal Centre, except under extreme emergency, and then only with the sanction of the Medical Superintendent, but this rule may be varied on receipt of a Certificate from a Medical Practitioner in Ante-Natal attendance on a patient in her home.

Admission should not be confined to abnormal cases.

5. Certain minor ailments (specified below) may be treated at the Centres, if the patients are unable to obtain treatment from their own doctor.

6. A Pre-natal Clinic Session should be limited to two hours.

Patients requiring milk under "assisted scheme" to be appropriately advised.

B. Post Natal Consultations.

I. Medical Consultation for those who desire same up to six weeks after confinement.

Patients to be classified into Groups shown in "A," and dealt with on the same lines.

II. If numbers not great enough for a separate session, the work may be combined with Pre-natal work.

III. After six weeks, these consultations to be merged with Infant Consultations, in the absence of any special indication to the contrary.

C. Infant Consultations.

I. *New-born Infants*: All babies brought to the Centre for the first time should be examined by the Medical Officer.

(a) Healthy, normal Infants: Mothers to be advised on Infant care and management.

(b) Abnormal Infants: To be referred for treatment on the same broad lines as defined under pre-natal Consultations.

Certain minor ailments (specified below) may be treated at the Centre, if early treatment will prevent more serious developments, and the parents unable or unlikely to obtain this immediately from a private doctor.

II. *Other Infants*: To be examined by Medical Officer and classified as above.

III. Infants should be examined at least, monthly in the first year, bi-monthly in the second year, and subsequently up to school age, quarterly or half yearly.

In industrial or congested areas it is recommended that the infants under one year should, whenever possible, be inspected weekly up to the end of the third month.

Notes.

(1) In view of the exacting nature of the work, its value tends to deteriorate if a session is prolonged more than 2 hours.

(2) The primary duties of Clinical Officers at Welfare Centres have to do with the prevention of defects, and the education of the parents in the early detection of same, by means of medical consultations, and instruction. This instruction should not be confined to Infant Feeding, and the Health of the Mother, but should embrace instruction in clothing, preparation of food, home nursing, training of children, and the general welfare of a humble home.

(3) Treatment at Maternity and Child Welfare Centres, should only be given to those patients who cannot or are unlikely to obtain it elsewhere, and should be confined to the following groups of defects and treatments:—

Maternal Defects.—

Ante-natal Defects.—Gastro-Intestinal, Varicose Veins, Dental, Lax Musculature, Mammary.

Treatment.—(1) Advice on Diet and personal Hygiene.

(2) Recommendation of simple remedies for the affections incidental to pregnancy.

(3) Recommendation for suitable appliances.

(4) Instruction in value of posture, etc.

(5) Such steps as are necessary to encourage adequate and correct functioning of the breasts.

Post-natal, as above, and

To take such steps as will ensure the normal termination of the neo-natal period.

Infantile Defects.

Respiratory.—Advice in Nasal and oral Hygiene. Existing Institutions for the treatment of sick children should be utilised as far as possible, notes for these institutions being provided by the Centre for necessitous cases.

Gastro-Intestinal.—

(1) Advice in personal hygiene and dieting;

(2) Recommendation and occasional prescription of laxative or corrective;

(3) Prescription of Cod-liver Oil, etc., in malnutrition.

Cutaneous.—Prescription of ointment or lotion in case of slight eruptions which would otherwise escape treatment, and become more serious.

Developmental.—

(1) Provision and application of pads and trusses in herniæ.

(2) The separation of adherent prepuce, and the prevention of phimosis.

(3) Treatment of the unhealed umbilicus.

(4) Provision should be made for the collection of specimens for examination by the Venereal Disease Pathologist, to avoid unnecessarily sending a mother or infant to the Venereal Diseases Clinic.

If a Treatment Clinic exists in connection with the Maternity and Child Welfare Centre the treatment of Venereal Disease should be undertaken thereat. Where no such Treatment Clinic exists, special sessions should be arranged at Venereal Disease Centres for Expectant and Nursing Mothers and Children.

(5) When conditions are found adversely affecting either the nursing mother or the infant, which apparently are due to mismanagement, neglect or ill-advice the defaulter should be notified of the defects discovered, and the Local Supervising Authority informed, in the case of a midwife.

SECTION 2.—Administrative Duties.

These include:—

A. Procedure to carry out:—

(1) Notification of Births Act;

(2) Ophthalmia Neonatorum Regulations;

(3) Control of Puerperal Fever.

B.

(1) Organisation of Health Visiting, including the training of the staff, and actual observations of methods of Health Visitors in the home as well as in the Centre.

(2)

(a) Encouragement of midwives to attend the Centres for consultation and assistance.

(b) Where the Authority is the Local Supervising Authority under the Midwives Act, the Control Supervision and Instruction of Midwives.

C. Co-ordination between:

General Public Health Work, Maternity and Child Welfare, and School Medical Service.

The success of a Maternity and Child Welfare

Centre depends upon the experience and personality of the Medical Officer who is responsible for all medical arrangements, and the general supervision of the work of the Centre. A knowledge of the world, and a wide experience in dealing with children, are invaluable assets. The Medical Officer should embrace every opportunity of becoming acquainted with the home conditions and personal characteristics of the mothers attending the Centres. In this connection the judicious development of the social side of the Centre should be encouraged.

Those responsible for the staffing of Maternity and Child Welfare Centres should realise that the work requires experience and sound judgment, and the Medical Officer appointed should have had special experience in the defects and diseases of Infancy, and the rearing of the normal infant, and if taking an Ante-Natal Clinic should be specially trained in Obstetrics. In no case should the Medical Officer be of less than three years' standing from the date of qualification, as agreed by the Society of Medical Officers of Health, and the Council of the British Medical Association.

In those towns with Medical Schools, opportunity should be given to Senior Medical Students to become acquainted with the work of Infant Welfare Centres, and lectures arranged by the Medical Officer of the Centre.

THE HOURS AND HOLIDAYS OF HEALTH VISITORS.

[In compliance with a request received from the National League for Health, Maternity and Child Welfare, the Society of Medical Officers of Health have approved the following Memorandum on "The Hours and Holiday of Health Visitors," compiled by the Maternity and Child Welfare Group of the Society.]

The consideration of the question of "Hours and Holidays of Health Visitors" involves:—

(1) An investigation of the "Hours and Holidays" now generally specified by Local Authorities.

(2) A Survey of the work expected of them.

(3) A comparison of this work with that done by other Municipal Officers.

(4) An enquiry into the sickness rate among them as compared with clerical and other inspectorial workers.

The Maternity and Child Welfare Group of the Society of Medical Officers of Health, while not suggesting that detailed investigation on the

above lines has been undertaken have, nevertheless at various meetings of the Group and the Executive Committee listened to the views expressed by a considerable number of its members, and as a result submit the following observations for the guidance of the National League for Health, Maternity and Child Welfare.

- (a) In most instances the hours and holidays are those applicable to workers in a similar grade, e.g., Sanitary Inspectors, Rate Collectors, etc.
- (b) The work of a Health Visitor is very largely educational and involves a preponderating proportion of individual tuition which is more laborious than class teaching.
- (c) The Home Visiting involves exposure to all weathers and frequently exposure to infection in the stuffy atmosphere of insanitary dwellings for much longer periods than are involved by the work of Sanitary Inspectors.
- (d) The strain of the work is evidenced by a high sickness rate, it being a frequent experience that the sickness rate of Health Visitors is higher than that of Sanitary Inspectors, Rate Collectors, and others whose work is divided between the office and their districts.
- (e) In areas where the Health Visitors have shorter hours and longer holidays the sickness rate does not compare unfavourably with that of other Municipal Workers, and the alteration of the hours and holidays has not involved a proportionate increase in staff, or resulted in a reduction of the work done.
- (f) A Scheme adopted by one local authority commended itself very strongly to the Group, and is detailed here:—

The Health Visitors have Saturday off duty, one being on duty for urgent matters. They make up for this time by doing two spells (1½ hours each) of evening duty a week, starting at 5.30 after half an hour off duty for tea. This enables them to reach many mothers who are out during the day, and sometimes to see the father.

The Medical Officer of Health of this district states that the arrangement works very well, and gives the Health Visitors two clear days off in most weeks, which they much appreciate.

CONCLUSIONS.

A constantly cheerful manner, constant vigilance, a keen power of observation, and never-failing sympathy are essential attributes of a successful Health Visitor. These attributes can only be fostered by such conditions of service as provide adequate remuneration and time for recreation and recuperation.

Qualifications.

It is felt that the minimum qualifications of a Health Visitor should be:—

- (1) Certificate of 3 years' General Training or full training at a Children's Hospital.
- (2) Certificate of Central Midwives Board.
- (3) Certificate of a recognised training Institute as Health Visitor.

Hours.

It is considered that Health Visitors' hours should be from 9 a.m. to 5 p.m. (Saturday half day), or such earlier time as the work of the Infant Welfare Centre may be finished (frequently 4.30) with one hour off for dinner, and possibly, the modification of Saturday work as set out above.

Holidays.

It is considered that Health Visitors should have 24 working days' holiday in the year exclusive of Bank Holidays, and that at least 18 working days of this should be taken at one time.

Study Leave.

In many areas with great advantage to themselves the Local Authority permits Health Visitors leave of absence to attend courses of instruction in London or other convenient Centres. By this means the Health Visitor increases her efficiency, and obtains a wider outlook in her work.

We commend the example of those Local Authorities who enable their Health Visitors to attend at Congresses.

NOTES FROM BRANCHES.

FROM THE MIDLAND BRANCH.

DERBYSHIRE COUNTY COUNCIL: SUPERANNUATION SCHEME.

The Derbyshire County Council at a special meeting held this month rejected the scheme which had been recommended by the Finance Committee to provide superannuation for the Council's officials. It was pointed out that the Police Force, Asylum Officials, and Elementary School Teachers had all been covered by superannuation schemes, not to speak of Civil Servants, who have the advantage of superannuation for

which no contributions are made by the officials. The number of Local Government Board servants proposed to be brought in under the scheme was 277, and the annual contribution required from the County Council apart from the liability of past years of service of existing officers, would be about £3,000. The Council first agreed to a resolution rescinding one passed in 1889, which laid down that no officer of the Council should be entitled to a pension on acquitting office.

The Superannuation Scheme itself required a two-thirds majority of the members present at the meeting. It was vetoed by a majority of 36 against and 34 in favour of the scheme.

BRETBY HALL.

This historic hall, for long the seat of the Earls Council in 1920 for the treatment of Tuberculosis. Financial stringency stopped the scheme for a time. The Tuberculosis Committee now propose a modified scheme, and the County Medical Officer was instructed to report how provision could be made for 50 beds for the treatment of early cases of Tuberculosis in children. Instructions were given for an architect to report upon the capital expenditure involved in the proposal.

CHANGES IN THE STAFF: WALTON SANATORIUM.

Dr. Francis J. Burke, Surgeon-Lt.-Commander, R.N. (retired), formerly resident Medical Officer at Walton Sanatorium, has been appointed to fill the vacancy in the School Medical Service caused by the lamented death of Dr. J. C. Bedwell (October 11th, 1923).

FOOD PROTECTION.

Bye-laws requiring meat, i.e., beef, mutton or pork, cooked or uncooked, and articles derived from such meat to be covered while being conveyed through streets, and for securing the cleanliness of carts, receptacles, etc., used in the conveyance of such articles came into operation in Birmingham on October 14th. These bye-laws were made pursuant to powers given in the Birmingham Corporation Act, 1922.

THE NUTRITIVE VALUE OF AN EXTRA MILK RATION.

Some months ago Dr. Auden reported to the Birmingham Education Committee the results of an experiment conducted in this subject at one of the public elementary schools. The school selected was situated in a typical slum area. An equal number of boys and girls were first selected by the head teachers from scholars who seemed to them to be poorly nourished and who appeared to be making poor progress at school in consequence of this deficiency, and from them a final selection of 15 boys and 15 girls was made of those

children who showed the greatest deficiency in weight combined with a low percentage of haemoglobin. An equal number of children of both sexes was selected from among those who presented no signs of malnutrition, thus giving two groups, poorly nourished v. controls. An equal ration of one pint of milk was given daily to the first group over a period of four months, and to the controls only during the second two months. In addition to the medical data obtained the teacher made special observations, and the parents' opinion was also recorded.

Parents and teachers were definitely impressed by the marked improvement in bodily and mental vigour. A 20 per cent. increase of haemoglobin was noted in the poorly-nourished children, and as a practical exposition of the value of the addition of an extra milk ration to the dietary of debilitated children the experiment has proved highly successful. The subject is a difficult one due to the many factors which have got to be taken into consideration, and as Dr. Auden rightly points out further knowledge of the factors which govern the growth and nutrition of children is required, and an experiment on a much more extensive scale is necessary before the results can be measured with scientific accuracy. It is understood that an experiment on the same lines is now being conducted in Bristol.

WALSALL MEDICAL OFFICER OF HEALTH:

APPOINTMENT.

At the last Branch meeting dissatisfaction was expressed that a Medical Officer of Health had been appointed at a salary £200 per annum below that set out in the new Salaries Scale, and that the appointment after having been blacklisted was not re-advertised. The local Division of the British Medical Association by allowing sentiment to interfere with business would appear to have been responsible. Some official assurance will have to be given that those of our members who remain loyal will not be let down in future, if we are to have any hope of a successful fight for the new scale.

The resolution that was passed by the Branch and submitted to the Council of the Society will, it is hoped, result in the publication of a full explanation of all the circumstances, in order that steps may be taken to overcome successfully the difficulties which no doubt existed in this case but which are probably not confined to Walsall alone.

FOOD AND DRUGS ACTS.

A prosecution in Birmingham for the sale of vinegar containing only 2.9 per cent. of acetic

acid reported fully in "The Grocer" of September 15th, 1923, serves to call attention to the fact that malt vinegar may undergo decomposition with age, and that white specks on the surface indicates a reduction of strength and renders it useless for preserving purposes. Attention was drawn to the report by Dr. Hamill on the preparation and sale of vinegar, No. 5, 1909, recommending that it should contain at least 4 per cent. of acetic acid. This standard has been fixed in Birmingham. (See appeal case of Robinson v. Newman, 1917.)

THE SMOKE EVIL.

A National Gas Exhibition organised by municipal and company gas undertakings was held in Birmingham a few weeks ago for the definite purpose of developing the use of gas. The exhibition was intended to appeal to the public and to demonstrate the many uses to which coal gas can be put; in this it was highly successful.

Popular lectures were given each evening. On the first day Dr. Jolly, M.O.H. for Wolverhampton, delivered a very instructive lecture on "Smoke as a Cause of Ill-health." He suggested that the wasteful and unscientific method of burning raw coal might be partly responsible for the increased sickness rates and death rates found in large towns. The extended use of gas throughout the country was undoubtedly having a beneficial effect upon the atmosphere of our large towns in promoting more sunshine and cleaner air. The Lord Mayor held a reception of delegates at which Dr. Seleby delivered a popular lecture on "Light and Life." He demonstrated by means of lantern slides similar to those published in the "British Medical Journal" of September 22nd, 1923, the marvellous results of Finsen Light and of sunlight in the treatment of so-called surgical tuberculosis, lupus and rickets, and contended that sunlight (as apart from open air habit) unobstructed by a smoke-laden atmosphere was essential to healthy young life in our cities.

WARWICKSHIRE KING EDWARD VII. MEMORIAL SANATORIUM.

The Bishop of Coventry attended at the new Sanatorium on the outskirts of Warwick on October 6th, to conduct the dedicatory service. It is hoped that at the official opening next spring a member of the Royal Family will take part in the ceremony.

A brief history of the origin of the institution was given. It was in 1910 that the scheme for the establishment of a lasting county memorial to his late Majesty took practical shape, and a large

and influential committee was formed. A county subscription was opened which resulted in a fund of about £8,000. On the passing of the National Insurance Act in 1911 the Committee at once realised that in the altered circumstances it would not be right to provide a new Tuberculosis Sanatorium to be maintained by voluntary subscription, and on the initiative of the Local Government Board in 1913 an agreement was made between the County Council, the Coventry City Council, the Coventry and Warwickshire Joint Committee, and the above committee to constitute a Joint Committee for Tuberculosis. War and post-War conditions resulting in heavy increase in building prices caused delay, and it was not until 1920 that the Joint Committee decided to accept the tender of Messrs. G. F. Smith and Son at £59,992 for carrying out the plans of the present building. It was first proposed to provide 80 beds, but 150 have now been provided, the increase being due to the necessity to provide for ex-Service men. Mr. J. A. Watson, of Chadwick Manor, also stated his intention of providing at his expense three pavilions, the Children's Pavilion and the Hospital pavilion at a cost of over £25,000.

The expense of the building has been helped as follows:—

By Mr. Watson	(about) £25,000
„ The King Edward Memorial	
	(about) 8,000
„ Gift from the Red Cross Society	10,000
„ Government Grant	27,000
	£70,000

Beyond the cost of the building considerable sums had to be spent on equipment, installation of heating and lighting, furniture, medical officer's house, laboratory, etc.

BIRMINGHAM'S NEW MODEL CHILD WELFARE CENTRE.

On October 13th the important addition was made to the civil health institutions of Birmingham, when Lord Elgin, Chairman of the Carnegie United Kingdom Trust handed over to the City the new Carnegie Child Welfare Institute in Hunters' Road, Handsworth. The Lord Mayor accepted the gift on behalf of the Corporation, and the formal opening ceremony was performed by Mr. Neville Chamberlain, M.P., Chancellor of the Exchequer, in fulfilment of a promise made when he was Minister of Health.

This centre is one of several model institutions which are being provided in the country with the assistance of the Carnegie Fund

Trustees, and in every respect the building which has cost £25,000, exclusive of the site, is regarded as a pattern of what a modern maternity and infant welfare centre should be. The maintenance and working expenses is estimated to cost about £5,000 per annum. Lord Elgin explained the aim and object of the Trust in starting the scheme of Child Welfare Centres. He said the most important asset to the community was good health, and in the management of the Centre they were trying to contribute to the national health. A great deal of our ill-health was entirely dependent upon whether they could get "light." The institute was more a home than a health and welfare centre. It must be treated as a home to which people could come in order to draw light and dispel the darkness of ignorance. The keynote of the institution and its equipment and staff should be to promote the feeling of light and warmth by winning the confidence and friendship of those who came there to seek advice and help. It was impossible to forceably ram health down the throats of people in the same way that a cartridge case was charged with powder.

He attached the utmost importance to the propaganda work of the institution.

Early arrangements will be made for a meeting of the Maternity and Child Welfare Group to be held at the Institution.

THE METROPOLITAN BRANCH.

DOG NUISANCE BYE-LAW MADE PERMANENT.

Some little time ago the Kensington Borough Council made a bye-law under Section 23 of the Municipal Corporations Act, 1882, and other statutes, rendering any person permitting a dog on a lead to foul the public footway liable to a penalty of forty shillings. This bye-law was to cease to be in force after the 31st December, 1923, unless a bye-law confirming and continuing its provisions had been duly made and brought into use before that date. The effect of the provisional enactment in the Royal Borough has evidently been such as to justify its retention in permanent form, and it is interesting to note that the sanction of the Home Secretary has now been obtained for a bye-law which shall be in force without limit of time. The first conviction was obtained recently when the defendant was fined 5s. and costs.

INTERNAL HÆMORRHOIDS.

To the series of Special Reports issued lately by Dr. F. W. Alexander, M.O.H., Poplar, is now added one on Internal Hæmorrhoids, in which treatment of this condition by injection is sug-

gested. The report is being circulated to local medical practitioners, and contains also suggestions for the consideration of the Ministry of Health, the National Health Insurance Joint Committee, and the Approved Societies.

NOTES FROM THE HAMMERSMITH REPORT.

Though far from satisfied with the general sanitary condition of his borough, due mainly to adverse housing circumstances, Dr. J. B. Howell is able to record satisfactory vital statistics for Hammersmith—a birthrate of 20.5, a death-rate of 12.9, and an infantile mortality rate of 71. Referring to meat inspection, Dr. Howell reiterates the view that, although the slaughterhouses are kept in a cleanly condition, the time has arrived when public abattoirs should be established, thus enabling the whole of the meat to be inspected before leaving the place of slaughter. Under the present system the slaughterhouses are subject to constant supervision, but it is found impossible to arrange for all animals killed to be examined. The selling of ice cream from barrows is also considered undesirable, as the accommodation provided for the washing of the utensils used (glasses, wafer frames, etc.) is very inadequate and unsatisfactory. An outbreak of lead poisoning, due to the consumption of beer which had been kept in lead glazed white enamel lined iron tanks, which were afterwards removed and replaced by earthenware tanks and barrels, is recorded, and the drinking of "home-made lemonade" sold from buckets on Epsom Downs during Derby week is believed to have caused six of the fourteen cases of enteric fever notified during the year.

THE DECREASED BIRTH-RATE.

Dr. F. J. Allan records an infantile death-rate of 54 per 1,000 births, the lowest figure it has ever been in Westminster, and only equalled by two other metropolitan districts (Hampstead and Lewisham). In commenting on the legitimate birth-rate of 117 per 1,000 women of child-bearing age in 1921 as against 165 per 1,000 in 1901, Dr. Allan states that it is often alleged that this reduction is due to deliberate restriction in the size of families, but consideration of the figures has led to the conclusion that there are other influences, chief amongst which is the postponement of marriage to more mature years, that play an important part in producing a decreased birth-rate.

A SOCIAL SIDELIGHT.

In discussing the social circumstances of Southwark, Dr. G. B. Millson states that it is surprising, even to those who know the district, how men

who have not worked for years manage to keep themselves and their families in good condition and fairly well dressed. There must, he reflects, be an enormous number of charitable agencies to which they successfully appeal. In the future owing to the boys not being attached or apprenticed to a trade he fears there will be an increase of unemployment and ill-equipped men, and consequently more general poverty. In 20 years the Southwark birth-rate has dropped from 33.3 to 24.4, the death-rate from 21.7 to 15.5, and the infantile mortality from 166 to 79.

NEW WELFARE CENTRES IN EAST LONDON.

Dr. L. T. Fraser Bryett (Shoreditch) furnishes details of a fatal case of food-poisoning which bacteriological examination indicated was due to the *Bacillus Aertrycke* with which chicken broth had become infected. A model maternity and child welfare centre, costing nearly £22,000, is in course of construction in the borough.

In Bethnal Green (Dr. G. E. Oates) a new welfare centre has recently been opened. This contains 3 consulting rooms, 2 weighing and dressing rooms, a treatment room, a dispensary, a large waiting and lecture hall, a health visitor's office, and a staff room. The centre is also used as an office for the receipt of applications and making of inquiries respecting milk grants in necessitous cases. Over 10,000 pint bottles of disinfectant fluid were distributed to Bethnal Green inhabitants during the year.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A Meeting of the Council was held at the House of the Society, on Friday, October 19th, 1923. The retiring President (Dr. T. Eustace Hill) was in the chair, and there were present Professors H. R. Kenwood and Harold Kerr, Lt.-Cols. Herbert Jones and F. E. Fremantle, M.P., Drs. G. F. Buchan, Cates, J. T. C. Nash, Banks, Pearce, Rees-Jones, Joseph, Lissant Cox, Wheatley, Garstang, Stocks, Gibbons Ward, Clements, Benton, Milligan, C. J. Thomas, Frederic Thomson, Jolly, Snell, Stirk, Ernest Ward, Lyster, McMaster, Wilshaw, Pedley and the President-elect, Dr. T. W. Naylor Barlow.

The minutes of the last meeting having been approved and signed, letters of apology were received from Dr. A. K. Chalmers and Dr. Algeron Wear.

Correspondence.—(1) From the Ministry of Health inviting the Society to nominate witnesses to give evidence before the Departmental Committee on the Use of Preservatives and Colouring Matters in Food. Agreed that Dr. Wheatley, chairman of the Committee on Foods, should submit names of representatives who could offer useful evidence. (2) From the Minister of Health acknowledging the letter of the Society dated 24th September, 1923, in reference to the directorate of the Rockefeller Institute of Hygiene (see "Public Health," October, 1923, p. 14), and agreeing that the views of the Society expressed therein must be given full weight by the Transitional Committee which is considering the appointment. (3) From the Minister of Health acknowledging the receipt of the Society's Memorandum on Health Propaganda forwarded on 24th September, 1923, which will receive his careful consideration. (4) From the Incorporated Vermin Repression Society in reference to Rat Week in London. This letter was referred to Metropolitan Branch. (5) From the National League for Health, Maternity and Child Welfare asking leave to publish and circulate copies of the Society's Memorandum on Health Visitors, and M. and C.W. Centres. Agreed that this request be granted.

Proposed New Branch.—Communications were considered from Dr. C. J. Coleman and Dr. R. Ashleigh Clegg, proposing the formation of a North-Midland Branch in the interests of members who were prevented by difficulties of travel from attending meetings of the Midland and Eastern Branches. *Resolved:* That the officers of the Society be asked to report on this proposal at the next meeting of the Council.

The Duties of Medical Officers of Health.—The draft memorandum on this subject forwarded by the Ministry of Health for the observation of the Society was again discussed, but it was decided that time was not available that day for proper consideration of the subject. It was agreed that the Officers of the Society, with the Chairman or Secretary of the Non-County Group, should draft suggestions and submit them to the next meeting of the Council, and that the Ministry of Health should be asked to await the observations of the Society until November 20th.

Statistical Tables for School Medical Officers.—In reply to an invitation from the Board of Education it was agreed to submit certain observations and suggestions in regard to the model statistical tables for School Medical Officers now under revision by the Board. Dr. C. J. Thomas was asked to thank the School Medical Group for their assistance in this connection.

Report of the Hon. Editor.—Dr. R. A. Lyster submitted the following report:—

During the past year a small increase in the average size of the journal has been possible as compared with previous years. This of course has curtailed some increase in expenditure. In spite of the increased number of pages there are now considerable arrears in the publication of papers and articles forwarded by the Branches and Groups with a request for acceptance. It will therefore be necessary for the Society to consider in the near future whether further enlargement of the journal is financially justifiable. In previous reports I have called the attention of the Society to the important fact that out of a very much smaller pre-war income it was able to afford a far greater proportional expenditure upon the journal. The Editorial duties and responsibilities would be made much lighter if it were possible for the Society to express considered opinions upon the more important matters relating to public health and preventive medicine. With that end in view, I suggest it might be possible at some future time to arrange for discussions instead of long papers at some of the meetings of the Society.

The report was received and Dr. Lyster was thanked for his continued services to the Society.

Report of the Hon. Treasurer.—Dr. G. F. Buchan submitted the following report:

I beg to submit my annual report for the year ended 30th September, 1923, and am glad to be able to state that the year's working shows a credit balance of £22 17s. 2d. This compares with a credit balance of £121 14s. for the financial year 1921-22, and a deficit of £249 8s. 8d. for the financial year 1920-21.

Income.—The income of the Society during the year ended 30th September, 1923, was £2,875 18s. 5d., being an increase of £212 18s. 9d. over the previous year. The increase is mainly due to an increase in subscriptions from £1,881 2s. 6d. in 1922 to £2,079 8s. 1d., i.e., £198 5s. 7d. in the year ended 30th September, 1923.

Expenditure.—Expenditure has increased from £2,541 5s. 8d. in 1922 to £2,853 1s. 3d., i.e., by £311 15s. 7d., during the year ended 30th September, 1923. The most rigid economy and careful scrutiny have been operative during the years, but the main items of increased expenditure are items over which your Treasurer has no control. They are

- (a) Travelling expenses of representatives on the Council from £192 7s. 9d. in 1922 to £294 4s. 1d. in 1923, or an increase of £101 16s. 4d.
- (b) The printing of the Journal from £641 11s. 3d. to £725 18s. 11d., or an increase of £84 7s. 8d.
- (c) Group Expenses, £32 13s. 11d. A corresponding item did not appear in last year's revenue account.

General.

Need for new Members.—The Society's income and expenditure now approach what have to be regarded as normal. Travelling expenses under the revised articles are not likely to diminish even if a reduction of railway fares is brought about. Group expenses will also in the future be a constant and probably increasing item of expenditure. In these circumstances an increased membership is required so that the Society may be fully representative of the Public Health Service and able to play an active part in Public Health work.

Subscriptions to Branches.—I have again received a request from an important Branch for payment of their debit balance. I am of opinion that this question of subscriptions to Branches and Group expenses should be re-

ferred to a Committee so that if possible a more equitable scheme than the present may be evolved for consideration by the Council.

Executive Secretary.—I desire to record my appreciation of the manner in which the Executive Secretary has been ever ready to assist me in the discharge of my duties as Treasurer. He spares himself in no way to promote the interests of the Society on every possible occasion.

The Report having been received, Dr. Buchan referred to applications received from certain Branches for increased or special grants. He suggested that the time had come for an inquiry into the whole subject of Branch Group grants, and it was agreed that the matter should be referred to a special committee consisting of the Secretaries of the Home Counties, Midland, Metropolitan and North-Western Branches, and of the Dental Group, with the Hon. Treasurer, who would report to an early meeting of the Council. The Report and Balance-sheet was then adopted and approved, and Dr. Buchan was thanked for his services as Hon. Treasurer.

Election of Committees.—The following committees were appointed for the Session 1923-24:—
Special Committee on Remuneration of Medical Officers of Local Authorities.

The President, Dr. G. F. Buchan (Chairman), Prof. H. R. Kenwood, Drs. Howarth, Peyton, Sanders, Lyster, Joseph, Petgrave Johnson, E. W. Goodall, Stocks, C. J. Thomas and Mr. Grantley Smith.

Special Committee on Food Problems in Relation to Public Health.

The President, Dr. James Wheatley (Chairman), Profs. Kenwood and Robertson, Drs. Howarth, Porter, Veitch Clark, Orr, Barlow, Snell and Ernest Ward.

Journal Committee.

The President, Dr. R. A. Lyster, Profs. Bostock Hill and Kenwood, Lt.-Col. Herbert Jones, Drs. Howarth, Snell, Porter, and H. P. Newsholme.

League of Nations' Courses for Foreign Health Officers.

The President, Dr. W. J. Howarth (Chairman), Profs. Kenwood, Drs. Lyster, Porter, Snell, Veitch Clark, G. F. Buchan, Cates and D. C. Kirkhope. Co-opted for Tuberculosis Courses: Dr. F. J. H. Coutts and Dr. Ernest Ward. For School Medical Courses: Dr. Eichholz and Dr. C. J. Thomas.

Disciplinary.—The action of certain members in regard to the policy of the Society was discussed and referred to the Salaries Committee for further consideration.

The Retiring President.—The proceedings closed with a cordial vote of thanks to Dr. Eustace Hill for his services in the chair during the past session.

NEWCASTLE ASSISTANT MEDICAL OFFICER OF HEALTH. Dr. T. N. V. Potts, Assistant Medical Officer of Health, Blackburn, has been appointed Assistant Medical Officer of Health, Newcastle, in place of Dr. Clegg, who is going to South Africa. Dr. Potts, was formerly on the staff of Newcastle Health Authority. His commencing salary will be £700, rising to £900.

SPECIAL COUNCIL MEETING.

A Special Meeting of the Council was held at the House of the Society on Monday, October 29th, 1923, when in the unavoidable absence of the President the chair was taken by Dr. W. J. Howarth.

Letters and telegrams were received from members of the Council unable to attend, warmly supporting the proposal that the Society should make some demonstration of sympathy for medical practitioners working under the National Health Insurance Acts in their efforts to secure adequate remuneration and satisfactory conditions of service.

On the proposal of Dr. G. F. Buchan, seconded by Dr. J. M. Clements, and supported by Drs. Garstang and Fenton, it was agreed unanimously to forward the following statement to the Minister of Health, the British Medical Association, the Hon. Secretaries of the Society's branches, and the Press:—

The Society of Medical Officers of Health have watched with keen interest the development of State medical work under the National Health Insurance Acts and have noted the benefits which insured persons have derived therefrom. The Society are convinced that further benefit will accrue, not only to the insured population but to the public health generally, by the extension of this service along preventive lines.

With this in mind the Society have carefully considered the requirements of Panel Practitioners as to remuneration under the Insurance Acts, and are satisfied that these requirements are fair and reasonable, and that the existing remuneration is a minimum to ensure a satisfactory medical service.

The Society are further of opinion that an inadequate or unsatisfactory medical service under the Insurance Acts will be detrimental to the public health.

The Society regret that the Minister of Health has failed to agree with Panel Practitioners as to their remuneration, but hope that the Royal Commission suggested by the Minister may be duly appointed and afford a satisfactory means of settlement.

Meanwhile the Society of Medical Officers of Health pledge themselves to do all in their power to support Medical Practitioners in their present claim under the Insurance Acts for adequate remuneration and satisfactory conditions of service and control.

The Council then adjourned.

ANNUAL GENERAL MEETING.

The Annual General Meeting was held at the House of the Society, on Friday, October 19th, 1923. At the commencement of the proceedings the chair was taken by the retiring President, Dr. T. Eustace Hill, and there was a large attendance.

The minutes of the last annual meeting having been approved and signed, apologies for absence

were received from Dr. A. K. Chalmers, Dr. Algernon Wear, Dr. H. P. Newsholme, and Prof. E. W. Hope.

Dr. Hill then called upon his successor, Dr. Thomas William Naylor Barlow, O.B.E., to occupy the Presidential chair, and invested him with the badge of office.

Dr. Barlow, in acknowledging the honour conferred upon him, said that he was proud that his colleagues should have considered him worthy to follow the many good men who had presided over the proceedings of that Society. His first privilege as President would be to move that the cordial thanks of the Society be tendered to Dr. Eustace Hill for the great services he had rendered during his year of office as President.

This proposal from the chair was passed with acclamation, and briefly acknowledged by Dr. Hill.

Annual Reports.—The annual reports of the Council, the Hon. Editor, and the Hon. Treasurer (see Minutes of Council, *Public Health*, October and November, 1923) were duly received, and the President expressed the gratitude of the Society to the Council and officials.

Election of Auditor.—Mr. J. T. Harris was unanimously re-elected as Auditor of the Society for the Session 1923-24, and thanked for his past services.

New Fellows.—The following candidates having been duly nominated, were elected to the Fellowship of the Society:

Adam, Louisa Caroline, M.B., B.S., Madras; Alderson, Percy Francis, Surg.-Cdr., R.N., M.R.C.S., L.R.C.P., D.P.H.; Atlee, Charles Nelson, M.R.C.S., M.R.C.P., D.P.H.; Benson, Walter Tyrrell, M.D., Ch.B., Edin., B.Sc., St. And., D.P.H., D.T.M.; Bulcock, Joseph Henderson, M.R.C.S., L.R.C.P.; Dobbie, John Navin, M.B., Ch.B., Glasg., D.P.H.; Duncan, Jessie Galloway, M.B., Ch.B., Glasg., D.P.H.; Edis, Mary Gertrude, M.D., B.S., Lond., D.P.H.; Forbes, James Graham, M.A., M.D., Cantab., F.R.C.P., D.P.H.; Gordon, George Alex. Connell, M.C., M.B., Ch.B., Aberd., D.P.H.; Griffiths, Sydney Harold, M.R.C.S., L.R.C.P., D.P.H.; Hardie, Lillias Beverley, M.B., Ch.B., Glasg.; Harold, Chas. Henry Hasler, Major, R.A.M.C., M.D., Ch.B., Liv., D.P.H.; Hutchinson, Gladys Hilda, M.B., Ch.B., Vict.; Low, John Bruce, M.B., Ch.B., Edin., D.P.H.; McEnery, Margaret, M.B., B.S., Lond., M.R.C.S., L.R.C.P.; McFarland, Armar John, B.A., M.D., B.Ch., Dub., D.P.H.; Porter, John Herbert, M.R.C.S., L.R.C.P.; Poyser, Richard Cruickshank, M.R.C.S., L.R.C.P.; Roberts, Ellis James, B.Sc., Univ. Wales, M.R.C.S., L.R.C.P.; Rutherford, Nathaniel John Crawford, D.S.O., Lt.-Col., R.A.M.C., B.A., M.B., B.Ch., Dub., D.P.H.; Stott, William, M.B., B.S., Durh., D.P.H.; Thornton, Charles Edgar, M.B., B.S., Lond.; Wills, Francis Hugh Poughill, L.M.S., S.A., Lond.

Upwards of thirty nominations were received for the November elections.

Presidential Address.—Dr. Barlow then delivered his Presidential Address, which is published in full in *Public Health*, November, 1923.

A hearty vote of thanks to the President for his address was moved by Dr. W. G. Willoughby, seconded by Dr. Eustace Hill, and carried unanimously.

The meeting then adjourned.

ANNUAL DINNER.

The Annual Dinner of the Society was held at the Hotel Cecil, on Friday, October 19th. Members and guests to the number of 150 were received by the President and Mrs. Naylor Barlow, and the plan of the tables will be found on another page.

The President having proposed the health of the King, the toast of "The Society" was given by The Rt. Hon. Sir William Joynson-Hicks, Bart., P.C., M.P., Minister of Health, who expressed delight in having the privilege of proposing the health of so important a society. Though very young as Minister of Health he had come to the task with an open mind on many of the great questions of the day, and very quickly found that in his work in connection with the great preventive side of medicine he would be brought into close and intimate contact with the members of the Society and would need to make friends and work in conjunction with the medical officers of health of this country. He was therefore especially pleased to be invited as their guest that evening. It was a very great Society, one which had started in a very small way but which now had no less than 1,800 members. All the men and a great many of the ladies who devoted their lives to maternity and child welfare work were members of the Society, banded together in the interests not merely of their own conditions and welfare but of the great subjects which they had at heart, the interests of preventive medicine and public health to which was due in great measure the remarkable and marked improvement in the health of the people during the last twenty-five years. It was the medical officers of health who had insisted upon proper sanitation, who had reduced the death-rate in this country, and who, he was sure, would be prepared with him for a great campaign which he looked forward to waging during the next few years if spared to remain at the Ministry of Health, not merely to clear out slums and create worse slums but to spread the people out into the country districts. He had always been a great supporter of large arterial road programmes and would like in conjunction with the great local

authorities to drive giant thoroughfares through the country districts of Great Britain. There had been no great main thoroughfares formed in the country for centuries past, and with present-day traffic conditions it was time we had some new roads. The people would follow the roads and get out into the pure air and sunshine of the country. The work of the medical officers of health would go before, and he felt convinced that if that policy were carried out the death-rate amongst infants would be still further diminished. During the last 50 years the position of medical officer of health had grown in importance: he dominated, and rightly dominated, the policy of the health authorities. Though proud of the efforts made in war he believed that the efforts which could be made in peace would be of more lasting benefit to the people of the country.

The President, who on rising was greeted with acclamation, considered it an honour to accept the toast. The Society was in good health, not to say rude health, and had never failed, and it was hoped never would fail, to raise its voice on any question concerned with the public health, whether in approval or in criticism. The Society would feel delighted and honoured that Sir William in his capacity as Minister of Health would rely on its support in dealing with the many problems that would arise. The medical officers of health claimed to be the outposts of the Ministry of Health, and there was within the Society a vast amount of knowledge and experience frankly at the disposal of the Minister, and which ought to entitle the Society to be heard on any question affecting the service.

Lieut.-Col. F. E. Fremantle, O.B.E., M.P., in proposing "The Guests," said the members were much encouraged by the presence of so many distinguished visitors, and were delighted to have them there that evening. In a graceful tribute to the ladies he remarked that it was the gentler sex who were at the bottom of the objective in public health work. The carrying into effect of the lessons that it was the constant endeavour to preach was dependent upon the women, who were best able to set the tone of public opinion in domestic life. The pivot of all health work must be the woman in the home. Col. Fremantle thanked the Minister of Health for coming down amongst them at so early a stage in the new chapter of his career. The Society honoured a continual series of Ministers of Health. Preventive medicine depended very largely upon the power of the purse, and between Sir William and his predecessor in office, Mr. Neville Chamberlain, now Chancellor of the Exchequer, they

might expect as much as possible for their work. In association with the Minister of Health they were glad to welcome Sir Arthur Robinson and Sir George Newman to whom they also looked for help. They were glad to see so many representatives of the Press present, and were especially pleased to have with them Sir Squire Sprigge, Editor of "The Lancet," and Sir Dawson Williams, who had completed a quarter of a century as Editor of the "British Medical Journal." They welcomed no less the lay Press who were an enormous influence in health matters. Col. Fremantle extended the Society's welcome to Lord Riddell, to Sir Humphrey Rolleston, President of the Royal College of Physicians, and to Dr. Alfred Cox, Medical Secretary of the British Medical Association, especially in view of the very close relationship which had been established during the past year largely as a result of his efforts to promote the co-operation of the two societies in the public and the national interests.

Lord Riddell thanked Col. Fremantle for the graceful terms in which he had proposed the toast, and could assure the Society that their guests had had a most pleasant and delightful evening. He always admired the medical officer of health, who lived between the devil and the deep sea, between the idealist on the one hand and the taxpayer on the other. The medical officers of health of this country were certainly some of the most tactful people in the universe. They were pleased to sit amongst so many ladies who had done such remarkable things in the public health world. The women's medical movement had started with a flourish but no one could doubt the success of women in the realm of municipal work. The decreased infantile mortality and the improved health of school children were due in a very great degree to medical women who had brought a new atmosphere into domestic life. Referring to the advances made in public health during the last 80 years his lordship said the so-called great old days were really rotten old days when the health of the community was in a poisonous state. He was quite sure that the people of this country were never better cared for than they were at the present time, thanks to the Ministry of Health and to the assiduity of the medical officers of health and their staffs. People were only too ready to say things about the city fathers but they had done wonderful things and were deserving of unstinted praise.

Sir Squire Sprigge, who responded to the toast on behalf of the medical press referred to the many directions in which the science of medicine

had developed necessitating new endeavours, to meet the needs of a wider circle of readers. In this one fell back on one's friends, and in no difficulty had it ever been found that an appeal to the right place, to the people who knew, had not met with most generous response. They relied upon the kindly assistance of a large body of advisers, assistance always rendered ungrudgingly, and he desired to acknowledge that with the utmost gratitude.

Sir Benjamin Johnson, D.L., J.P., proposed the health of the President, and testified to his zeal, courage, originality, and the gifts of mind and character which he had brought to bear in his duties as a medical officer of health. Hearty cheers were given for the President and Mrs. Barlow, and the former briefly returned thanks for the toast.

Our report of the speeches omits any record of some excellent stories told by the speakers which, with an enjoyable musical programme, made the dinner a very cheery function from start to finish.

PROCEEDINGS.

NORTHERN BRANCH.

COUNCIL MEETING.

The Annual Meeting of the Branch Council was held in the Medical Institute, 7, Windsor Terrace, Newcastle-upon-Tyne, on the 5th October, 1923.

Present: Dr. T. Eustace Hill (Vice-President) and four members.

The minutes of the last meeting (12th January, 1923) were read and confirmed, and signed by the Chairman.

M.O.H. Appointment, South Shields.—Reference was made to the recent application for the appointment of Medical Officer of Health at South Shields, and acceptance in defiance of the proscription by the Society and the British Medical Association.

It was decided that the matter be fully discussed at the Branch Meeting.

It was further resolved to support strongly the appeal of the President-Elect of the Society, Dr. T. W. N. Barlow, for intensive recruitment of members both for the Society and the British Medical Association.

The Annual Report of the Honorary Secretary and Treasurer was read and adopted, and ordered to be presented to the Annual Meeting of the Branch as the Report of the Council.

Branch Meeting.—The Annual Meeting of the Branch was held in the Medical Institute, Newcastle-upon-Tyne, on the 5th October, 1923.

Present: The Vice-President (Dr. T. Eustace Hill) and 14 members.

The minutes of the Summer Meeting (15th June, 1923) were read and confirmed, and signed by the Chairman.

Installation of New President.—Dr. T. Eustace Hill informed the meeting that the President-Elect (Dr. A. G. R. Cameron) was unable to attend owing to illness. The Honorary Secretary was instructed to write to Dr. Cameron conveying the sympathy of the Branch with him in his indisposition, and wishing him a speedy recovery.

Dr. Thomas Horne, the retiring President, was nominated and duly elected Vice-President.

The Honorary Secretary was instructed to write to Dr. Horne expressing the sympathy of the Branch in his indisposition, and hoping that he would soon be restored to his usual health.

It was resolved that Dr. T. Eustace Hill act as Chairman of the Branch in the absence of the President and Vice-President.

Branch Council.—The following were elected as members of the Council of the Branch:—Drs. Mabel Brodie, W. H. Dickinson, G. Foggin, T. Eustace Hill, J. A. Hislop, W. Hudson, R. F. Lunn, S. G. Mostyn, H. Renney, A. Smith, Senr., J. W. Smith, and A. F. G. Spinks, together with the President, Vice-President, and the Honorary Secretary, *ex-officio*.

South Shields—Recent Appointment of Medical Officer of Health.—It was reported that in spite of official proscription by the B.M.A. and the Society of M.O.H., South Shields Corporation had succeeded in obtaining an applicant for the post of Medical Officer of Health, and he had been duly appointed.

A resolution was passed regretting that the person appointed should wilfully cut himself off from the friendly relations which exist between the members of the Public Health service, who are loyal to the interests of their colleagues.

A letter from the President Elect (Dr. T. W. N. Barlow) urging active recruitment for the Society and of the B.M.A. was read, and strongly supported.

A letter was read announcing a Conference to be held in Newcastle on 26th January, 1924, when a proposal will be considered to establish a District Joint Consultative Committee of Local Government Officers of all classes, and inviting the Northern Branch of the Society of Medical Officers of Health to appoint representatives.

It was agreed to appoint Dr. J. A. Hislop, Medical Officer of Health, Tynemouth, and Dr. T. Buckham, Medical Officer of Health, Lanchester R.D., to attend the meeting as representatives.

The Annual Report of the Honorary Secretary and Treasurer, together with the statement of accounts audited by Drs. T. Eustace Hill and A. F. G. Spinks, were presented as the Report of Council.

Dr. McLachlan moved and Dr. Leigh seconded that the Report be received.

Annual Dinner.—It was decided to hold the Annual Dinner in the Medical Institute on a Friday in December, and that the arrangements be left in the hands of the President and Honorary Secretary.

Dr. George Foggin, Principal School Medical Officer, Newcastle-upon-Tyne, read a paper upon "Milk: Nutritional Feeding," which included a statement of results over a prolonged experiment upon a milk allowance to a number of selected children in certain schools in the City.

The following took part in the discussion dealing with the subject from the various aspects of the population generally, M. & C.W., Tuberculosis, and the School Child:—Drs. T. Eustace Hill, A. F. G. Spinks, Mary Howie, W. H. Dickinson, and H. Kerr.

Dr. Foggin, after answering several questions, was accorded a hearty vote of thanks for his paper.

REPORT OF THE HONORARY SECRETARY AND TREASURER (Dr. H. KERR) FOR THE YEAR ENDING 30th SEPTEMBER, 1923.

The fully-paid-up membership for the year ended 30th September, 1922, was 132. During the period under report seven members were elected, and there was one transfer to the Branch. The Branch lost one member through leaving the district, and consequently he was transferred to another Branch. The total membership is now 139 (131 Members and 8 Associates). There are also three Honorary Members.

The Branch met six times, and the average attendance was the same as that of the previous year, viz.: 16.

The Annual Dinner was held at the Medical Institute on the 1st December, 1922, 24 members and four guests attended.

The Presidential Address by Dr. Thomas Horne was upon "Section 28 of the Housing, Town Planning, etc., Act, 1919." There was a discussion on "The Working of the Midwives Act and the Rules of the Central Midwives Board," opened by Dr. A. F. G. Spinks. In connection with the latter seven definite resolutions passed by the Branch were forwarded to the Council of the Society.

The Branch also considered special reports from the Council of the Society regarding (a) The Constitution of the Society; (b) The Salaries Scale and measures for securing its adoption by the B.M.A.

The Summer Meeting was again held at the Dinsdale Spa Golf Club House, Dinsdale, on the 15th June, 1923, and the attendance numbered 16. After the business was finished the members spent the rest of the day upon the golf course.

Questions of appointment or remuneration in connection with the following were before the Branch during the period under report:—

West Hartlepool, H.O.H. (whole time).
Hartlepool, M.O.H. (whole time).
Whicham U.D.C., M.O.H. (part time).
South Shields, M.O.H. (whole time).
Jarrow, M.O.H. (whole time).

Arlecdon-Frizington, M.O.H. (part time).
Cumberland C.C., M.O.H. (whole time).
North Riding, Yorks, M.O.H. (whole time).

Your representatives attended six of the eleven meetings of Council of the Society, and kept in intimate touch with the policy and proceedings at Headquarters.

Dr. T. Eustace Hill, being President of the Society for the year under report, was in constant attendance at general meetings, meetings of Council, and Committees of Council during the year, a year signalled by an event of the greatest importance in the history of the Society, viz., the successful conclusion of negotiations for intimate relationship with the B.M.A. and the consequent modification of the constitution of both the Society and the Association.

LOCAL RELATIONS WITH THE B.M.A.

Throughout the area of the Northern Branch its members have been active in promoting good relationship and co-operation with their respective Divisions of the B.M.A., and in canvassing for the membership of the Society the importance of joining the B.M.A. is always vigorously urged, with the result that on the completion of the census of the Public Health Service within the Branch area it was found that of all *whole-time* officers 77, or 74 per cent., were members of the Society of Medical Officers of Health, and 71, or 69 per cent., members of the B.M.A. Of *part-time* officers 51, or 48 per cent., were members of the Society, and 79, or 74 per cent., of the B.M.A.

It is highly satisfactory to report that it is now becoming increasingly common for members of the Northern Branch of the Society of Medical Officers of Health to be elected to the various posts of responsibility in their Local Divisions of the B.M.A.

Appended are the reports of the Honorary Secretaries of the Tuberculosis Medical Officers' and the School Medical Officers' Sub-Groups.

TUBERCULOSIS SUB-GROUP.

During the past session five ordinary meetings were held. The annual dinner was held on Thursday, February 8th, 1923. No summer meeting of the Society was held this year. The average attendance per meeting was eleven.

SCHOOL MEDICAL OFFICERS' SUB-GROUP.

The following papers were read:—"Eye Work in Connection with Schools," by Dr. A. T. Paterson, School Medical Officer, Durham C.C.; and "School Dentistry," by Mr. Percy Bartle, L.D.S., Durham C.C.

Visits were paid to the Northern Institution for Deaf and Dumb, North Road, Newcastle-upon-Tyne, and to the premises of Messrs. Fleming, Wholesale Manufacturing Opticians, Charlotte Square, Newcastle-upon-Tyne.

NORTH WESTERN BRANCH.

Proceedings of an Ordinary Meeting held in Manchester on Friday, October 12th, 1923.

Dr. Herbert Peck (in the chair) and 22 members present.

Minutes of last meeting read and confirmed.

A letter was read from Dr. A. W. Martin, the oldest member of the Branch, tendering his resignation of membership of the Society as he

had given up active professional work owing to advancing years and ill-health. The Hon. Sec. was instructed to write to Dr. Martin regretting that he should take this course and inviting him to become an Hon. Member of the Branch.

Dr. Peck introduced Dr. Lissant Cox as President for the Session 1923-24. After Dr. Cox had thanked the members for his election a hearty vote of thanks was proposed by Dr. Wilkinson, seconded by Dr. Talent and unanimously accorded to the retiring President (Dr. E. W. Rees Jones) for his work during the past Session.

Dr. G. Lissant Cox, Central Tuberculosis Officer of the Lancashire County Council then delivered his Presidential Address entitled "Progress and Problems in Tuberculosis." He dealt with the relationship of the work of the 340 Tuberculosis Officers in the country to other public health work and he expressed the view that a Tuberculosis Officer should be neither a clinical expert pure and simple, nor one who is merely an aid in the supervision of official tuberculosis public health requirements but instead he should be a first rate clinician, looked upon as a consultant by the doctors in general practice, having administrative ability, and a public health outlook. Referring to notification of cases of tuberculosis, he mentioned that if a Public Health Authority took the view that nothing could be done as regards treatment for individual consumptives in the early or late stages, then a large number of non-notified cases or late notifications could be expected. For Pulmonary Tuberculosis it is agreed that treatment as regards drugs is of no avail at present, but the consumptive requires education in a new mode of living in order that, with increased resistance, he may fight successfully the disease, and in this wide sense treatment is surely of real value.

Dr. Cox referred to the controversy as to the value derived from Sanatorium treatment, and he quoted figures from Lancashire showing the after-histories of 3,950 early and intermediate cases, 2,270 of whom had been to Sanatorium and 1,680 had not. So far as the groups were comparable the benefit lay on the side of Sanatorium Treatment. He stated that the proportion of non-notified fatal cases of Pulmonary Tuberculosis had decreased in the Administrative County with a population of over 1½ millions, in recent years from 18 per cent. to 8 per cent., a fact helped by the cordial relations existing between the Tuberculosis staff and the family doctors, 76 per cent. of all the new cases examined having been sent for an opinion as to diagnosis before the Tuberculosis Officer received particulars of the notification. The uneven distribution of Tuberculosis in

different parts of Lancashire was next dealt with, with its relation to the number of rooms per person, and the different industries in various localities, illustrated with a chart showing that the greater the proportion of female weavers employed in cotton weaving districts the less the phthisis death-rate became. Other charts were shown to demonstrate the striking fall in the new cases of Tuberculosis and also the greatly lessened mortality from this disease.

At the conclusion of his address a hearty vote of thanks was accorded to Dr. Cox on the proposition of Dr. Daley, seconded by Dr. Hessel.

The Hon. Sec. reported on the result of the Conference at the Middlesex Guildhall between Representatives of the Society and British Medical Association on the one hand and of the Association of Municipal Corporations County Councils Association and other Local Authorities.

It was resolved that the Annual Dinner be held in Liverpool this year, on Friday, December 14th, and that all details be left to a Sub-Committee consisting of the President of the Branch (Dr. Cox), Drs. Barlow, Wood and Joseph.

It has been decided that during this Session some meetings should be held on Wednesdays instead of Fridays and later in the afternoon than usual in order to permit of the attendance of more of the School Medical Officers.

YORKSHIRE BRANCH.

The Annual Luncheon was held at the Hotel Metropole, Leeds, on September 28th, Dr. J. Buck (Branch President) presiding. The President of the Society (Dr. T. Eustace Hill) was present, accompanied by Mr. G. S. Elliston, the Executive Secretary, and in addition to 22 members of the Branch there were present: The Mayor of Batley (Councillor Crothers), the Mayor of Halifax (Alderman Longbottom), Mr. W. B. Pindar (Clerk to the Hunslet R.D.C.), Alderman Branson (Halifax), Alderman Walker (Bradford), Councillor Moorhouse (Leeds), Councillor Stephens (Huddersfield), and Councillor Anderson (Wakefield). The speeches were of a high degree of excellence, and good feeling between the members of the Local Authorities and the Medical Officers were manifested throughout.

Dr. J. Mitchell Wilson.—A pleasant feature of the Annual Luncheon was the announcement by Dr. Eustace Hill that the Honorary Fellowship of the Society had been conferred upon Dr. James Mitchell Wilson, Consulting Medical Officer of Health to the County Council of the East Riding of Yorkshire. The Yorkshire Branch re-

joices over the honour which has been done to one of its most esteemed members. The first mention of Dr. Wilson's name in the minute-book of the Yorkshire Association of Medical Officers of Health appears under the date February 1st, 1878, though he was not elected a member until the following year. During the intervening period he has won golden opinions from his colleagues by reason of his charming personality and the energy and interest he has displayed on behalf of the Society. His characteristic speech in response to the President's announcement was full of good things and gave a stimulus to his younger confrères.

EASTERN BRANCH.

The Annual Meeting of this Branch was held on July 14th, 1923, when the following officers were elected for the coming year:—Dr. B. D. Z. Wright (M.O.H., Smallburgh R.D.), President; Dr. H. H. Back (M.O.H., Aylsham R.D. and Blofield R.D.), Vice-President; Dr. H. C. Pattin, Auditor; Dr. J. T. C. Nash, Hon. Secretary and Hon. Treasurer.

The retiring President (Dr. Lambert Lack) was cordially thanked for his services and hospitality.

At a meeting on October 13th Dr. Wright (President) in the chair, there was a large attendance of members and visitors.

Drs. Fergusson and Sexton and Mr. Millican were nominated for membership.

It was decided to support the formation of a North Midland Branch in the interests of the parent society, notwithstanding the consequent loss of membership to this Branch.

The President delivered an interesting and informative address on goats' milk, which it was unanimously decided should be forwarded to "Public Health" for publication.

MIDLAND BRANCH.

The first meeting of the Session was held at the Council House, Birmingham, on Thursday, October 4th, 1923, at 3.30 p.m.

Present: The President and 19 members.

The induction of Dr. A. Hamilton Wood as President for the Session 1923-24 was performed by Dr. Gibbons Ward, the retiring President.

The minutes of the previous meeting were read, confirmed, and signed.

A letter was read from Mrs. Shore thanking the Branch for their expression of sympathy at the death of her husband.

The Council recommended to the Branch that the next monthly meeting should be held at

Derby, and that invitations should be sent to the Local Medical Officers in the Public Health Service who were not members of the Society.

This was carried unanimously.

The President then delivered his Presidential Address: "The Role of the Individual in the further progress of Public Health." After pointing out that fairly adequate legislative provision already existed for regulating and safeguarding environment, the speaker called attention to the fact that the most recent enactments had mainly affected the individual, and related principally to the prevention of disease. He next dealt with the lines along which effort might be directed in order to bring about progressive improvement in the national health.

The problems connected with the further reduction of maternal and infant mortality were carefully discussed and various valuable suggestions put forward.

Reference was also made to such controversial matters as "Birth Control" and "The Segregation of Mentally Defectives."

The latter part of the address dealt with the importance of the education of the individual in personal hygiene. The speaker believed that health propaganda, if properly carried out, was an extremely valuable work, and urged that expenditure on such a service should be allowed to rank for a grant from the Ministry of Health.

On the motion of Dr. Snell, seconded by Dr. Gibbons Ward, the meeting accorded Dr. Hamilton Wood a hearty vote of thanks for his extremely interesting Presidential Address.

METROPOLITAN BRANCH.

This Branch held its first meeting of the session at the Society's house in London, on Friday, 12th October, 1923, the President (Dr. Frederic Thomson) occupying the chair. Twenty-four members were present.

The need of uniformity of practice in regard to the supply of diphtheria antitoxin in London formed the subject of letters from the London Panel Committee and Dr. Annis, representative of the Branch on that Committee. In view of the fact that the Ministry of Health had the matter under consideration it was decided to bring it forward at a later meeting.

The Branch expressed a unanimous desire to support the decision of the London District Council on the question of scales of salaries of sanitary inspectors and health visitors in London, and instructions were given for this view to be con-

veyed to the Council of the Society and to the Salaries Committee.

Consideration of the revised order of procedure in regard to the treatment of tuberculosis, drawn up by the London County Council, was postponed until the next ordinary meeting.

A communication from the Metropolitan Boroughs' Standing Joint Committee, forwarding (a) a copy of a report from the Battersea Borough Council urging uniformity of action in the Metropolis in regard to rat repression measures, and (b) the views of a number of metropolitan borough councils on the subject, and seeking the advice of the Branch thereon, was also left to the next meeting for consideration.

An invitation from Messrs. J. Lyons and Co., Ltd., to the Metropolitan Medical Officers of Health to visit the firm's establishments at Cadby Hall, Kensington, and Greenford, was accepted.

Dr. Parkes conveyed a desire to resign the auditorship of the Branch. It was resolved that he be asked to reconsider his decision with a view to acting as one of the auditors during the present session. Dr. Annis was also re-elected Hon. Auditor.

"Comments and Reflections on Diphtheria" formed the title of the Presidential Address to the Branch, which was greatly appreciated by all members present. A cordial vote of thanks was unanimously accorded to Dr. Frederic Thomson for his interesting paper, which it was hoped might be published in the journal.

HOME COUNTIES BRANCH.

The first meeting of the session 1923-1924 of the Home Counties Branch of the Society of Medical Officers of Health was held at the House of the Society, on Friday, 5th October, 1923, at 3.30 p.m. The meeting was well attended. The President of the Branch, Dr. W. Benton, was in the chair.

The minutes of the previous meeting were read and approved.

The Secretary submitted several memorandum of the Ministry of Health. Discussion took place on the Housing, etc., Act, 1923, and its effect on Section 15 of the Housing, Town Planning, etc., Act, 1909, and Section 28 of the Act of 1919.

After discussion, the day of the meeting was fixed to be on the first Friday and the first Thursday of the month alternately.

The President then gave his Presidential Address on "A Complete Anti-Tuberculosis Campaign." In disclaiming his intention of revealing anything new or startling, he emphasised

the fact that at present the machinery already existed to successfully combat tubercular disease. The action of certain Medical Officers of Health in encouraging the present economania was to be deprecated. The fact that prevention of tuberculosis rather than its treatment which at present engages so much of our attention was the true function of the Medical Officer of Health was emphasised. In this regard, the isolation of advanced cases became of vital importance. The provision of large numbers of beds for the treatment of established tuberculosis compared with the small number of open-air schools was to be regarded as beginning at the wrong end. The apathy of the Government in regard to the question of transmission of tuberculosis by milk was adversely commented upon. The loss of all the valuable medical histories of children up to the school leaving age, after these children left school, was deplored and the President suggested that these records should be made available to insurance practitioners and that all insured persons should be examined within one month of being admitted to the panel.

On the motion of the retiring President (Dr. McMaster), seconded by Dr. S. Stalker, the President was heartily thanked for his address, to which he suitably replied.

A further discussion took place on a letter from Dr. Vercoe, Medical Officer of Health for Chelmsford, in which he complained of an alleged attitude of the Society's journal, "Public Health," in regard to certain medical subjects which are of a controversial nature. On the motion of Dr. Scurfield, seconded by Dr. Kirkhope, the Secretary was instructed to forward a copy of the letter to the Executive Secretary for the consideration of the Council or its appropriate committee.

The Secretary was also instructed to bring to the notice of members the advisability of joining the British Medical Association, this to be done by a note on the card of invitation to the meeting.

The Secretary was instructed to take such action as might be possible, in conjunction with the Executive Secretary of the Society, to obtain the withdrawal of the candidate recently appointed to the South-West area.

MILK AS FOOD.

Dr. George A. Auden, Medical Officer for the City of Birmingham Education Committee, in co-operation with Dr. James R. Mitchell, has recently carried out at the Alcock Street Council school

Birmingham, an experiment in which a pint of milk was given daily to thirty under-nourished school children for a period of four months. The conclusions arrived at by the two doctors are as follows:—There was an improvement in the rate of increase in weight and in nutrition, a notable improvement in mental and bodily vigour and alertness, and an improvement in the amount of the red colouring matter of the blood. It is added that it was found by the examination of the same children one month after the issue of the milk had ceased that a general slight loss in weight had taken place.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

PREVENTION OF VENEREAL DISEASE.

From Dr. J. J. JERVIS, M.O.H. Leeds.

SIR,—In the October issue of "Public Health" you make the statement in your Editorial on the Prevention of Venereal Diseases "that in those areas where practical prevention has been introduced so far as it is possible under the severe handicaps to which it is subjected by legal obstruction, the fall in the incidence of venereal disease has been remarkable and has been greater than the fall which has taken place in the country generally."

Such a statement appearing in the principal organ of Public Health in the country is of the highest importance, and I am sure Medical Officers of Health and V.D. Officers would welcome the publication of the figures on which it is based. I hope this course will commend itself to you and that the facts will appear in an early issue.

J. J. JERVIS.

[The Portsmouth returns show a 32 per cent. reduction in the incidence of venereal disease during 1921 and a 42 per cent. reduction during 1922, as compared with the year 1920.—ED., P.H.]

APPOINTMENT WANTED.—Temporary or permanent post sought by M.D., D.P.H., experienced in all branches of Public Health work. Has recently been acting as an Assistant Medical Officer on the staff of the Surrey County Health Department.—Apply J., c/o The Society of Medical Officers of Health, 1, Upper Montague Street, Russell Square, W.C.1.

53

The Society of Medical Officers of Health.

VOL. XXXVII.

CO-OPERATION WITH THE B.M.A.

The Report, a copy of which accompanies this issue, was drawn up with a view to meeting some of the difficulties which are constantly arising in various parts of the country whenever suggestions are made for the extension of the activities of the public health authorities. Many unpleasant episodes have occurred because private practitioners have considered that in some of these extensions the domain of private practice was unduly encroached upon. In the opinion of the Council of the B.M.A. many of these difficulties might have been avoided if there had been a frank discussion in the first place between the medical officer of health and the executive of the local division. In the report referred to certain general principles are laid down as to the co-ordination of preventive and curative medicine, and suggestions are made as to the proper way in which representations should be made on behalf of private practitioners to any local authority which proposes to institute or extend a scheme of medical inspection or treatment.

Medical officers of health should make a point of attending the meetings at the Division when this report is being considered. Undoubtedly a

*Subscription price, 31s. 6d. per annum, post free
in advance. Single copies, 2s. 6d., post free.*

	PAGE
EDITORIAL—	
Co-operation with the B.M.A.	53
Salaries in County Areas	54
The Panel Dispute	54
Position of Salaries Question	55
SPECIAL ARTICLES—	
Appointments to Avoid	57
Falling Birth Rates and Death Rates	57
Thirty Years as a Part-time Medical Officer of Health in a Rural District (<i>By Joseph Buck, M.D., D.P.H., Medical Officer of Health for Hunslet R.D.C.</i>)	58
Small Pox and Chicken Pox (<i>By J. H. Garrett, M.D., D.P.H., Medical Officer of Health, Cheltenham</i>)	61
League of Nations' Third Inter-Change.—Visit to the United States of America (<i>By Charles Porter, M.D., B.Sc.</i>)	62
SOCIETY OF MEDICAL OFFICERS OF HEALTH—	
Council Meeting	67
Ordinary Meeting	69
Important Notice to Members	55
NOTES FROM BRANCHES—	
Home Counties' Branch	69
North-Western Branch	70
Northern Branch	70
Midland Branch	70
" " Tuberculosis Sub-Group	71
CORRESPONDENCE—	
The Co-ordination of the Public Health and National Insurance Services	71
Potent Anti-Meningococcal Serum	72
NOTES	57

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH
ANNUAL DINNER, OCTOBER 19th, 1923.
PLAN OF THE TABLES.

Lady Smith, J.P. 1 Sir William R. Smith 2 Mrs. J. B. Wilkinson 3 Dr. J. B. Wilkinson 4 Mrs. Baker 5 A. E. Baker, Esq. 6 M.R.C.S., L.D.S. 7 Ken Kolke, Esq. 8 Dr. J. A. R. Glenzie 9 Dr. R. H. Wilschaw 10 Dr. G. M. Fox, J.P. 11 Dr. T. Ridley Bailey 12 Dr. E. H. Small 13 Sidney Sheen, Esq. 14	Dr. H. H. L. Hichon 27 Dr. Hichon's Guest. 28 George Thomson, Esq., L.D.S. 29 Dr. J. Watson Simpson 30 Mrs. Granley Smith 31 Granley Smith, Esq., H.D.D., L.D.S. 32 Mrs. R. Bellios 33 Dr. C. S. Thomson 34 Dr. J. T. C. Nash 35 Prof. H. Kerr, O.B.E. 36 Mrs. Andrews 37 Surg-Capt. O. W. Andrews, C.B.E., R.N. 38 Mrs. Sheen 39 Dr. E. W. Goodall, O.B.E. 40	Dr. W. Benton 27 Mrs. Bendix 28 D. Benton, Esq. 29 Dr. F. E. Bendix 30 Mrs. Ionside 31 Dr. T. Ruddock-West 32 Mrs. Newsholme 33 Dr. H. P. Newsholme 34 Mrs. McMiner 35 Dr. A. B. McMaster 36 Dr. J. J. Buchan 37 Dr. W. McC. Wanklyn 38 Mrs. Wanklyn 39 Dr. Lockhart Stephens, C.B.E., D.L. 40 Mrs. Lockhart Stephens 41	The Times 1 Central News 2 Press Association 3 Public Health 4 Sanitary Record 5 Dr. J. B. Howell 6 Mrs. Newsholme 7 Dr. H. P. Newsholme 8 Mrs. McMiner 9 Dr. A. B. McMaster 10 Dr. J. J. Buchan 11 Dr. W. McC. Wanklyn 12 Mrs. Wanklyn 13 Dr. Lockhart Stephens, C.B.E., D.L. 14 Mrs. Lockhart Stephens 15	The Executive Secretary 23 Dr. R. W. Stocks 24 The Medical Officer 25 Dr. Mary Kidd 26 The Daily Telegraph 27 Dr. Hilda Clark 28 The Morning Post 29 Dr. Catherine Gangee 30 Dr. Eric Donaldson 31 Major Kenneth Conyn, R.A.M.C. 32 Mrs. Picard 33 Dr. F. E. Strase 34 Dr. Cyril Banks 35 Mrs. J. J. Buchan 36 Dr. J. J. Buchan 37 Dr. W. McC. Wanklyn 38 Mrs. Wanklyn 39 Dr. Lockhart Stephens, C.B.E., D.L. 40 Mrs. Lockhart Stephens 41	Dr. G. Liseant Cox 1 Dr. W. J. Cox 2 C. F. R. Johnston, Esq., D.Sc. 3 Dr. G. Paddock Bate, J.P. 4 Mrs. John Bate 5 Dr. Ruby Thomson 6 Dr. Sidney Lawrence 7 Major A. H. Hayes, R.A.M.C. 8 Fred Peck, Esq. 9 Mrs. Peck 10 Dr. J. C. Saunders 11 Dr. E. W. Rees-Jones 12 Dr. B. L. O'Connor 13 Mrs. Hamilton Wood 14 Dr. S. J. C. Holden 15 Mrs. Young 16 Dr. E. Colston Williams 17 John Savile, Esq. 18 Mrs. Charles Porter 19 Dr. Andrew Balfour, C.B., C.M.G. 20	Sir William Hamer 27 Lady Murphy, M.R.E. 28 Dr. A. A. Mussen 29 Miss Murphy 30 Dr. W. F. Corfield 31 Mrs. Cates 32 Dr. A. T. Nankivell 33 Lady Gauvain 34 Dr. Joseph Cates 35 Sir Henry Gauvain 36 Mrs. G. F. Buchan 37 Dr. W. Champneys 38 Miss Victoria Barron 39	Dr. W. G. Willoughby 1 Dr. Wallace Henry (Chairman, Rep. Mtgs., B.M.A.) 2 Dr. George Millson, O.B.E. 3 Sir Benjamin Johnson, D.L., J.P. 4 Prof. A. Bostock Hill 5 Sir Dawson Williams, C.B.E. 6 Sir George Newman, K.C.B. 7 Hon. Mr. Justice Swift. 8 Mrs. Naylor Barlow 9 The Minister of Health (The Rt. Hon. Sir William Joynson-Hicks, Bart., P.C., M.P.) 10 The President (Dr. T. W. Naylor Barlow, O.B.E.) 11 Lord Riddell 12 Dr. T. Eustace Hill, O.B.E. 13 Sir Humphry Rolleston, K.C.B., P.R.C.P. 14 Prof. John Robertson, C.M.G., O.B.E. 15 Sir Arthur Robinson, K.C.B. 16 Dr. James Wheatley 17 Sir Squire Spr'gge 18 Dr. W. A. Bond 19 Dr. Alfred Cox, O.B.E. 20 Dr. F. J. H. Coutts, C.B. 21
---	--	---	--	---	--	--	--

great amount of misunderstanding still exists on this important subject, and nothing but full discussion with helpful explanations advanced from the medical officer of health can clear the atmosphere. Most of the previous misunderstandings have been due to the fact that the average practitioner has little knowledge of the workings of public health administration, and the more he learns about it in the future the greater will be the possibilities of amicable understanding between various branches of the profession.

SALARIES IN COUNTY AREAS.

In previous issues we have referred to the striking successes which have attended the efforts of the B.M.A. and the M.O.H. Society in connection with the salaries scale, but we have never disguised the fact that the position with regard to the service under County Councils is far from satisfactory. Staffordshire County Council recently evaded the reasonable salaries scale by promoting an assistant without throwing open the appointment and without advertisement. Subsequently, Herefordshire, the Isle of Ely, and the North Riding of Yorkshire County Councils succeeded in filling vacancies at completely inadequate salaries, although only by sacrificing all choice among candidates, and presumably the County Councils Association were led to believe that these "successes" could be continued in defiance of the professional unity.

When the County Councils Association received the circular from the British Medical Association and the Society of Medical Officers of Health, together with the salaries scale, they declined to give any consideration to the subject, and committed themselves to the opinion that a scale was impracticable. Subsequently, a so-called "Conference" took place between representatives of the B.M.A. and the M.O.H. Society on the one hand, and representatives of the County Councils Association, the Association of Municipal Corporations, the Urban and Rural District Councils Association, and the Association of Education Committees on the other. The representatives of the public bodies mentioned listened for a short time to statements made by the medical representatives on the subject of the necessity for a scale, but at the end of that hearing, and without any discussion whatever upon the merits or demerits of the scale itself, and without any opinion being expressed as to whether the items in the scale were reasonable or otherwise, the medical representatives were dismissed with a statement from the Chairman that the public

bodies concerned intended to remain "masters in their own house." If this is what the County Councils Association regards as "negotiation" then it is quite time that a united profession succeeded in teaching them other views.

Already it appears to be evident that professional unanimity is producing some effect upon this stubborn body as is evidenced by the fact that at a meeting of the Executive Council of the County Councils Association held recently the Secretary was instructed to write to the Ministry of Health drawing attention to the way in which the County Councils are embarrassed by the British Medical Association and the Society of Medical Officers of Health in the proper discharge of the public health functions imposed upon them.

Probably the embarrassment to which the County Councils Association referred was due to the fact that the Holland County Council, who have been trying to secure the services of a County Medical Officer for a salary of £900 per annum inclusive of travelling expenses, received only one application, and this single applicant was considered to be insufficiently qualified.

Nottinghamshire County Council, obviously stimulated by the success of Staffordshire, Herefordshire, the North Riding of Yorkshire, and the Isle of Ely, in evading the salaries scale, are now advertising in the lay press for a County Medical Officer at the inadequate salary of £1,000 per annum, but one may confidently rely upon the fact that no self-respecting member of the Public Health Service will send in an application.

THE PANEL DISPUTE.

Following upon the refusal of the B.M.A. to accept the terms originally offered, which were dealt with in our last issue, alternative offers were made by the Minister of either (1) a capitation fee of 8s. 6d. per head for five years (compared with the previous offer of 8s. 6d. for three years), or (2) an immediate committee of inquiry to report upon the subject of payment.

The second alternative has been accepted and the Committee of Inquiry has now been appointed.

We offer our congratulations to the British Medical Association for the admirable way in which these negotiations have been managed, and the manner in which the profession has been held together. The episode forms an excellent illustration of a fact which we hope every member of the Public Health Service will take to heart, namely, that every reasonable aspiration of the profession can be accomplished, but only by absolute loyalty and unanimity.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Important Notice to Members.

The attention of members is directed to the reprint from the *British Medical Journal* (October 20th, 1923) circulated with this issue of "Public Health," which will be the subject of early discussion at Branch Meetings of the Society and Divisional Meetings of the B.M.A. (see leading article, "Co-operation with the B.M.A.," on p. 53).

Every member of the Society is also asked to consider carefully the following Memorandum.

POSITION OF SALARIES QUESTION.

MEMORANDUM BY THE COUNCIL OF THE SOCIETY.

The Council think it desirable to inform all members as to the present position of the salaries question. The campaign has been undertaken not for purposes of gain but so that the Public Health Medical Services which are yearly increasing in public importance shall be able to attract to their ranks medical graduates of good quality. The Council especially desire to direct attention that as from 1st January, 1924, entrants for the Diploma of Public Health require what means practically a 7 years' course in Medicine and Public Health, and that even after this training has been undergone few men are appointed as Medical Officers employed in Departments under the age of 30 years.

After a prolonged period of negotiation the British Medical Association adopted at their Portsmouth meeting in July, 1923, the following Scale of Minimum Commencing Salaries for Whole-time Public Health Officers:—

		*Minimum Commencing Salaries per Annum.
RESIDENT MEDICAL OFFICERS		£350 plus emoluments.
DEFINITION.—These are Medical Officers employed in Hospitals, Sanatoria, or other Institutions without responsibility for the work of other Medical Officers.		
NOTE.—Where the Appointing Authority limits the appointment to a term not exceeding one year and not renewable, this salary shall not apply.		
MEDICAL OFFICERS EMPLOYED IN DEPARTMENTS.	Working directly under a Senior Medical Officer.	£600.
DEFINITION.—These are Medical Officers without responsibility for the work of other Medical Officers but who shall have had at least three years' experience in the practice of their profession subsequent to obtaining a registrable qualification.		

		*Minimum Commencing Salaries per Annum.
SENIOR MEDICAL OFFICERS IN CHARGE OF DEPARTMENTS, e.g., Port Sanitation, School Medical Departments, Tuberculosis Departments, Mental Deficiency Departments, Maternity and Child Welfare Departments, Venereal Disease Departments, or any other similar department or combination of departments, and Medical Superintendents of Hospitals, Sanatoria or other Institutions.	Without Assistants.	£750.
	With 1 Assistant	£900.
	2	£950.
	3	£1,000.
	4	£1,050.
	5-6	£1,100.
	and for every completed two or less	an additional £50.
DEFINITIONS.—These are Medical Officers who are in charge of departments and are directly responsible to the Medical Officer of Health or otherwise.		

DEPUTY, OR CHIEF ASSISTANT, MEDICAL OFFICERS (Hospitals, Sanatoria, or other Institutions and Departments).	A salary equal to 60 per cent. of the salary of the Medical Superintendent or Senior M.O. in charge, but not less than the salary of a M.O. employed in a department.
--	---

DEPUTY OR ASSISTANT MEDICAL OFFICERS OF HEALTH.	A salary equal to 60 per cent. of the salary of the M.O.H. but not less than the salary of next grade of medical officer in the department.
DEFINITION.—A Deputy or Assistant Medical Officer of Health is a medical officer duly appointed as deputy or assistant medical officer of health by the local authority to assist the medical officer of health in the general administration of the health department and the carrying out of the various Acts, bye-laws, orders, rules, regulations, etc., required to be or usually administered by the medical officer of health; the title deputy or assistant medical officer of health to be limited to medical officers carrying out these general duties.	

		Population.	
MEDICAL OFFICERS OF HEALTH.	Under 35,000.	£800.	
	" 50,000.	£900.	
	" 75,000.	£1,000.	
	" 100,000.	£1,100.	
	" 150,000.	£1,200.	
	" 200,000.	£1,300.	
	" 300,000.	£1,400.	
	" 400,000.	£1,500.	
	" 500,000.	£1,600.	
	" 600,000.	£1,700.	
	Over 600,000.	£1,800.	
DENTAL OFFICERS			
ASSISTANT DENTAL OFFICER...		£450.	
DENTAL OFFICER (Single-handed)...		£500.	
" (with an Assistant) ...		£600.	
For each additional Assistant ...		£25.	
[NOTE.—The Scale for Dental Officers was not submitted.]			

NOTES.—(A) These salaries are nett, any expenses necessitated by the duties being provided in addition.

(B) Population means population at the latest Annual Report of the Registrar General.

(C) No existing officer should be prejudicially affected by the operation of the scale.

*(D) ANNUAL INCREMENTS should be at the rate of 5 per cent. per annum rising to 40 per cent. above the minimum basic rates.

*(E) BONUS. The Current Civil Service cost of living bonus should be applied to the foregoing scales.

(F) The salaries of Medical Superintendents of Poor Law Hospitals should be as for Senior Medical Officers in charge of Departments as set out above.

(G) Medical Superintendents of Institutions, and in suitable cases Chief Assistant M.O.s should, in addition to their salaries, be supplied with a house.

(H) There shall be no differentiation of salary on account of sex.

(I) All exceptional work not recognised as normal duties shall be the subject of additional remuneration.

(J) If marriage be deemed by the local authority a disqualification for a medical appointment the same shall be specifically stated when the vacancy is advertised.

(K) In placing existing officers in accordance with these salaries, years of service and merit should receive recognition.

(L) All Medical Officers of local authorities should be subject to similar security of tenure as is provided for a Medical Officer of Health under the Public Health (Officers) Act, 1921. But where the appointing authority limits the appointment to a term not exceeding one year, and not renewable, this provision shall not apply.

The above Scale (except that section applying to Dental officers) was adopted at the Portsmouth meeting as stated with the following instruction to the Council of the British Medical Association, namely, "that the Council be instructed to meet in consultation with representatives of the Associations representing the Local Authorities and be authorised if necessary to make such alterations in detail as may be necessary to secure an agreed scale." This consultation between the British Medical Association and the Society of Medical Officers of Health and representatives of the County Councils' Association, the Association of Municipal Corporations, the Association of Education Committees, the Urban District Councils' Association and the Rural District Councils' Association took place on Tuesday, October 9th, at 2.30 p.m. No official reply has yet been received as to the result of the consultation but the representatives of the employing bodies made it clear to the British Medical Association and Society of Medical Officers of Health, whom they treated merely as a deputation, that they proposed to remain masters in their own house, and that they did not

consider a scale of salaries necessary and that each Local Authority, without reference to the British Medical Association, should determine the salaries of their medical staff for themselves. Since then the County Councils' Association have adopted a resolution practically on these lines and have forwarded to the Ministry of Health a further resolution stating that the salaries campaign of the British Medical Association and the Society of Medical Officers of Health was seriously hindering County Councils in the discharge of their Public Health duties.

The Council desire to inform all members of the Society that the Scale as above is in operation as to all new appointments. In connection with this matter the Council call attention to Article 11 of the Society's Articles of Association which is as follows:—

" 11. If any member of the Association should be charged with conduct detrimental to the honour and interests of the medical profession or the Association, the Council shall have the power, after due enquiry of which at least fourteen days' notice shall be served on the member, specifying when and where he may be heard in his defence to admonish or call for the resignation of such member. Should he refuse to resign when so required, the Council may terminate his membership by expulsion. A majority of two-thirds of those present and voting at a meeting of the Council, shall be required for the purpose of exercising the powers conferred by this Article.

The Council hope that it will be rarely, if ever, necessary for them to take action under this Article, and are convinced that by co-operative loyalty and the adhesion of all members to the Scale they will secure for the public the advantage of having the Public Health Medical Services administered by medical men of good standing and repute on terms acceptable both to the medical profession and local authorities. The Council especially desire to state that Medical Officers of Health or other Senior Medical Officers who from time to time are asked to make recommendations to their Local Authorities as to the salaries of the medical staff will merely recommend the Scale. The Council feel that a Medical Officer of Health or other Senior Medical Officer making recommendations below the minimum commencing salaries of the scale is not acting in loyalty to his colleagues or the profession generally and may bring himself within the scope of action under Article 11 above quoted. The

Council further desire to add a note relative to the position of Assistant or other Medical Officers who are seeking senior appointments in their own departments. They recognise in many cases that such officers may be considered by the employing Local Authority to have a prior claim on such appointments, but they cannot recognise on that account that the Assistant or other Medical Officer who is promoted shall accept promotion at a lower rate than the Scale provides. If all Assistant and other Medical Officers whom it is proposed to promote at a lesser salary than the Scale provides will act together and co-operate loyally with their fellow members of the Society and with the British Medical Association, the Council are satisfied that the interests of no individual in these circumstances will be imperilled. The Council would make it known that generally in their opinion the acceptance by Assistants or other Medical Officers of senior appointments in their own departments not in accordance with the Scale is an act of disloyalty to the profession and would fall to be dealt with under Article 11 of the Society's Articles of Association.

The Council desire to state that the Secretary of the Society will always be available to give candidates in difficulties every possible information and advice and the Council will at all times give special consideration to any case submitted to them by any member. They feel sure that they are on the eve of final victory in relation to the present Salaries Campaign and only ask for the loyalty and adhesion of members to the Scale so as to secure its final adoption in all instances by Local Authorities.

T. W. N. BARLOW, President.

G. S. ELLISTON, Executive Secretary.

APPOINTMENTS TO AVOID.

All members of the Public Health Service are warned against making application for any of the following appointments without having first communicated with the Secretary of the M.O.H. Society or the Medical Secretary of the British Medical Association, 429, Strand, London, W.C.2. The County Council of Holland (Lincolnshire) and the Nottingham County Council are endeavouring to obtain County Medical Officers at salaries below the recognised scale. The County of Stirling is endeavouring to obtain an underpaid Assistant County Medical Officer. The Devonshire County Council is endeavouring to obtain a school medical inspector, and assistant

school medical officers are required by the County Council of Cornwall, Cheshire, Middlesex, and Somerset, at salaries below the very reasonable scale of the British Medical Association.

Underpaid Assistant Medical Officers of Health are also required by the Metropolitan Borough of Finsbury, the Borough of Smethwick, and the Borough of West Hartlepool, and underpaid School Medical Officers are required at Brighton, Carlisle, Crewe, Edinburgh, Liverpool, Nottingham, and South Shields.

FALLING BIRTH RATES AND DEATH RATES.

The birth rate recorded during the past quarter is described as the lowest birth rate in any third quarter, except during the period of the war. The rate was 19.8 per 1,000 of the estimated population. The following table shows the rates during the third quarters of other years:—

BIRTH RATES—THIRD QUARTERS.					
1913	1914	1920	1921	1922	1923
24.4	24.4	24.3	22.5	20.3	19.8

Of the 190,148 births recorded, 97,350 were males and 92,798 females, giving a proportion of 1,049 males to 1,000 females.

The death-rate for the quarter was 9.5 per 1,000. This is exactly the rate recorded during the same period of last year. The following table makes a comparison with other third quarters:—

DEATH RATES—THIRD QUARTERS.					
1913	1914	1920	1921	1922	1923
12.3	12.4	9.9	10.4	9.5	9.5

The infant mortality was 57 per 1,000 births. This is 27 per 1,000 below the average of the ten preceding third quarters and, with the exception of a mortality of 55 in the third quarter of last year, the lowest rate recorded in any quarter.

The reason of this low rate is supposed to be the absence this year, as last, of any serious epidemic. Influenza was a primary or contributory cause of death in 742 cases, or 0.8 per cent. of the total deaths.

NOTICES.

As shown on the Sessional Card, the Council of the Society of Medical Officers of Health will not meet during December unless matters arise of urgent importance.

The Index of "Public Health," Vol. XXXVI., will be ready on December 1st, and will be forwarded to any subscriber on application.

THIRTY YEARS AS A PART TIME MEDICAL OFFICER OF HEALTH IN A RURAL DISTRICT.

BY

JOSEPH BUCK, M.D., D.P.H., Medical Officer of Health for Hunslet R.D.C.

It has been said that "the greatest happiness in human life consists in being well deceived." Whatever degree of truth there may be in this aphorism I am not deceived as to the honour which you bestowed on me in electing me as your President for the year, nor did I accept the position without some diffidence, inasmuch as in my capacity as a part time Medical Officer of Health with many other obligations, I felt that I might not be able to fulfil to my satisfaction the various duties of the office, and that my views might not at all times coincide with the orthodox views of those who devote the whole of their time to the Public Health Service.

Times, manners and men have changed and medical science has been revolutionised since I entered the profession upwards of 40 years ago.

It was the custom in those days to be sent as an apprentice to a surgeon for a period of years, and at the age of 16 I became the pupil (legally fastened by indenture for 5 years) of the surgeon and apothecary who held the appointments of Medical Officer of Health to the Urban and Rural Districts as well as Poor Law and private practice.

It is not my intention to disparage this system; much benefit accrued and useful information was acquired in many ways from my experience, which I have not had cause to regret, except that the term of years was too long, and should have been limited to two years at the most. These were the days of Empiricism. Typhoid was known as "low fever," pus was still "laudable," Koch had not discovered the tubercle bacillus, bacteriology was in its infancy, and the causation of many diseases was attributed to the "Germ Theory."

It was thus as a boy that I became introduced to the Public Health aspect of medicine, my duties being of a very limited character, viz., the copying of the quarterly reports, the manipulation of a few meagre statistics and the application of the principles of Listerism to minor surgical cases, whenever the opportunity presented itself, in place of the various poultices, plasters and medications which were in vogue at that time. During my student days, I took considerable interest in the subject of Public Health, and after many years, wish to pay a high tribute to the sound

teaching and kindly encouragement of Dr. John Glaister, Professor of Public Health and Medical Jurisprudence in the University of Glasgow. After two years' residence as Medical Officer in a provincial union infirmary, I migrated to Rothwell, and became the partner and deputy of the late Medical Officer of Health to the Hunslet Rural District Council. In 1893, on the demise of my partner, I was appointed to the office, but it may be taken as a sign of the times, that the salary was docked one-third, on account, it was alleged, of my youth and inexperience, but in reality as an excuse to cut down the salary.

These were the days of the old sanitary authorities, when one's presence at the board meetings was viewed with a certain degree of suspicion, and one's absence with equanimity. Vested interests were apt to prevail and, in the absence of security of tenure, one had to tread very warily.

The establishment of County, District and Parish Councils was a distinct improvement on the old regime, and from this date steady progress has been made in all matters pertaining to the efficient sanitary administration of the district.

It is not my intention to weary you with statistics. Suffice it to give you the mean for the decade 1910-19 of the principal vital statistics of the district as compared with those of England and Wales for the same period, and to briefly review the questions which arise out of these subjects, especially in the light of a part time officer and general medical practitioner.

The Hunslet Rural District is more urban than rural in its character, abutting as it does on the city of Leeds, and its population is composed mostly of coal miners, and other artisans, who are congregated together in certain parishes.

The population (1921) was 7,240.

It may be argued that little reliability can be placed on any statistics, owing to the paucity of numbers, but as the figures are taken over a series of years, this objection does not obtain.

VITAL STATISTICS.

Mean for 10 years, 1910-19.	Huns- let R.D.C.	Eng. and Wales.	1922.	
			Eng. and Wales.	Huns- let R.D.C.
Birth Rate ...	20.0	21.8	20.6	20.6
Death Rate ...	12.6	14.3	12.9	11.0
Zymotic Death Rate ...	.7	?	?	Nil.
Infant Mortality Rate ...	77	103	77	72

The declining birth-rate throughout the country is causing much concern amongst those who fear a decrease in population, and consequently racial decline.

These fears appear to me to be groundless, inasmuch as the decrease in the death-rate, increased longevity, and the preservation of infant life are all factors which more than counter-balance its effect.

The population of the country is steadily increasing. We are not in that category of countries which are dependent on man-power for their existence and are self-contained. We are becoming every year more and more dependent on other countries for our food supply, and no longer can our industries, even with prospective expansion, find employment for its increasing surplus population.

The ever-increasing population, in a country overburdened with taxation, unemployment, and social unrest, is a matter which requires our most serious attention. The Voice of the Eugenist is heard in the land, and the problems of birth control, mental deficiency, and venereal disease are of too important a nature to be lightly ignored.

The death-rate (for the decade, 1910-19), viz., 12.6, needs but little comment, except that the number of deaths in children under 5 years of age continues to diminish and the number in persons over 65 to increase—a necessary corollary to the many agencies which have been established to combat infant mortality, and promote maternal welfare, and to the social and economic efforts for the betterment and uplift of the people.

The infant mortality rate of 77 over a series of years, in a district which is more industrial than rural in character is somewhat remarkable and worthy of attention. It is not many years since the infant mortality rate of 100 for the whole country was looked forward to as a "consummation devoutly to be wished." This ideal has been realised more expeditiously than was anticipated, and yet there is room for considerable improvement on this figure. One point stands out prominently in my experience, and probably in that of most medical officers, viz., the excessive number of deaths in infants from congenital debility, premature birth, marasms, malformations and other allied conditions.

Of 11 deaths in infants under 12 months of age in 1922, 10 died within 4 weeks of birth, and 9 out of the eleven were consigned to the before-mentioned causes which were obviously pre-natal.

I attribute the falling infant mortality rate to (1) smaller families and consequent better quality of and more concentrated attention to the offspring, (2) improved social and economic conditions over a series of years and (3) more effective

sanitary administration. In fact our aim should be quality not quantity, and preventive rather than curative methods.

The zymotic death-rate continues on the down grade being .7 for the decade 1910-19, and for 1922, nil, a fact unknown in my own experience, and unique I should say in the annals of the Hunslet District Council. As regards the incidence of infectious diseases, enteric fever has disappeared, epidemic diarrhoea has become almost negligible and diphtheria has ceased to be the bug-bear of former years—conditions due, undoubtedly to a more exact knowledge of the causation of these diseases, more scientific methods of diagnosis and treatment and improved sanitation generally.

Small-pox could and should be wiped out, but owing to the laxity and unsatisfactory state of the Vaccination Law, it is becoming more prevalent and causing anxiety for the future.

That successive Governments have failed to tackle this question is probably due more to political considerations than to want of faith in its efficacy, and this fact does not reflect credit on the State as the custodian of the Public Health.

Measles, scarlet fever, and whooping cough continue to exact their toll on child life, and until we have fathomed the causation of these diseases I am afraid deaths from these causes will continue to augment the death-rate. At this point I should like to emphasise the vicious system of Government Grants being dependant on school attendance. Children are frequently rushed into school, when quite unfit through the excessive zeal on the part of school attendance officers and teachers. It is unsatisfactory that school authorities and children should be thus penalised, and this method of securing a maximum possible sum towards educational expenses should be put on a more sound basis.

The subject of Tuberculosis has been discussed *ad nauseam*. The vast sums of money expended on sanatoria and other present day methods, are, in my opinion out of all proportion to the benefit derived. Had this expenditure been utilised in promoting better environment, housing schemes and effective supervision over the milk supply, the results would have been far more commensurate with the capital outlay. That tuberculosis, other than respiratory, is more amenable to treatment, is evidenced by my experience in the Children's Homes of the Hunslet Union, where, from an average of one hundred children collected chiefly from the poor districts of South

Leeds, highly favourable results have been obtained from healthy environment, plain, wholesome food and happy conditions.

The recent attempts on the part of the Ministry to improve the National Milk Supply are far from satisfactory. Those who advocate sterilisation and pasteurisation are confronted with those who argue that these methods will destroy the vitaminic properties of the milk, whilst the grading of milk appeals to me as a catering for the well to do, and leaves the poor under the same conditions as before.

The far reaching effects of venereal disease are prominently before us in our hospitals, infirmaries and union institutions, and although we have in our possession the knowledge for the prevention and cure of this foul disease, yet the methods for putting this knowledge into practice are so hedged in by controversial and social considerations that very little progress is made.

Until sentiment is put aside and concerted action and compulsory measures are adopted our efforts will be unavailing.

The Midwives Act is about to be amended, and I am afraid, for practical purposes, that the zeal of the promoters is outrunning their discretion. The original object of the Act was to protect the industrial classes against ignorant and uncontrolled practice and to provide for the better training of midwives. Whilst agreeing that efficient training is necessary, I am afraid that this is being carried too far, with the result that the ordinary commonsense intelligent woman, suitable for the work, is being debarred by lengthened curriculum and increased fees from taking up the work, and the diploma is becoming an accessory to those who never intend to practice in the true sense of the Act.

The result is that it is most difficult to obtain the services of a qualified midwife in an industrial district, and the "handy" woman, of necessity, is again coming into prominence.

The increasing mortality from malignant disease is causing much concern, and the question of cancer research at present is exercising the resources of those bodies capable of dealing with it. I cannot disassociate myself from the impression that food may play an important part, and the subject of dietetics in its application to the Public Health aspect of disease is one that is likely to attract more consideration than in the past. The same remarks may be applied to diabetes, for which no permanent specific cure has yet been discovered. Much publicity has been given to the treatment of this insidious disease by Insulin, which is somewhat premature

and regrettable, inasmuch as the laity have been buoyed up by hopes which cannot as yet be realised.

That insulin is of great value in advanced stages is fully recognised, but it only acts as an artificial substitute for the deficiency in the internal secretion of the pancreas, as long as it is administered. It does not cure, it is only adaptable to certain advanced forms, and its administration is not without danger except in the hands of experts.

The same publicity is being given to the researches of Prof. Dreyer in connection with tuberculosis. Whilst looking forward with much hope to the efficacy of these investigations in both diseases with a view to a curative agent being found, they are only in the experimental stage, and definite conclusions for the sake of the community should be deferred.

A matter of urgent importance affecting the Public Health is the question of institutional treatment. In our cities and large boroughs, whilst hundreds are awaiting admission for lack of accommodation in voluntary hospitals, ample accommodation could be found in the large well-equipped and up-to-date union infirmaries. People will take advantage of charitable institutions maintained by voluntary contributions but will not accept assistance paid for out of the rates. Reform in this direction is urgently needed in order that our Poor Law Hospitals could be more generally utilised, and sentiment and the taint of pauperism eliminated.

On behalf of part time Medical Officers of Health, I would mention that certain anomalies have existed for some time, and that no effective efforts have been made to remove them. It is a matter for regret (1) that superannuation should not have included part time officers, especially those who have devoted the best part of their life to the service; (2) that nothing has been attempted to revise the scale of salaries of these officials, many of whom are working at a mere pittance; (3) that, whilst large sums of money can be spent by corporations and other large bodies in sending delegates to the various conferences, small authorities are turned down by the Ministry of Health on the plea of public economy; (4) that no security of tenure exists for him, and that he is liable to be deprived of his office on the caprice or whim of his Board.

As the part time officer plays a very important part, and is I believe still in a majority in the Public Health Service, I take this opportunity of pleading for a little more consideration for him on the part of the Society.



Typical case of Chicken Pox on 4th day from first appearance of rash. Similar eruption on back with scattered spots on legs and feet. Some of the spots that photographed light were distinctly vesicular.



Typical case of Mild Small Pox in unvaccinated girl on 5th day from first appearance of rash. Similar rash on legs and feet.

Finally, we are all members of a great and noble profession. Our aim should be the public welfare, and this can only be attained by steady co-operation between all its branches, unity of purpose, and the adoption of a *via media*—tact, toleration and moderation—as opposed to the extremes of a *laissez faire* attitude or the doctrines, of the crank and the faddist.

SMALL POX AND CHICKEN POX.

BY

L. H. GARRETT, M.D., D.P.H., Medical Officer of Health, Cheltenham.

The recent occurrence in England of a mild type of small-pox has increased the importance of being able to differentiate clearly between small-pox and chicken-pox. It is very usual for these two diseases to run contemporaneously wherever prevalence of small-pox is experienced, and everyone engaged in dealing with a small-pox epidemic must have been struck with the suggestion of the operation of some common cause leading in different circumstances to the occurrence alternatively of one or the other of the two diseases, or of the capacity of one to pass into the other under favourable conditions. This idea, however, is at present of the nature of pure speculation, and, substantially considered, small-pox and chicken-pox are emphatically distinct diseases, and it is the object of this article to accentuate the difference between them by means of the accompanying photographs (see Plate) and the following descriptive points derived from the writer's recent experiences.

Long practice leads to the observation that each definite outbreak of a zymotic disease tends to assume a type, which may be summarily spoken of as mild or severe, according to the physical effects and rate of mortality produced, or the type may be specialised according to the predominance of one set of symptoms, or the part of the body chiefly affected. In the case of the small-pox recently experienced it may be said that the symptoms generally have been modified, the physical and mortal effects being comparatively very slight. Chicken-pox has also its types, and is capable of modifications accordingly. A number of cases which are all connected together, being derived from the same source and one another, may be observed to assume the same appearance, and afford an example of a type. Between such types of chicken-pox small variations occur in the aspect of the rash and its course, and the degree of illness, and relative infectiousness of the cases. But although the appearances in these types of

chicken-pox vary, each one has a chicken-pox rash and not a small-pox rash, which is distinct and different.

The chicken-pox rash consists in considerable part of simple vesicles containing thin fluid. Such well developed watery vesicles may be few and far apart as sought for at any one time, the main part of the existing rash being only papular, whilst another type will exhibit blebs of considerable size and number, some of the vesicles being almost bullous, and the vesicular rash prominent at all parts affected, even upon the soles of the feet. Neither papules nor vesicles, however prominent the latter be, pass into regular pustules. They perhaps burst, and they all change in appearance within a day or two, beginning to dry up into dark scabs that are presently going to be shed.

Chicken-pox therefore has an eruption, some part of which assumes the form of simple vesicles, varying in size from $\frac{1}{4}$ to $\frac{1}{2}$ of an inch across, more or less. The several spots of this eruption, viewed within the first few days of its occurrence will exhibit a variety of appearance due to the rapid changes that take place in them, and the fact that they do not all come out and mature together. Thus commonly, within the first week of the eruption, you see pimples not arrived at the vesicular stage, vesicles full or burst, and dark spots of drying up lymph and dead epidermis all existing at the same time. The itching or irritation often causes some of the scabs to be scratched, and this increases their size and depth and the likelihood of pitting. Not uncommonly, a small amount of pus develops between the vesicular and dried-up stages, a thin layer of pus, for example, may collect round the edges of the larger vesicles. These, however, are very likely to be broken, and are always flat and unlike the raised pustules of small-pox. Compared with that of small-pox the rash is altogether comparatively flat, soft and irregular at the base.

The inflammatory areola surrounding the spot is not diagnostic by presence, absence or intensity, the inflammation of surrounding skin being idiosyncratic in both diseases, depending upon relative sensitiveness to reaction, as in the case of vaccination.

The comparatively short duration of the rash in the same state, or its tendency to quick change in appearance is a very important diagnostic point in favour of chicken-pox. One of the French names for chicken-pox is *la petite vérole volante*, and although the flying-away of all traces of eruption may require three weeks, the first stages of the eruption of chicken-pox are transitory compared with the eruption of small-pox.

A case of mild small-pox is also differentiated from chicken-pox by difference in distribution of the rash, the small-pox rash being more on the limbs than on the trunk. In chicken-pox it is to be expected that there will be most on the chest and up the sides towards the axillæ, and on the back, especially over and between the shoulder blades. The wrists and backs of the hands are particularly prone to be affected by the rash of small-pox, and the limbs generally in preference to the trunk, occasionally a greater generalisation is to be expected however, the skin of all parts of the body being implicated. In both diseases the rash may extend on to the feet and even on to the soles, though it is more frequently observed upon the soles in small-pox. The same may be said of the palms of the hands, though the palms are more rarely affected, and the face, particularly the forehead is the seat of the rash in both diseases, and in both it may affect the hairy scalp and the palate. The depth of the eruption in the skin is greater in small-pox, which accounts for its slower maturation. Where existing on the soles and palms, the apparent condition of the eruptive spot frequently remains about the same for as long as a fortnight or three weeks in small-pox, and generally, the pustules are comparatively long in changing their appearance. The rash in small-pox is usually well defined, less tending to depart from the circular form at the base, more raised, harder to touch, at first somewhat pearl-like in appearance, growing purulent, not beginning to degenerate into flattened black scabs from the 2nd day, but persisting and retaining the same prominent appearance, more or less, for a considerable number of days which may run into weeks, though ultimately the desiccation and desquamation may be rapidly completed when the process has begun.

There are types of both small-pox and chicken-pox in which itchiness is a characteristic.

The preliminary illness and subsequent malaise is often very slight in mild small-pox, the symptoms not being more severe than in chicken-pox. In chicken-pox the intervening days between onset and rash are usually fewer than the usual 4 days of small-pox, i.e., 1 to 3 days only. But the constitutional disturbance in either disease may be so slight as to render it of no diagnostic value.

It must be remembered that the progressive development of the eruption in either of the two diseases may cease at any point, the rash sometimes not passing beyond a condition of small pimples, or inflammatory points of small size sug-

gesting the place of a developing pimple.

The distribution of the rash, the appearance of the eruptive spots, the maturation, depth and length of duration of the spots, the prodromal and subsequent illness, are each subject to anomalous exception, but taken all together they will almost invariably supply the sufficient difference for correct and immediate diagnosis, their quick appreciation depending largely upon the practical experience of the observer.

Recent vaccination considered as preventive of small-pox, will assist and generally confirm the diagnosis arrived at by those physical signs above mentioned. The after vaccination of the case, where there has been no previous vaccination, would also afford evidence, in its success or failure, of the real nature of the case, and be generally found to confirm the diagnosis arrived at by the other means, the attack of small-pox being preventive of successful vaccination.

LEAGUE OF NATIONS' THIRD INTER-CHANGE.

VISIT TO THE UNITED STATES OF AMERICA.

By CHARLES PORTER, M.D., B.Sc.

II.

Due to arrive on Friday, 7th September, despite a certain amount of fog, such excellent time was made that on the morning of the 6th Sandy Hook was sighted and by 2.30 in the afternoon, having paid respects to the Statue of Liberty and a variety of skyscrapers, the party set foot on American soil. Somewhere about 10.30 and in the neighbourhood of Ellis Island, the ship was boarded by, amongst others, the quarantine staff under the charge of Dr. Grubbs, who, having been advised of our presence on the "President Roosevelt," sought us out at once and in the name of the Public Health Service, bade us welcome to the States. More than this, he invited us to accompany him in his inspection of the third-class passengers. The object of this examination is merely the detection of individuals who may be suffering from infectious disease or who may be in a verminous condition. It is, in fact, a public health inspection and precedes the fuller examination made by other officers on Ellis Island under the law governing immigration. As the party is to be given the opportunity of studying quarantine methods more fully before the conclusion of the course, it is proposed to postpone the giving of a description of the inspection carried out until later.

Once landed, the Customs' examination caused little delay, and by about 4 o'clock the party was established in the quarters they had chosen for a resting place during the few days that must elapse before setting out for Washington. As a matter of fact little rest was obtained by anybody. Dr. Kuhn, the representative of Yugoslavia, who had been ill throughout the voyage, was found to be suffering from pleurisy with effusion, and was carried straight from the ship to the New York Hospital. Here he is likely to remain for some weeks, though at the time of writing his condition has shown considerable improvement. It was oppressively hot during the whole period of our stay, and knowing that a return visit was to be paid little or no attention was paid to matters of public health interest, the time being devoted to sight-seeing and learning something of the mode of life of the average American, particularly as regards the taking of meals. By the end of the visit most members were acquainted with quite a number of Child's restaurants (the American Lyons', only much whiter); and could handle a tray in a cafeteria with some degree of skill. All meals, including breakfast, were taken at a Child's restaurant, or a café, or a cafeteria, where each customer on entering receives a tray and a set of table implements wrapped in a serviette. He then walks round, picking and placing upon his tray the dishes of his choice. This he carries to the table at which he desires to sit and consume his meal. The amount of his indebtedness is marked on a card that he carries, and payment is made by the customer at the door as he passes out.

Departure from New York was made on Sunday morning at 11, and six hours later Washington was reached. Of this city it is quite impossible to speak without enthusiasm. Though the period spent in New York was admittedly short and we were not well situated and perhaps also out of tune, most of us found it disappointing. Naturally it is fearfully overcrowded, and the buildings are nearly all, particularly in the lower part of the city, tremendously high. The streets, therefore, seem rather narrow, and the feeling most prominent in the mind is that one is of little account, and generally, so to say, insignificant. The streets do not appear to be so well kept as in the majority of European capitals, but this is probably due to the fact that scavengers are difficult to find, other forms of labour being easily obtainable and at better rates of pay. In New York, as throughout the States generally, there is much talk of the sums earned by workers in the building trades

particularly. Skilled workmen—bricklayers, plasterers, carpenters, etc., can quite easily make 20 to 25 dollars, or even more, per day. One effect of this, conjoined with prohibition, has been to increase the number of automobiles. Also it has led many negroes to leave the South and find well-paid employment in the more northern cities. Washington has a particularly large coloured population at the moment, though, of course, there has always been a large number of negroes in the capital city.

For spaciousness and for beauty of its public buildings and its parks, one may safely believe that Washington is without a rival. That it is the capital city and the home of the Federal Government and the various State departments, probably accounts for much. In the ordinary sense it is not, of course, a municipality, the local government being in the hands of a small commission appointed by the Government, with various officers, including a health officer under them. There is no council, no elections, and nobody has a vote in Washington or the district of Columbia, which perhaps one may be forgiven for explaining, is what the letters "D.C." after Washington, stand for. Possibly it may be said also that the river upon which the city stands is the Potomac, and that this is pronounced Pot-o-mac, the accent being on the middle "o." Of the buildings—the Capitol, the Washington Memorial, the Lincoln memorial, and the Stadium at Arlington (where the unknown American soldier lies), all four in a straight line; of the Congressional Library (a treasure-house of rare beauty), of the House of Representatives, where each member has a room of his own, there is no space to speak.

The United States Public Health Service, at the moment, is housed in two separate buildings, that with which the delegates are best acquainted being the Butter Building, number 3 B Street, N.W. Here the Surgeon-General, Hugh S. Cumming has a room, and several of the assistant surgeon-generals in charge of divisions are also quartered. Here the delegates attended on the morning of Monday, 7th September to be formally welcomed by the Surgeon-General and his staff, and to hear what was in store for us during the fortnight of our stay. In the afternoon there was a more or less informal reception at the Butter Building when we were introduced to each of the members of the staff as were in Washington, chatted with them, heard something of their activities and answered questions about the voyage, the situation at home, and the impressions formed abou

the States. A very pleasant, friendly, and profitable afternoon, and an excellent way of opening proceedings. The morning hours of the second day (Tuesday, 11th September) were to have been devoted to the hearing of addresses by the Secretary of the Treasury, who holds a position more or less analogous to that of the Minister of Health in England, and from the Surgeon-General. Owing to political exigencies the Secretary was unable to address us, and the Surgeon-General greeted us not only in his own name, but in that of Mr. Mellon. Immediately afterwards work was commenced, Dr. Kerr, one of the assistant-surgeons-general, delivering an address on the "Legal Authorities and Limitations of the Public Health Service." This and the two addresses given on the third day by Assistant-Surgeon-General Lloyd and Surgeon B. S. Warren, were designed to give us an understanding of the organisation of the Medical Health Service, its constitution, duties and mode of procedure, particularly in relation to the State Health Services. These latter, even in the early stages, were, we gathered, almost entirely independent of the Federal Department, and in many respects more comparable with the English Ministry of Health than with the U.S. Public Health Department. The subject dealt with by Dr. Lloyd was the "Health Activities of the Federal Government," Dr. Warren addressing the group on "The Organisation of the Public Health Service."

Evolution of the Health Service.

From these three speakers we learned something of the development of public health in the United States and were shown how the service of to-day grew up out of the Marine Hospital Service, which was established in 1798 in order to provide treatment for sick and disabled seamen. This body came under the Treasury because it was the department concerned with all the works carried on at the ports, looking after customs, and so on. Gradually the Marine Hospital Service became a health service, because its members were the first to see cases of disease that, if introduced into the country, might injure commerce and health. Also the members acquired knowledge of methods of prevention against epidemic diseases and were consulted as authorities in preventive medicine generally by various States. In time the Government recognised that the service was performing, and could perform, health duties, and this fact was recognised by changing the name to Marine Hospital and Public Health Service. The public health functions becoming more and more prominent as the years went on, the title was

finally shortened to "Public Health Service" in 1912.

QUARANTINE.

(a) International.

This new service, in addition to new duties, performs all the functions of the old Marine Hospital Service, particularly those concerned with quarantine and the keeping of disease out of the country. It also is under the Treasury, the Secretary, as already mentioned, being in effect the head of the service, though the duties in this connection are performed by the Assistant Secretary, with whom in general the Chief Executive Officer, the Surgeon-General of the Public Health Service, comes in contact. Since 1912 the Public Health Service has advanced with great rapidity and has had more and more powers and duties given to it. In the main these have relation to disease investigation and prevention, the service having to-day power to deal with all infections, endemic as well as exotic, with the object primarily of protecting the country as a whole from invasion.

(b) Interstate.

In the matter of disease prevention its activities are not, however, regarded as having exclusively for an object the safeguarding of the United States. In addition to traffic that may bring infection from other countries there is the traffic between the various States themselves that may lead to dissemination of infection. Inasmuch as each State has its own government, having concern only with that State, and has neither the organisation nor the desire to interfere with neighbouring states, it is essential that there should be somebody on guard and empowered to prevent interstate spread of infection. The Public Health Service is the body so empowered and in charge of what is known as "Interstate Quarantine." In a word, the U.S. Public Health Service is the authorised agency of the Federal Government; the Health Department of the Union, working for the common good of all the States, doing what is everybody's and therefore nobody's work. It is quite distinct from the Health Departments of the various States, just as they are distinct from it. Interference with the operations of the constituent States in regard to disease is, in fact, small. Powers do exist under which the department, through the Surgeon-General, may step in if it appears that any State is not properly dealing with an epidemic and the neglect appears likely to be dangerous to other or all States. In fact, however, the service does not interfere directly; merely offering to co-operate, rendering assistance if requested.

The Public Health Service and the States.

Co-operation, indeed, appears to be the watchword of the Federal Health Department rather than competition. Having regard to the fact that all the powers possessed by the Federal Government are such as have been voluntarily handed over to it by the States this is obviously the proper course. In every way possible it is sought to bring co-operation about. One of the most useful and interesting of these is through annual conferences, called by the Surgeon-General, and attended by representatives of all States. At these a variety of subjects is discussed, but more particularly such as affect both parties, the Federal and the States. The regulations with regard to Interstate Quarantine now in operation, for example, were thoroughly thrashed out in conferences before being submitted to the Secretary of the Treasury for approval.

The Hygiene Laboratory.

In connection with disease prevention, most important work is done by the Hygiene Laboratory under the Division of Research, which concerns itself not only with scientific research but Field investigations also. Probably in no country, certainly not in England, is there anything corresponding to this laboratory or indeed to the division as a whole. Of its value there can be no doubt. All the workers—chemists, bacteriologists, pharmacologists, etc.—are intensely earnest and are given every encouragement and assistance in their work. An opportunity was given the party to visit and inspect the laboratory, and in the course of the visit various specialists gave short talks on the work each had in hand. It was very impressive and extremely interesting.

Control of Biologic Products.

In this laboratory, under Dr. McCoy, the work done in relation to the control of Biologic Products—antitoxic and other sera, vaccines, etc.—is carried out. The object of this is to provide a safeguard for the public against exploitation by manufacturers of materials claiming to bring about immunity against, or cure of, any disease. At the moment Dr. McCoy is particularly interested in the researches of Dreyer and was most anxious to learn the views held in England as to the results claimed for the method.

Bureaux of Chemistry and Animal Industry.

Most of the work done at the laboratory is in the nature of research, and though the chemical and pharmacological departments are very active, they have no real concern with analysis work under the Pure Food and Drugs Acts. This is

done by the Bureau of Chemistry, which carries out the police and sampling duties under these acts as well.

Like this Bureau, the Bureau of Animal Industry is entirely separate from the Public Health Service proper, although, of course, it co-operates with it. The Bureau of Animal Industry has some duties under the Pure Food and Drugs Acts, but mainly it concerns itself with animal foods, inspecting live cattle and dead meat, canned foods, etc., at the manufactory, passing and condemning when necessary. Shipment of harmful products may be forbidden by this bureau, and though under the Pure Food and Drugs Acts, shipment of milk from one state to another may be forbidden if the condition is not satisfactory, milk supervision is generally regarded as a function of the municipal health authorities and officers, even though the milk comes from outside the municipality and State.

Sanitation.

Sanitary work in general is not very definitely a function of the Federal Health Service, though it should be noted that in the division concerned with Domestic (Interstate) Quarantine there are a number of engineers, one being attached to each of the seven zones into which the country is divided. The work of these officers lies in relation to sewerage and water supply, and a great deal is done with the object of inducing State and Local Authorities to adopt measures for preventing the pollution of rivers and streams and other bodies of water. The assistance of the engineering officers is commonly offered to States or may be asked for by the State Authorities in connection with these matters, and though they only act as supervisors and advisers, the actual work being done by the local officers, very excellent results have been obtained in a number of areas. Water supplies of 54 railways have been passed as satisfactory (a matter of great importance having regard to the length of the journeys taken by rail), and 27 supplies in steamships navigating inland and other waters have also been certified.

Federal and State Health Functions.

Apropos of sanitary work in the individual States, it may not be out of place to note here, though it will probably be referred to at greater length later, that the Federal Government Department occupies a position different from that of the Ministry of Health. It is not in the real sense a supervisory body, and it does not appear to be empowered to criticise arrangements or to bring direct pressure

to bear on the State authorities to raise the standard of work within their borders. Nevertheless it acts quite frequently in a supervisory and advisory capacity, but only by request. In some instances the request is very general to go into the whole sanitary organisation of a State or Municipality, and to assist in drawing up a health code. Comparatively recently the States of Texas and Massachusetts sought assistance in connection with the preparation of a sanitary code and in each case one of the Assistant-Surgeon-Generals was detailed for the purpose.

In regard to disease and quarantine matters, as already noted, the situation is rather different, though even here it is only in the event of a considerable epidemic that an examination of regulations and organisation may be made, and only if they appear to be inadequate that the Surgeon-General may prepare regulations for the use of the State. No step in the direction of enforcement may be taken unless the State fails.

Health Functions of Other Bodies.

As in England there are a number of functions that seem obviously to be suitable and appropriate for performance by the Public Health Service, that are, in fact, performed by other bodies. The most important of these is Maternity and Child Welfare work, which for some years has been controlled by a Special Bureau of Child Welfare which is under the Department of Labour. It is proposed to refer later to the work done in this connection, but in the meantime it may be said that so far as the Bureau at Washington is concerned the work has been taken up with the utmost enthusiasm and is being developed at a splendid pace.

Bureau of Census.

Another matter that, as in Great Britain, is not in the hands of the Public Health Service, is the making and keeping of vital statistical records. Much statistical work in regard to morbidity and mortality is, of course, done in the department, but the information is provided voluntarily under a scheme prepared by the Surgeon-General and adopted by the vast majority of the States and Municipalities.

In this, as in other matters, it is because the department shows itself willing to co-operate, and on the part of the States and Municipalities there is a similar desire to co-operate that results are obtained. In this relation "co-operation" appears to be the first impression gathered and one that shows only signs of enduring and deepening. For all that has been done in regard

to public health in the United States, and it is very much, and for all the advances that will inevitably be made, it is to the officers of the Public Health Service much, if not most of, the credit must go.

Constitution of the Health Service.

Of these officers and of the service generally this would appear to be an appropriate moment to speak. The first point to be noted is that, so far as the medical staff at any rate is concerned, it is, despite the fact that it is essentially a civil organisation, it was at the same time an organisation similar to the Army and Navy. The members carry the President's commission and possess a military uniform, which, on occasions, they wear. For example, Dr. Grubbs, the quarantine officer who boarded the "President Roosevelt" at New York was in army kit. The grades in the regular commissioned medical corps of the Public Health Service, are fixed by statute as those of surgeon-general, assistant surgeons-general, senior surgeons, surgeons, passed assistant surgeons, and assistant surgeons. Appointments are made to the lowest grade, and the applicant must pass an examination conducted by a board of Medical Officers of the service. They must in addition be graduates of some reputable medical college and have one year's hospital experience or two years in practice. At present on account of some falling off in the number of graduates some difficulty is experienced in obtaining suitable applicants. Newly appointed officers do a special tour in order to obtain experience in the various branches of the work, e.g., at a marine hospital, at a quarantine station, and an immigration station, and in the Hygienic Laboratory. Promotion to rank of "passed assistant surgeon" is obtained after four years' service, and when a satisfactory medical and physical examination is passed. In June, 1921, there were 29 assistant surgeons, and of passed assistant surgeons 57. The next grade is that of Surgeon, and may be obtained after 12 years' service and a satisfactory examination. In June, 1921, there were 78 officers of this rank.

Promotion to the rank of Senior Surgeon is by recommendation, on merit and seniority. The number of officers of this rank in 1921 was 21, 10 on the active list and 11 on the retired list, as it is called, "or waiting orders."

Officers who are in charge of administrative divisions, of which there are seven, hold rank as "Assistant Surgeon-General." The surgeon-general is selected from the Medical Officers of the Service above the grade of passed assistant-surgeon, and is appointed by the President and

with the advice and consent of the Senate. He holds office for four years, but may be re-appointed. Four years is the usual length of a tour of service. As a service, there is not in England nor probably any other country, anything like it. The activities are unlimited geographically and in every other respect. A member may be sent anywhere not only in the American possessions, but also to ports in other countries. As regards the subjects to be worked at they may be general health work, helping others to break up virgin soil, and it is one of the things that makes the members of this service to be envied that there is so much virgin soil. Or the officer may be put on to investigating industrial hygiene, or outbreaks of plague, or a new disease, e.g., tularæmia, the rabbit disease, the discoveries in connection with which attracted so much attention a year or so ago, and so on.

As regards length of service and retirement, it is to be noted that the appointment is non-political and changes in administration make no difference. Nor are the members subject to the same rules as regards pension and age limit as members of the civil service. There is no age limit, though on reaching the age of 64 a medical examination is carried out, and on this the officer may be retired on three-quarters pay and nominally "on waiting orders." On disablement, retirement on three-quarters pay is the rule.

Organisation of Health Work.

These, in outline, are the chief points with regard to personnel, and in regard to organisation it may be noted that for administrative purposes the work is subdivided into seven main groups. Each group or division is presided over by an Assistant Surgeon-General, who has under him a certain number of medical and in some cases engineering or other professional assistants.

The first division is that of personnel and accounts. It is presided over by Dr. Kerr. For the second division, that of sanitary reports and statistics, Dr. Lloyd is responsible. Dr. Stimson, who is well known to many members of the service in Great Britain, having been a member of the second interchange, being in charge of the division of Scientific Research. The division of Foreign and Insular Quarantine and that of Domestic (Interstate) Quarantine are directed by Dr. Long and Dr. Draper respectively, Dr. Smith dealing with the division of Marine Hospitals and Relief, and Dr. White conducting the division of Venereal Diseases. Each of these officers delivered an address descriptive of the work of his special branch. As this article has already reached

a very great length, it is proposed to postpone giving a summary of these addresses and a description of the inspections made and the hospitalities received until later.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the House of the Society on Friday, November 16th, 1923, the President (Dr. T. W. Naylor Barlow) in the chair. There were present: Prof. H. R. Kenwood, Lt.-Cols. Herbert Jones and F. E. Fremantle, M.P.; Drs. Lyster, Wilshaw, Stocks, McMaster, Stirk, Frederic Thomson, Snell, Gibbons, Ward, Garstang, Wheatley, Milligan, Fenton, Banks, Benton, J. T. C. Nash, G. F. Buchan, Cates, Eustace Hill, Pearce, Wear, Ernest Ward, Lissant Cox, Clements, and Jolly.

The minutes of the last meeting were approved and signed.

Letters of apology were received from Dr. E. W. Rees Jones, Dr. W. J. Howarth, and Dr. G. W. N. Joseph.

Correspondence.—(1) From the Minister of Health acknowledging the resolutions forwarded by the Council on October 29th in reference to the remuneration of Insurance Practitioners. (2) From the British Medical Association thanking the Council for the support expressed by the above resolutions. (3) From the Board of Education (Medical Branch) expressing appreciation of the suggestions offered by the Society in reference to the draft of the Board's new statistical tables. (4) From the National League for Health, Maternity and Child Welfare, asking for the opinion of the Society in reference to Circular No. 415 of the Ministry of Health. It was decided to reply that while the decision referred to in the circular was to be regarded as useful, the Society think it desirable to press for the amendments of the Midwives Act on the lines approved by the Council on July 31st, 1923.

Representation of the Society.—Dr. E. H. Snell was appointed to represent the Society on the Parliamentary Sub-Committee of the B.M.A. Dr. T. W. Naylor Barlow and Dr. R. W. Stocks were appointed to the Maternity and Child Welfare Sub-Committee of the B.M.A. Prof. H. Kerr was nominated to represent the Society at the meeting of the General Council for the National Registration of Plumbers to be held at Newcastle-upon-Tyne on 30th November, 1923; Prof. H. R. Kenwood and Dr. Cyril Banks were

nominated to the National Baby Week Council, the latter replacing Dr. A. B. McMaster, who is unable to attend on the days usually fixed for meetings of the Council.—Dr. McMaster was thanked for his past services on the Council.

Report of the Salaries Committee.—Dr. G. F. Buchan submitted the report of the Salaries Committee dealing with the proceedings of the Committee during the past month. In reference to the salaries of Sanitary Inspectors the report stated:

(2) Your Committee have had before them letters from the Sanitary Inspectors' Association of the 16th August, 1923, and the Metropolitan Branch of the Society of Medical Officers of Health of the 16th October, 1923, relative to the salaries of Sanitary Inspectors and Health Visitors in London.

- (a) Your Committee recommend that the Council of the Society advise members of the Society individually and collectively to support the Scale of Salaries recommended by the London District Council for London Sanitary Inspectors and Health Visitors.
- (b) Your Committee further recommend that the Council expresses its regret that the Ministry of Health should have intervened to endeavour to upset an agreed arrangement under a properly constituted Council representing employers and employees.
- (c) That the Sanitary Inspectors' Association and the Ministry of Health be informed of the foregoing resolutions.

The above recommendations were approved and adopted.

The Committee also recommended the publication in "Public Health" of a memorandum indicating the obligations of members of the Society in reference to the Scale of Salaries, and the general lines of such memorandum were approved by the Council. Owing to difficulties of attendance when meetings are held at short notice, the Committee asked that their number should be increased by the addition of one or two members from in or round London. To meet this request the Council elected Dr. Cates and Dr. Clements as additional members of the Committee.

Certain proposals submitted by the Committee in connection with the enforcement of the Scale of Salaries were approved by the Council for discussion with the British Medical Association and with the suggestion that the special circumstances obtaining in some areas should not be overlooked.

The Council nominated the following to represent the Society at a conference with the B.M.A. on December 11th, 1923, at 2.30, when further steps in connection with the Scale of Salaries will be discussed: The President (Dr. T. W. Naylor Barlow), Dr. G. F. Buchan, Prof. H. R. Kenwood, Dr. W. J. Howarth, Dr. R. A. Lyster, Dr. G. W. N. Joseph, Lt.-Col. Herbert Jones,

Dr. Charles Sanders, Dr. G. Petgrave Johnson, Dr. E. W. Goodall, and Dr. Cates.

Formation of New Branches.—The following report of the Committee of Officers of the Society was approved and adopted:—

(1) Your Committee have considered the proposal in reference to the formation of a North Midland Branch of the Society, for the convenience of members who find it difficult or impossible to attend meetings of the Eastern or Midland Branches.

(2) Although your Committee think it desirable that no obstacle should be placed in the way of any body of members who desire increased opportunities of meeting together, they find it necessary to point out that there are certain objections to the multiplication of Branches.

(3) The chief of these is in connection with representation on the Council. Even under the revised Articles of Association, the Council will have forty members increasing as the Society grows in numbers. The cost of Council meetings is therefore a serious consideration that must not be overlooked when the formation of new branches is proposed.

(4) Your Committee would also like to be satisfied that existing Branches are unable to offer reasonable facilities for members of the Society in the North Midlands. It would seem that if some of the meetings of the Eastern Branch were held, say, at Peterborough, and if the Midland Branch met alternately at Birmingham and Nottingham, the necessity for a new Branch might disappear.

(5) Your Committee therefore recommend that the applicants for a North Midland Branch, and the existing branches affected by the proposal, should be asked to take this report into consideration and submit their observations to assist the Council in arriving at a decision.

An inquiry was received from Medical Officers of Health in the Province of Madras, India, regarding the formation of a local branch of the Society. The Executive Secretary was directed to consult members of the Society in India in reference to this proposal.

Duties of Medical Officers of Health.—The Committee of Officers of the Society submitted a report on the draft Memorandum on the Duties of Medical Officers of Health, forwarded by the Ministry of Health for the observation of the Society. The report drew especial attention to the lack of any precise definition of the specific duties of Medical Officers of Health of Counties, Boroughs, Urban and District Councils, and Port Sanitary Authorities. After some discussion and amendment the report was adopted, and it was agreed that recommendations on the lines of the Committee's report should be forwarded to the Ministry of Health.

Summer Time.—On the proposal of Lt.-Col. F. E. Fremantle, seconded by Dr. G. H. Pearce, it was resolved unanimously:

"That this Society is of opinion that in the interests of national health it is advisable that Summer Time should be per-

petuated for a period of six months in every year."

It was agreed that this resolution should be forwarded to the Home Office, the B.M.A., and to other public bodies interested in the matter.

Disciplinary.—In accordance with No. 11 of the Society's Articles of Association, it was decided that three members should be asked to explain their failure to support the policy of the Society in reference to recent appointments.

Council Meetings.—In view of increasing business it was decided that until further notice meetings of the Council should be called for 2 p.m., but that contentious matters should not be considered before 2.30.

The Council then adjourned.

ORDINARY MEETING.

An Ordinary Meeting was held at the house of the Society on November 16th, 1923. The President (Dr. T. W. Naylor Barlow) was in the chair, and upwards of thirty members were in attendance.

The minutes of the last meeting were approved and signed.

The following candidates having been duly nominated were elected to the Society:—

As Fellows:

Adamson, Alfred Fairgrieve, M.D., Ch.B.Edin., D.P.H.; Ash, Walter Martin, M.B., B.S.Lond., F.R.C.S.Ed., D.P.H.; Borthwick, George Arthur, M.D., Ch.B.Edin., D.P.H., D.T.M., Barr.-at-Law; Braithwaite, Edward Ashe, M.B., C.M.Ed., J.P.; Burke, Francis James, M.B., B.Ch., R.U.I., Surg.-Lieut.-Cdr., R.N. (ret.); Burnett, John Ridley, M.D., C.M.Edin., M.R.C.S., L.R.C.P.; Carson, Stewart, M.B., C.M.Edin.; Cheesewright, Iris Marjorie, M.B., B.S., B.Sc.Durh.; Cross, Edward John, T. D., M.D.Durh., M.R.C.S., L.R.C.P., D.P.H., Lieut.-Col. R.A.M.C.(T.) (ret.); Clark, John, M.D., C.M.Edin., F.R.C.S.Ed.; Cullin, George Robert, L.R.C.P. & S.Edin., L.R.F.P.S.Glasg.; Dawson, George Duncan, M.D., Ch.B.Manch., D.P.H.; Evans, Leslie Wilson, M.C., M.B., B.S.Durh., M.R.C.S., L.R.C.P., D.P.H.; Fergusson, May Clement, M.B., B.Ch., N.U.I.; Forsyth, William Henry, D.S.O., Major R.A.M.C., M.B., Ch.B.Ed., D.T.M.; Gordon, James Alex., M.B., Ch.B.Ed.; Holt, Harry Mainwaring, M.B., B.S.Lond. and Leeds; Macdonald, James, M.A., M.D., C.M.Edin.; Mackenzie, Ella G. F., M.A., M.B., Ch.B.Ed., D.P.H.; Matthews, Charles Edward, M.D., B.Ch., B.A.Oxon., M.R.C.S., L.R.C.P., D.P.H.; Parker, Wyndham, M.C., M.B., Ch.B.Ed., D.P.H.; Pinchin, Arthur John Scott, M.D.Lond., M.R.C.P.; Rankine, John Lawson, M.R.C.S., L.R.C.P.; Ranson, John Sturges, M.R.C.S., L.R.C.P., D.P.H.; Roberts, Ellis James, B.Sc., Univ. Wales, M.R.C.S., L.R.C.P.; Roe, George Charles Frederick, L.R.C.P. & S.I., D.P.H.; Ross, Sheila Margaret, M.D., Ch.B.Ed., D.P.H.; Sexton, William Henry, L.R.C.P. & S.I., L.M.; Strathairn, George Cecil, M.B., Ch.B.Ed., D.P.H.; Underwood, John Ernest Alfred, M.B., B.S., B.Sc.Lond., M.R.C.S., L.R.C.P., D.P.H.; Walker, John George, M.R.C.S., L.R.C.P.

As Associates:

Birch, Frank Harold, H.D.D.Ed., L.D.S.Liv.; Millican, Percy, L.D.S.Eng.; Pedler, Hubert Chas. George, M.R.C.S., L.R.C.P.

A number of candidates were nominated for election at the next meeting.

Dr. Archibald Leitch then read a paper on "Considerations on the Etiology of Cancer." The paper, with a report of the discussion, will be published in an early issue of "Public Health."

After a vote of thanks to Dr. Leitch the meeting adjourned.

HOME COUNTIES BRANCH.

The second meeting of the Session 1923-1924 of the Home Counties' Branch was held at the House of the Society on Thursday, 1st November, 1923.

The President of the Branch, Dr. W. Benton, presided, and 14 other members were present.

The Secretary reported the proceedings of the preceding meeting of the Council of the Society at which the principal business was the consideration of the Draft Memorandum of the Ministry of Health on the Duties of Medical Officer of Health. In the absence of knowledge as to the details of this Memorandum it was decided that the Branch could take no action.

Dr. A. T. Nankivell submitted a very interesting specimen of a shrew which had been found in a tin of pineapple.

He then read his paper on "The Consolidation of the Public Health Acts." He recommended that as a first step all present public health laws ought to be re-arranged and re-printed, without amendment, and passed as one Act divided into leading parts, e.g., Housing, Infectious Diseases, etc. or alternately as several Acts dealing with the present public health laws in the same manner.

The second step, he suggested, would be to prepare an amending Act embodying the provisions of various local Acts at present in force throughout the country. Examples were given of the advantage of such Acts and the saving of expense to Local Authorities by such a procedure.

The third step would be a further amending Act extending the powers at present exercised by Local Authorities.

Amongst the lines of such extension were suggested the power to acquire, and the rating of, empty houses, the endowment of the Medical Officer of Health with plenary powers to abate nuisance; the registration and licensing of all food premises; and the extension of the powers of health departments to include the control of the vaccination laws etc.

In conclusion, Dr. Nankivell moved a resolution on the lines of his address. At the suggestion of Dr. Buchan, the resolution was amended to include the medical provisions of the Education Acts. The resolution, as amended, then read as follows:—

"That the consolidation into one or more statutes of the present scattered public health legislation, including the medical provisions of the Education Acts, is much to be desired, and that the extension of existing legislation, on the lines already approved by Parliament for various Local Authorities, would be of benefit to other Local Authorities who have been unable to afford the promotion of private Acts, and that, apart from this extension the statutes governing Public Health need further to be strengthened and amplified, and that the Minister of Health be asked to give consideration to these resolutions, having regard to the fact that the consolidation and amendment of the Public Health Act would be inexpensive and non-controversial."

After discussion, the resolution was approved and the Secretary was instructed to forward a copy to the Council of the Society for their consideration.

NORTH-WESTERN BRANCH.

Meeting held at the Tuberculosis Dispensary, Ashton-under-Lyne, on Wednesday, November 14th, 1923.

Present: Dr. G. Lissant Cox (President) in the chair, and 26 members. Minutes of last meeting read and confirmed.

An excellent demonstration of X-ray work as applied to the diagnosis of Tuberculosis was given by Dr. J. Logan Stewart, Consultant Tuberculosis Officer (Lancs. C.C.). He pointed out that lesions of 2 to 3 millimetres in size had to exist before they became obvious under X-ray, but that such lesions as these rarely gave rise to physical signs. As a diagnostic method it was a very great help and probably fewer mistakes were made with it than either with physical diagnosis or bacteriological examination of the sputum. To obtain its full value it must be used as a routine and not only in picked cases. Dr. Stewart showed amongst other things the difficulty of diagnosing bilateral early infiltration of both apices or disease at the hilus by any other method. In addition, he demonstrated the use and value of a Potter Buchy diaphragm in taking skiagrams especially in bone and joint cases.

A hearty vote of thanks was accorded Dr. Stewart on the proposition of Dr. J. B. Wilkinson, seconded by Dr. J. W. Talent.

The President kindly provided tea for the members at the close of the meeting.

NORTHERN BRANCH.

A special meeting was held at the Medical Institute, Newcastle-upon-Tyne, on Friday, 2nd November, 1923, at which 16 members were present. In the absence, through indisposition, of the President and Vice-President of the Branch, Dr. Hislop presided.

The following resolutions were put to the meeting and were adopted:—

(1) That the members of the Northern Branch of the Society of Medical Officers of Health give loyal and united support to their colleagues engaged in National Health Insurance work.

(2) That the members of the Northern Branch of the Society of Medical Officers of Health pledge themselves not to enter into any negotiations with, or accept any appointment offered to them by the Ministry of Health, Approved Societies, or other bodies, contrary to the policy of the British Medical Association, or to the prejudice of other practitioners.

The Honorary Secretary presented letters of apology for absence from the President of the Society and 27 members of the Branch, in all of which hearty support of the resolutions was expressed.

The Honorary Secretary was instructed to communicate the resolutions to the Executive Secretary of the Society of Medical Officers of Health, to the General Medical Secretary of the British Medical Association, and to the Honorary Secretaries of Branches and Divisions within the area of the Northern Branch.

MIDLAND BRANCH.

The second meeting of the Session was held at the New County Offices, St. Mary's Gate, Derby, on Thursday, November 1st, 1923.

Prior to the meeting Dr. Sidney Barwise conducted those present over the County Laboratories, the X-Ray Department, and the Dental and Ear and Throat Clinics. In the Laboratory there were various interesting specimens shown under the microscope, and the Wassermann reaction was demonstrated. At the Dental Clinic two dental dressers were working under the direct supervision of the dentist. Operations for the removal of tonsils and adenoids were in progress in the School Clinic. In the X-Ray Room Dr. Watt showed a very fine collection of radiograms illustrating pathological conditions of the lungs.

At 3 p.m. the Branch meeting was held.

Present:—The President (Dr. Hamilton Wood) occupied the chair, and there were 29 members and 6 visitors present.

The minutes of the previous meeting were read, confirmed, and signed.

Correspondence.—(1) From Dr. Killick Millard accepting the invitation of the Branch to open a discussion at the December meeting and suggesting alternative subjects. It was unanimously resolved that Dr. Millard be asked to speak on "Birth Control from the Public Health Point of View." (2) From Dr. Wilkins with reference to the hour at which the Branch Meetings were held. This was referred to the Council of the Branch for report.

Dr. Sidney Barwise then replied to the various points raised regarding the scheme of dental treatment in the County of Derby, and particularly to the employment of trained dental dressers working under the supervision of dentists. He also circulated a summary of the dental work performed in administrative counties during 1922, which showed the favourable comparison that Derbyshire made with any other county.

Dr. John A. Watt then read a paper on "Features of the present Small-pox Epidemic," in which he carefully noted special points of clinical and administrative interest in the recent mild outbreaks in Derbyshire. This paper gave rise to an excellent discussion in which several of the members participated, including Drs. Davison, Millard, Garrow, King, and Barwise.

At the close of the proceedings, the members were entertained to tea upon the invitation of Dr. Sidney Barwise and Dr. Watt.

MIDLAND BRANCH. TUBERCULOSIS SUB-GROUP.

The first meeting of the Group was held at 44A, Broad Street, Birmingham, on Saturday, October 13.

The President, Dr. Gordon-Smith (Worcester) was in the chair, and there were eleven members present.

Dr. Watt (Derby) was elected President for the Session, and Dr. Gordon-Smith vacated the chair in favour of Dr. Watt. Dr. Bell-Ferguson was elected Vice-President, Dr. Sharpley re-elected Hon. Secretary and Treasurer; Com-mittee, Drs. Dixon, Gordon-Smith, Elliott, Clark, Hefferman, Peebles, Todhunter, were nominated and elected, which was agreed to.

The programme for the Session was then discussed and the Secretary was instructed to write

to members asking them to give lectures. It was decided to hold the meetings at The Anti-Tuberculosis Centre, 44A, Broad Street, Birmingham, at 2.45 p.m. on Saturdays.

Discussion on "Pure Milk" was then opened by Dr. Bell-Ferguson, who having mentioned the defects in the present-day legislation for dealing with the milk supply, advocated the pasteurizing of milk by the continuous method, backing up his arguments by figures showing the wonderful advance made in the public health of New York.

Discussion then followed in which the President, Drs. Campbell Clarke, Todhunter, Elliott and Sharpley took part.

Dr. Dixon and Dr. Bell Ferguson were then elected to represent the sub-group on the Group Council in London.

Annual Report (1922-23).—During the session four meetings were held and papers read by:— (i.) The President, Dr. Gordon-Smith, on "Some Points Relating to Tuberculosis," at Birmingham. (ii.) Dr. Bell Ferguson on "Some other Bacterial Diseases of Respiration in relation to Tuberculosis," was held in the Freeman's Room, Council House, Smethwick. (iii.) Dr. Clark on "Experiences with Colossal Calcium in the Treatment of Tuberculosis," held at Birmingham. (iv.) Dr. Nicholson on "The Dusty Lung at Derby." The papers were provocative of interesting and lively discussion on each occasion.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

THE CO-ORDINATION OF THE PUBLIC HEALTH AND NATIONAL INSURANCE SERVICES.

From Dr. S. BEGGS, M.O.H., Middleton.

Sir,—In view of the appointment of a Royal Commission to investigate the working of the National Health Insurance Act, may I press before the Society of the Medical Officers of Health the desirability of urging such modification of the Act so as to make Preventive Medicine a *live* part of a comprehensive scheme.

As one who has had practical experience of National Health, Public Health, and Army Service, I state emphatically that the great weakness of the National Insurance Medical Service is the great factor of the Prevention of Disease not being dealt with.

Preventive and curative medicine ought to go hand in hand. This is carried out in the services,

and there is no reason why in civil life the same co-ordination is not possible.

The Medical Officer of Health and the General Practitioner are not sufficiently in touch, and they are each working on different lines. 60 to 80 per cent. of insured persons come under their panel doctor annually, and the greater part of the disabilities treated are preventable.

This being the case, there is an evident necessity for greater co-operation and co-ordination between the two services.

May I urge that this matter may be taken up by the Society of Medical Officers of Health. Now is an opportune time to press the claims of the Society and to make the National Health Medical Service and the Public Health Service a unified and co-ordinated whole.

Yours faithfully,

S. T. BEGGS.

POTENT ANTI-MENINGOCOCCAL SERUM.

From Dr. DUNCAN FORBES, M.O.H., Brighton.

Sir,—In Circular 366 dated 9th February, 1923, Sir George Newman refers to the work being undertaken by Dr. E. G. D. Murray for the Medical Research Council, which work has for its object the production of an immune serum for therapeutic use in cases of cerebro-spinal fever; Sir George goes on to say that the work has been retarded by scarcity of material, and asks pathologists to send freshly isolated strains of meningococci to Dr. Murray at the Field Laboratories, Milton Road, Cambridge.

Early in the war numbers of Service men suffering from cerebro-spinal fever were received into the Brighton Infectious Disease Hospital, and sera from various sources were tried with no beneficial results; on the contrary the organisms were found to increase in number and to be extra cellular to a greater extent after the administration of serum. Then came the work of the Central Cerebro-Spinal Fever Laboratory under the auspices of the Medical Research Council. At the first puncture and before administration of serum a few c.c.'s of fluid were taken from which the meningococci present were cultured, typed and horses immunised. Later the Medical Research Council's anti-sera proved as great successes as the earlier sera had been failures. Quite evidently the meningococci vary in character from one epidemic to another, and it is only by having horses rendered immune to the type or types prevailing at the time that a useful serum can be pre-

pared. Serum valent against one type of meningococcus seems to have no effect when pitted against another type.

As I had previously advanced these views in the hope that the Medical Research Council's study would not be dispersed, and that the Medical Research Council's methods would be continued by the Ministry of Health, I was naturally prepared to give what help I could to anyone such as Dr. Murray, who was keeping the types for inoculation up to date. Unfortunately, being a busy M.O.H., I was discouraged by the seeming necessity of repeatedly preparing and constantly having in a fresh state special media for the culture of the meningococcus. This seemed hardly worth while as months usually elapsed between the admission of cases. I therefore attempted nothing.

Recently there was an admission. I tried a polyvalent serum which made the child much worse. Later I had a culture sent to Dr. Murray, who reported that the particular type belonged to an unclassified type, hence no doubt the failure of serum treatment; no horses are known to have been inoculated with the type in question. I wrote to Dr. Murray and explained the difficulties of the M.O.H. in giving him assistance and also assured him that if he made our path easy many of us would be willing to send him cultures. Fortunately Dr. Murray sees his way to do this, and promises to send any M.O.H., willing to procure material, supplies of suitable media, which will be renewed from time to time, so that the M.O.H. will always have suitable media by him ready for the chance case. Dr. Murray's present researches show that the constitution of the medium is of considerable importance. I appeal to every M.O.H. who has an incubator at his Fever Hospital to write to Dr. Murray for supplies of media; thereafter it will be a simple matter for him to supply Dr. Murray with cultures from which finally horses will be immunised. I press for this the more as it appears to be the only way to procure sera which will more than halve the case mortality in place of sera, which often do actual harm.

Yours faithfully,

DUNCAN FORBES.

DR. A. A. TURNER, M.C., Deputy Medical Officer of Health for St. Helens, has been appointed to Croydon in the same capacity at a salary of £780 per annum.

"MANLOVE-ALLIOTT'S STEAM DISINFECTOR" for using high-pressure dry saturated steam; in good order; chamber 8-ft. by 5-ft. 5-in. by 3-ft.; opens each end; reasonable price accepted, or will exchange for smaller size sterilizer.—Cuxson, Gerrard & Co., Ltd., Oldbury.

Public Health

THE JOURNAL OF
The Society of Medical Officers of Health.

No. 4.

JANUARY, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

EDITORIAL—

	PAGE
Salaries Campaign	73
Standard of Fat in Milk	74
Foot and Mouth Disease as Affecting Man ...	76
International Congress on Industrial Health ...	76
Court of Inquiry into Panel Fees	76

SPECIAL ARTICLES—

A Brief Review of the Progress of Military Hygiene Since the War (By Major-General W. W. O. Beveridge, C.B., C.B.E., D.S.O., K.H.P., Director of Hygiene, War Office)	77
The Economic Circumstances of the Country as a Whole, and the Various Rates by Means of which Health is Measured (By R. J. Ewart, D.Sc., M.D., F.R.C.S., M.O.H., Barking)	88
The League of Nations, Third Inter change of Health Personnel in the United States (By Charles Porter, M.D., B.Sc., etc., Medical Officer of Health, Metropolitan Borough of St. Marylebone)	89

NOTES FROM THE BRANCHES—

Metropolitan Branch	94
----------------------------	----

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Ordinary Meeting	95
Metropolitan Branch	95
Home Counties Branch	95
Midland Branch	96
Yorkshire Branch	97
Northern Branch	97
Tuberculous Group	98
West of England Branch Tuberculous Sub-Group	98
School Medical Group	99

CORRESPONDENCE—

Prevention of Venereal Disease	100
---------------------------------------	-----

Editorial.

SALARIES CAMPAIGN.

The outstanding feature of the salaries campaign at the present time is the fact that neither the Society nor the British Medical Association is getting advance notice of pending appointments which are likely to be advertised at inadequate salaries. An essential step towards success is advance knowledge that such vacancies are likely to occur, whereas at the present time neither the Society nor the Association hears about many of these vacancies until the advertisement is offered to the medical papers. Secretaries of branches in particular are urged so to organise their area that they are certain to receive information about likely vacancies in any part of their district, and to transmit such knowledge forthwith to headquarters. It is to be hoped also that the Divisions and Branches of the British Medical Association have taken advantage of the power to elect on their executive committees persons specially representing the Public Health Service and that they have placed upon those representatives the duty of informing the Secretaries of the Divisions at the earliest possible moment of any prospective vacancy in the local service.

The immediate danger in connection with the campaign is the temptation to which many of the inadequately paid posts subject the junior members of the profession. Local authorities, in trying to evade our new scale, instead of advertising, or in addition to an advertisement in a lay paper, are inclined to offer to a junior a post which he or she would not have any possible chance of getting in open competition. Unless this temptation is resisted by the whole strength of the British Medical Association and the Society of Medical Officers of Health we shall be defeated all round by our own colleagues. Junior members of the Service should have impressed on them that the present battle is being fought mainly in their

interests and that a post which looks tempting enough at the beginning of their career may prove to be merely a blind alley occupation with a salary which is totally insufficient as they get older.

All kinds of excuses are being made by local authorities in order to avoid the 'salaries scale. The Nottinghamshire County Council, after grossly underpaying their County Medical Officer for many years, have agreed to appoint him, on retirement, as Consulting Medical Officer at £300 a year. His present salary is £1,050 as compared with the salary scale of £1,500. An attempt is now being made to suggest that the £300 salary as Consulting Medical Officer should be taken into consideration in fixing the salary of the new County Medical Officer. The Service has already had some striking illustrations of the insidious and dangerous nature of such proposals. When Professor Bostock Hill retired from the Warwickshire County Council he was appointed Consulting Medical Officer at a salary of £250 and that payment was made an excuse for paying his successor, his former Assistant, a salary so scandalously inadequate that for years it constituted a handicap to the whole County service, being quoted as an example by every county council when questions relating to the salaries of county medical services were being discussed. The position so created was thoroughly unsatisfactory, and undoubtedly did damage to the whole Service for many years, but the climax was reached in May last when this incredibly mean County Council, after having made this retiring appointment and salary an excuse for underpaying a County officer, decided to reduce the salary of the Consulting Medical Officer from £250 to £105, thereby proving that the acceptance of such a policy is not only dangerous, but entirely futile from the point of view of the Public Health Service. A precisely similar excuse was made by the Staffordshire County Council when the Assistant County Medical Officer was promoted to the appointment at an inadequate salary, such an appointment constituting a serious stumbling block in the way of general advancement all over the country.

The Town Council of Brighton is endeavouring to obtain a whole-time School Medical Officer at the inadequate salary of £500 as compared with the minimum salary in the scale of £600. Efforts have been made locally to prejudice the public against the scale by misleading statements as to its real demands and facts, and a newspaper report of one of the meetings makes the amazing statement that the Medical Officer of Health professed ignorance of the existence of the scale. Brighton has unfortunately acquired an unenviable reputa-

tion with regard to the payment of its medical officers. In 1912 and 1913 there appeared for months an important notice in the "British Medical Journal" warning intending applicants not to apply for the post of Assistant Medical Officer for Brighton until they had communicated with the British Medical Association on the subject. In spite of these warning notices, however, and in spite of the fact that the salary offered was inadequate, the Town Council succeeded in securing a candidate, and their success on that occasion apparently encourages them in their present endeavour to oppose the reasonable demands of the Association at the present time.

Comment has been made upon the lengthy list of public health appointments now appearing in the special notice in the current issues of the "British Medical Journal," but the length of this list should not discourage anyone. References to copies of the "British Medical Journal" of ten years ago will show far longer lists of warning notices concerning contract practice, an evil which has been successfully fought and overcome by means of the organisation of the profession and the loyalty of its members. In the same way, and through the same means, the reasonable demands of the Public Health Service will be obtained.

A particularly unfortunate result has to be recorded in connection with the Holland (Lincolnshire) County appointment. Considerable successes had been effected by the professional efforts in this locality, and no satisfactory applicant had been obtained, and everyone was assuming with confidence that the loyalty of the Public Health Service was sound and was equal to this test. The surprising announcement has now been made that Dr. Coleman, the Medical Officer of Health for Lincoln, has accepted this underpaid appointment.

STANDARD OF FAT IN MILK.

A pamphlet entitled, "Some Observations on the Butter Fat in Milk," has been published by Mr. Wilfred Buckley, C.B.E., of Moundsmere Manor, Basingstoke. This pamphlet is based mainly upon some observations which were made in 1915 at Moundsmere Manor Farm, the analyses being undertaken by the Laboratory Staff of the County Medical Officer for Hampshire. It is difficult to understand why these figures have made so belated an appearance, but it is presumably in order to combat the growing feeling among those concerned with the interests of the

public that a minimum standard somewhere between 3 and 3.5 per cent. of fat should be fixed by law and that it should be made a punishable offence to sell milk below that standard. Mr. Buckley's efforts on behalf of the interests of the milk producing industry are well-known, and he has never lost an opportunity of trying to persuade the public to induce milk producers to produce a good article by tempting them to do so through the medium of high prices. It is doubtful, however, whether this method of inducement is likely to lead to results satisfactory to the general public, the great majority of whom are not able, and are not likely to be able, to pay fancy prices for milk.

We understand that the investigation carried out at Moundsmere Farm was avowedly an investigation into possible relative changes in the composition of milk by varying the diet of the cows. It was not undertaken in any way as an investigation bearing upon the controversial subject of a minimum standard for milk, and the work then undertaken, and the results then obtained, are not to be regarded as bearing upon that subject. The sampling, method of milking, and all such vital and important factors were without that strict supervision which would be necessary if the results of the investigation were to be used in this respect. We are also informed that it was a matter of remark by the County Medical Officer and his staff that many of the cows were in obviously poor condition, and that the diet appeared to be insufficient. According to the dietary published by Mr. Buckley there would appear to be, judged by modern notions, an insufficiency of vitamins. The scarcity of grass at that time of 1915 was also remarkable, and, as a matter of fact, the experiments had to be unexpectedly extended owing to the impossibility of turning out the cows to grass when there was no grass available. Obviously no general conclusions can be based upon these experiments.

It has always been admitted that individual cows may, owing to unequal intervals between the milkings, occasionally fall below 3 per cent. fat content in the morning milking, but practical experience in sampling shows that in the mixed milk of a herd of cows (any number exceeding, say, 7) there is little or no danger of the fat content falling below 3 per cent. In fact, the records of sampling under the Sale of Food and Drugs Acts in the County of Hampshire extending over many years, and including every sample taken, whether obviously adulterated or not, amounting to

hundreds of samples every year, show conclusively that no hardship would be inflicted upon the milk producer if the minimum legal standard of fat in milk were fixed at 3.5 per cent. In this respect, the general composition of samples of milk taken in the County of Hampshire over long periods supports and confirms the valuable evidence given before the Interdepartmental Committee on the Laws, Regulations and Procedure Governing the Sale of Milk in Scotland. This Committee summarised their conclusions and recommendations as follows:—

"The presumptive standard has proved unsatisfactory, and it is inexpedient to retain or to amend it. It is within the power of every producer, by paying attention to his business, to produce and to distribute milk containing at least 3 per cent. of fat and 8.5 per cent. other solids. Scientifically such a quality of milk is suitable for the purposes for which milk is essential, and is also suitable for ordinary consumption by adults. For the feeding of infants it would be an advantage if commercial milk were more or less uniform in quality. There is a great necessity for increasing the consumption of milk and for educating the public in regard to its value as a food. It is necessary to protect the public, and especially children, against adulterators of milk. It is just that the producer of a high quality of milk should be able to dispose of it so as to receive value for what he sells. A considerable majority of witnesses who gave evidence before us desired that a legal standard should be instituted, and those who advocated the retention of the presumptive standard appeared to do so chiefly on the ground that those who did not tamper with milk should be sustained in their right to prove their innocence."

The Report also refers thus to the present system of dealing with the quality of milk:—

"In view of these considerations, we have arrived at the conclusion that a new system of administration is necessary in regard to the sale of milk. The existing system, encumbered by a multitude of legal decisions, has not impressed us with its efficacy. We feel strongly that the whole system of administration as affecting milk demands simplification."

As regards the legal standard, the recommendation of the Committee is to the following effect:—

"We recommend that there should be a legal minimum limit for the two classes of solid constituents in milk, namely, butter fat and solids not fat."

"The figures of this limit, should be determined by Order of the Central Department, which should have power to revoke such an Order and to impose a new Order if circumstances rendered this necessary.

"While we consider that a certain discretion should be left to the Department in settling the figures of the legal minimum limit, we recommend that meantime it should not be less than 3 per cent. of fat and 8.5 per cent. of solids not fat.

"In their Order establishing a legal minimum limit for butter fat and solids not fat, the Central Department should also define milk."

We have on numerous occasions contended that the present method of dealing with the milk problem on the part of the Government Departments concerned is entirely unsatisfactory and is likely to be actively prejudicial to the general public. The certification of milk is never, in all probability, to produce results beneficial to the general public, who cannot afford to pay the fancy prices demanded. By dividing milk into various classes a new terror is added to poverty, and no satisfactory solution of the problem is likely to be reached until it is made a punishable offence to sell milk below a minimum quality both chemically and bacteriologically.

Judging from the storm of indignation that arose after the issue of the notorious Circular 325 (since withdrawn) by the Minister of Health, it is evident that the public is in no mood for any more support to be given to the vendor of unsatisfactory milk, and we hope that Mr. Buckley's pamphlet, if it has any effect at all, will hasten the satisfactory solution of the problem on the lines indicated above.

FOOT AND MOUTH DISEASE AS AFFECTING MAN.

Having regard to the recent statement of the President of the Royal Society of Medicine that doctors were willing to co-operate with the veterinary profession in the prevention and cure of animal diseases, and in view of the suspicion that foot and mouth disease may extend from animals to man, inquiries have been made by the Minister of Health into the present position.

While there is evidence that the disease can be communicated from animals to man, mainly through the secretions from the mouth of the infected animals to the dairyman, cowkeeper, or other persons in very close contact with them, the occurrence of such cases is rare, the illness

has been very mild, and in this country there is no instance of death having resulted.

So long as the policy of the Ministry of Agriculture of immediate slaughter both of infected animals and of animals in contact with them is carried out, there is very little probability of an extension of the disease to man.

A year ago a circular was issued to the sanitary authorities in the country dealing with this disease and calling attention in particular to the possible use of milk from infected animals. This, of course, is most undesirable; it is, in fact, prohibited by law; and the authorities are stated by the Minister of Health to be fully alive to the necessity of preventing it. So long as all infected or contact animals are slaughtered or kept under the closest official supervision the risk of the milk being used is infinitesimal.

The prevention and cure of the disease in the animal is a matter for the Ministry of Agriculture; the medical staff of the Ministry of Health are keeping in close touch with the records of the outbreaks as they progress.

INTERNATIONAL CONGRESS ON INDUSTRIAL HEALTH.

A group of Swiss medical men interested in industrial health questions held a meeting at Berne on October 9th, 1923, and constituted themselves as the Swiss Organising Committee for an International Congress on Industrial Health.

The Committee consists of Messrs. von Gonzenbach, Silberschmidt, Zangger, Rossi, Carrière and Cristiani (Chairman). It was decided that the first congress should be held at Geneva on July 18th to 20th, 1924, and should deal with the following questions: Industrial Lighting and Eye-strain; Impure Air in Factories; Value of Fatigue Tests.

The Committee has asked prominent men of science who have given special attention to these questions to draw up reports on them. There are three *rapporteurs* for each question.

The office of the Committee is at the Institut d'Hygiène of the University of Geneva, and all persons wishing to take part in the congress should communicate with the Comité at that address, from which further information may be obtained.

COURT OF INQUIRY INTO PANEL FEES.

The Court of Inquiry appointed by the Minister of Health and the Secretary for Scotland

to consider the question of the remuneration of Insurance Practitioners held a private meeting on December 12th at the Ministry of Health, and considered questions of procedure.

Meetings for the purpose of hearing evidence will take place on Friday, January 4th, at 10.30 a.m., and on Monday and Tuesday, January 7th and 8th, 1924, at the Ministry of Health, Whitehall, S.W.1. Those meetings will be open to the public and the Press.

A BRIEF REVIEW OF THE PROGRESS OF MILITARY HYGIENE SINCE THE WAR.*

BY

Major-General W. W. O. BEVERIDGE, C.B., C.B.E., D.S.O., K.H.P., Director of Hygiene, War Office.

GENTLEMEN,

In the first place I have to thank you—and I do so very warmly—for the honour you have done me in electing me to be your President for the ensuing Session.

Newly elected Presidents very frequently accept the honour with diffidence, but I must confess, that knowing how well I shall be supported, I have no thought but pleasure in accepting that, which to me, will be a most valued and interesting duty.

Although the group is still young, encouraged by the interest taken by our Presidents and Secretaries, not only are we firmly established, but already very useful and instructive work has been achieved. It is a matter for congratulation that a member of our group—Surgeon-Commander S. F. Dudley, R.N., gained the Neech Prize for the best paper read in the last Session—I think there is a general consensus of opinion that this article showed considerable originality, and is a valuable contribution to epidemiology.

I hope that during this Session we shall have before us many interesting papers for discussion and we should, I think, bear in mind, that one of the objects of the group is to exchange freely our views on matters affecting the welfare of the fighting services, and that in peace, we should prepare for war, by endeavouring to obtain a clear conception of the best and most approved methods of sanitation and should apply all new scientific data to the requirements of active service in the field. The marvellous progress in the theoretical knowledge of hygiene

was to a great extent in the late war, followed by a manifold practical application in every branch of the science, and it is well known how, through this advance, we surpassed all earlier effort; but even so, there always remains the feeling that possibly more might have been done in spite of all our good intent. The prevention of disease means looking ahead, and our aim should be to anticipate the many problems which arose during the past war, and think out the new ones which will appear on active service in the field under the advancing conditions of warfare.

It is clearly then our duty to try and visualise future operations and be prepared to reduce our shortcomings to a minimum and this, I feel sure, can be materially assisted by the deliberations of our group so happily constituted.

The methods which we adopt in attaining the solution of our problems will be based on our scientific training, where inference is primarily founded on experience, and the experience gained in the late war will still form a sound basis for future action, just as the limited experience gained in the South African war served us in such good stead during the past war and gave rise to the foundation on which our sanitary organisation was built.

In the Medical History of the War, we have now at our disposal a more or less complete summary of the measures of prevention undertaken in all theatres of the war. This work undoubtedly will be of the greatest assistance in helping us to formulate our plan of campaign in the future. For this most valuable help, we are indebted to our late President, who as Editor-in-Chief of the Medical History of the War has spared no pains to produce a record of which he may be justly proud.

In addition to extending our own outlook we must ensure also the education of the whole personnel of the Services in all matters concerning Hygiene and Sanitation in as far as it affects life in the field. This education of the Sailor or Soldier must be thorough—more in harmony with modern scientific progress and such, that ritual becomes a matter of daily routine. The subject has specially occupied our attention since the war, and all officers and men are receiving instruction in hygiene at the Army School of Hygiene at Aldershot. An attempt is made to produce a hygienic conscience, and to a certain extent faith must take precedence over knowledge.

Although Naval or Military Hygiene may necessarily differ to some extent from that under civil conditions, especially in its application in the field, yet in principle, it in no way differs from

* Presidential Address to Navy, Army and Air Force Hygiene Group of Society of Medical Officers of Health, November 1923, 1928.

general hygiene, and hence the value of our group is not limited to the fighting services alone. Army hygiene is often of special value to the Civil Public Health Service, since ideal experimental conditions are facilitated in service practice and in field sanitation, and certain problems can be studied more freely and to a greater extent, perhaps, than would be practicable under civilian conditions. Again, in the Service, continual observation of the Sailor or Soldier and his family, widens our views on epidemic problems. Measures directed against outbreaks of infectious diseases are also facilitated in the circumstances attending life in the Service, and the control of environment can be more thorough and systematic, than is often the case in civil life. Such measures as isolation, the daily examination of contacts, increased spacing out in sleeping quarters, disinfection of messing utensils, and preventive inoculation, are examples of measures which should present little difficulty in our services.

It is generally recognised that the exercise of Army discipline does much to facilitate the application of hygiene measures, and in consequence, the health conditions of a unit are directly proportional to its discipline. The best disciplined regiments for example show the lowest sick rate.

In the Services, the chief function of the Hygiene Authorities is to advise on all measures of Health affecting the troops, but it is only by the interest and co-operation of regimental officers, especially company officers, that the best results in the prevention of disease can be obtained. The value of Hygiene in the prevention of wastage of man power, not only in peace, but more especially in the field, is recognised by all branches of the Army and the interest taken, and the assistance given, by the General Staff and other Branches, not only makes the task of the Medical Authorities easier, but tends to infuse the right spirit of hygienic discipline and precept throughout the Services.

On many occasions during the war, medical officers of foreign armies commented on the fact that in the British Army Hygiene measures were greatly facilitated, not only by the interest and assistance afforded by all combatant officers, but also by the training in Hygiene and Sanitation, which officers and men had received prior to the war and continued to receive, even during the stress of the intensive training of the New Armies.

The knowledge gained in the Services by observation carried out in all parts of the world,

are naturally of great interest to the civil hygienist, and indeed, co-operation between the civil, naval and military services has been the means of elucidating many an obscure problem, resulting in a general benefit to the Nation. It is only by such mutual confidence and co-operation that any real progress can be made, and it is obviously to the advantage of both civil and military preventive services to foster this in every way.

It is also essential to success, that, in addition to a close co-operation among all the Regular Services, the auxiliary services should as far as possible keep themselves in close touch with all hygiene movements and measures of control which are carried out in the Regular Army both at Home and Abroad.

It is likewise an advantage to keep ourselves informed of all recent advances in military hygiene made by Foreign Powers. The official publications of the American and French military medical departments are particularly interesting and instructive.

Time is bringing the fulfilment of many a recommendation made by medical officers and others in the past and doubtless many of the improvements we so earnestly desire will be made eventually, even though we may not live to see them.

All measures for the improvement of health or the prevention of disease, are more or less costly, and no financial branch of the Public Services can view a hygienic innovation dispassionately, unless it is shown that ultimately a gain in economy will be affected by improvement in general health. It is the duty of the Medical Authorities, however, to bring to notice any measure which they believe, after due consideration in all its aspects, to be necessary to preserve or improve the health of the troops, even though the recommendation cannot be carried out at the time, because of financial or other difficulty.

The record of the recommendation should always be at hand, to be returned to again and again until fulfilled, and very often a part of the recommendation, or some modification of it, which will eventually bring about the completion of the whole may be carried into effect.

Since our group consists of members, all interested in the Public Health aspect of the fighting services, to many of whom we shall look for help and advice when occasion arises, possibly it will be advantageous to remind you of certain problems that have arisen since the war, and to inform you of the progress which has been made for the betterment of the soldier

in regard to his personal welfare and efficiency. Although much has been done and is being done, still many problems remain, some of which for reasons of economy are held over at present, but eventually they must be solved. In this respect, bearing in mind that a very large amount of disease can now be attributed to overcrowding, I feel that the problem of increased space per head in barrack rooms combined with better lighting and ventilation can still profitably occupy our minds in the future, and that we have by no means solved the difficulty of preventing overcrowding on active service, or the all important problem of ensuring cleanliness and freedom from vermin in the field.

Public Health as applied to the civil community is concerned with the individual during the whole period of life, but in the fighting services it is chiefly concerned, for all practical purposes, with selected personnel during a certain period of life. Practically, and as it should be, it is the best and most active period of life (from 18 to 40 years of age) with which we are chiefly concerned.

In this short address, it only will be possible to mention some of the progress which has been made since the war under two headings:—

1. *Recruiting and Enlistment.*
2. *Service at Home and Abroad.*

1. RECRUITING AND ENLISTMENT.

Recently the whole of the duties connected with the medical aspect of recruiting have been taken over by the Directorate of Hygiene. By this administrative change, the Directorate of Hygiene is not only responsible for the preservation of the soldiers' health, but also from a health point of view, for his selection and training as a recruit.

It is not necessary for me to dilate upon the importance of this new burden of responsibility which has been added to a scientific branch of the Army Medical Service; it should suffice, when I tell you, that so long ago as the middle of the seventeenth century both the Prussians and the Austrian Army Regulations emphasised the fact that "The duty of inspecting recruits and defining whether they are fit or unfit for military service is the most difficult and responsible that an army surgeon has to perform."

At the present time, the man power of the country is suffering from the effects of a long-continued war, much in the same manner as did the French after the general peace of 1826. In that year out of 1,033,442 soldiers drafted to serve in the Army, 380,213 were sent back because they fell short even of the diminutive stature of 61 inches.

Our difficulties at the present time are not connected so much with the stature, but from the general physique and minor disabilities with which so many of the recruits are suffering when they present themselves for enlistment. In this connection, I would draw your attention to the fact that the percentage of medical rejections on enlistment increased roughly from 20 per cent. in 1912-13 to 35 per cent. in 1920-21, and the present-day rate of rejection is even higher.

The medical branch is not concerned, except in an advisory capacity, with fixing the limitations of age and height for a recruit; these are, and always have been, governed by the supply of and demand for recruits. It is important to remember that whilst the youth of from 18—20 is more easily moulded to the requirements of a trained soldier, a youth never becomes really efficient as a fighting man until after the age of 20 or 21. The memorable remonstrance of the Emperor Napoleon to the legislature of France, should not be forgotten. "Shame on you!" he wrote: "I demand a levy of 300,000 men; but I must have grown men. Boys serve only to fill the hospitals and encumber the road-sides." The vast number of immature conscripts who gave out on long marches during the campaigns of the French Emperor, and particularly during the march to Moscow, is well-known.

In dealing with the subject of recruiting, it is interesting to consider the statistics, relating to the disabilities for which recruits are rejected. The most common cause for rejection in previous days was "Diseases of the Heart," and whilst the percentage of rejection from this cause has not increased to any great extent there has been a marked increase in the percentage of rejections for disabilities which may be attributed to, or be connected with faulty nutrition and development, possibly the result of the war. I refer to defective vision, defective and deficiency of teeth, under-chest measurement, and flat feet.

The increased strain on the nervous system consequent on the "frightfulness" of modern warfare, has led to a greater amount of attention being focussed on the mental capacity and nervous stability of the recruit on enlistment, as a possible means of lessening the incidence of shell-shock and allied war neuroses. To this end, investigations are at present being conducted to try and establish a standard of mental capacity for the recruit on enlistment, and at the same time a War Office Committee, is dealing with the subject of Disordered Action of the Heart. It is hoped that by the provision of a standard of normality as regards the tolerance of the heart to exercise, to lessen

the discharge of recruits under this head. Researches are being continued so as to arrive at more definite standards of physical normality, more especially with regard to the normal ratio of weight to stature, and the relation of body weight to the economic load which the soldier can carry.

I will not burden you with a mass of figures dealing with the statistical results of recruiting, but the brief reference I have made of what is being done, may give you an idea of some of the problems connected with the medical aspect of recruiting.

Depôt Training.

A recruit who is passed medically fit at a recruiting depôt after final approval by the approving officer, joins his Regimental depôt for what is, perhaps, the most important phase in his career as a soldier. At this depôt he receives a further medical examination to ensure that no disabilities have been missed at his primary medical examination which are likely to interfere with his future efficiency as a soldier. He remains at the Regimental depôt for approximately five months, during which period he is under constant medical supervision by the medical officers in charge of effective troops, and at the same time, is periodically inspected by the Assistant Director or Deputy Assistant Director of Hygiene, who is able to scrutinise very closely his hygienic surroundings, his food, clothing, physical training and, in fact, all details which combined make an ideal system for producing a trained soldier from the raw recruit in the shortest period possible. Particular attention is paid to the systematic weighing of the recruits whilst at their training, and any recruit who loses or fails to gain weight whilst at the depôt is very carefully medically examined for the cause. It is interesting to note that the generally accepted idea that a normal recruit loses weight during the first fortnight of his training has been exploded. It has been proved recently that the normal recruit steadily gains weight during his period at the depôt; the average increase being in the neighbourhood of ten pounds. Admissions to hospital are followed invariably by a drop in weight commensurate with the degree of sickness, and, curiously enough absence without leave involving in all probability excesses of one nature or another, generally is followed by a drop in body weight. Furthermore, investigations are proceeding in conjunction with the Physical Training Branch, the result of which it is hoped will facilitate the elimination of the nervous unstable recruit from ranks of the trained soldier. In this connection, I would

emphasise the importance of endeavouring to train the recruit in the "unknown quantity" of modern warfare.

The period spent at the depôt is all too short, but at present it has to be controlled by the demand for overseas drafts, and, as a contrast, I would draw your attention to the lengthy period of probation which recruits for the Roman Army had to undergo before they were finally approved.

This period, according to Vegetius, was of four months' duration, and even then the recruit did not receive the military rank of a soldier until he had satisfactorily proved that he had the necessary physical ability, mental capacity, and courage to endure the hardships and dangers of a soldier's life.

2. SERVICE AT HOME AND ABROAD.

In the first place let us consider what part the Directorate of Hygiene plays in the service of the soldier during his whole career in the Army.

The Directorate is concerned with all matters relating to the preservation of health and the prevention of disease. Collection of information as to the prevailing diseases, water supplies, geology and meteorology of possible theatres of war, and formulation of preventive measures and suggestions as to suitable clothing, dietaries, etc. Medical questions and statistics in connection with recruiting. Medical and sanitary questions in connection with barracks, hutments, hospital ships, water supplies, and methods of purification; schemes for the disposal of waste water, refuse, and excreta. Technical questions as to disinfectors and disinfectants; food requirements of the soldier; clothing and equipment. Consideration of inventions dealing with the prevention of disease and advice on the supply of materials. Organisation and direction of research on matters affecting the health of the Army. Liaison with public health departments at home and in foreign countries.

It also maintains a close co-operation with the Directorate of Pathology since the prevention of disease is from a scientific point of view, intimately dependant on mutual investigation in Pathology and Hygiene.

In regard to all questions affecting accommodation in barracks and camps, we should recall the wonderful and valuable recommendations made by the Royal Commission appointed in 1857 to inquire into the Regulations affecting the Sanitary conditions of the Army. This report in spite of the lapse of time still repays a close study and should be read by all interested in the subject. Personally I find a reference to it of the greatest

value; and for sound commonsense principles as applied to barracks and general sanitation it cannot be surpassed.

The outcome of the recommendations made and carried out, was to reduce the death rate from 17.5 per 1,000 in 1857, which was then double that of the civilian death rate, to 3.4 in 1897 and to 2.2 at the present day. In 1862 the Commission was constituted a standing body and had its counterpart in the Army Sanitary Committee, appointed after the Crimean War, and by the Army Hospitals Committee which was formed in 1903. These two Committees were amalgamated in 1906 as an Army Hospital and Sanitary Committee and it was this Committee which was absorbed in the Army Medical Advisory Board in 1907. To this Board was attached an expert in Sanitation and an expert in Tropical Diseases.

The Board decided that two sub-committees should be appointed to carry out investigations of various matters connected with the work of the Board, more especially as regards the prevention of disease. These sub-committees were termed Pathological Sub-Committee, and the Hygiene Sub-Committee.

The Board also appointed the following sub-committees:—Sanitation, Construction of Barracks and Hospitals, and Equipment (including Clothing and Ambulance Transport).

On the outbreak of war in 1914—the Army Sanitary Committee was reconstituted in November of that year to advise on all matters connected with the health of the Army at home and overseas. It consisted of representatives of the Local Government Board, India Office, and the civil and military sanitary experts of the Army Medical Advisory Board.

The present Army Hygiene Advisory Committee was formed in 1919 as part of the Directorate of Hygiene, and replaces all former hygiene Committees. In addition to military members representing the General Staff, Quartermaster-General, Master-General of Ordnance, and Director-General, Civil Public Health is represented on the Committee by three distinguished members.

The duties of this Committee embrace the following:—

Sanitary problems in connection with barracks, hutments, hospitals, water supplies, and methods of purification; schemes for the disposal of waste water, refuse and excreta.

Technical questions as to disinfectors and disinfectants, food requirements of the soldier, clothing and equipment.

Organisation and direction of research on

matters affecting the health of the Army. Consideration of Parts I and II Hospital Services.

The function of the Committee is in some respects similar to the Royal Commission of 1862 in that it advises on all sites for new barracks or hospitals and type plans, especially in regard to sanitary requirements.

Hygiene Organization in War.

When an army takes the field in future there will be a complete hygiene organisation based on the experience gained in the late war.

In forces of small size, Assistant Directors of Hygiene and Pathology will be appointed to the Headquarters of the Force, and as many Deputy Assistant Directors of Hygiene and Pathology as are considered necessary.

A representative of the Directorate will also be appointed to the Headquarters of a Corps. Sanitary Sections will be allotted to Armies in the Field in the proportion of one to each Division and commanded by an R.A.M.C. Officer specially trained in Sanitation, but not necessarily a medical officer. Each section will have a fixed establishment of trained N.C.O.'s and men including tradesmen, such as bricklayers, carpenters, and sign painters. The N.C.O.'s are now termed Sergeant or Corporal Sanitary Inspectors.

For a force of one or more armies, a Directorate of Hygiene similar to the Peace Establishment will be required.

In addition to the above organisation, the Hygiene Directorate of an army in the field will be supplemented by mobile Hygiene and Bacteriological laboratories, and Base Hygiene laboratories. It is interesting to note that the first appearance of a laboratory in the field was in the South African war.

It is satisfactory to record that the health of the army since the war has steadily improved and that at the present time the health statistics are only a little above pre-war figures. In this connection, however, we must remember that we have not yet returned to full peace conditions, and that until quite lately troops were still occupying several unhealthy areas in new territory acquired during the war.

The incidence of Venereal Disease and Scabies in the Army at Home has steadily declined since the war and this is due entirely to the Hygienic preventive measures adopted in all Commands.

The incidence of Venereal Disease in 1920 was 48.3 per 1,000 of strength and that of Scabies 51.57. At the present time, the ratio per 1,000 for Venereal Disease is 25 and for Scabies 8.0 and in each case is lower than that shown in pre-war returns.

The general mortality rate is now reduced to pre-war figures and there appears to be no reason why it should not further be reduced.

It is an interesting fact that minor injuries head the list of prevailing diseases in Commands at Home, followed by venereal disease, disease of the digestive system, inflammation of the bowels, and areolar tissues in that order. Venereal diseases of the digestive system and injuries, head the list for service at Home and Abroad.

Formerly, in all armies, even in peace, the mortality due to injuries and accidents was greater than in civil life. The mean of the four years 1859 to 1862 was 61 per 1,000. The mortality due to injuries in 1922 was 0.68, a little lower than in 1913.

In the years 1859 to 1862 it is interesting to note that the diseases in their order of fatality were tuberculosis, violent deaths, pneumonia, diseases of the heart. Fevers (typhoid and typhus), diseases of the nervous system, bronchitis, and delirium tremens.

The mortality from tuberculosis at that time for the whole army was not in excess of the rate for the civil population, the rate being 3.8 and 3.5 respectively per 1,000 living. The incidence fell most heavily on the Foot Guards, however, and was computed to be nearly four times as much as among the civil population of from 25 to 45 years of age.

The great sanitary reforms of Lord Herbert and the Royal Sanitary Commission which were carried out in 1858 shortly after the Crimean War led to an extraordinary decrease in the mortality of all arms, and especially in respect of tuberculosis.

The Royal Commission reported that 57.3 per cent. of the deaths in the infantry of the line were caused by diseases of the respiratory organs, and of the deaths in the Guards, no less than 67.6 per cent. The total rate of mortality per 1,000 per annum, amounted to 17.6, which was nearly double that of the civil male population of army ages. They considered that the cause of these high rates of mortality could be assigned to:—

1. Night duty.
2. Want of exercise and suitable employment.
3. Intemperance and debauched habits among soldiers.
4. Crowding and insufficient ventilation, and nuisances arising from latrines, and defective sewage in barracks.

At the present time the admission rate for tuberculosis in the Army is 1.3, whereas up to 1862, it was somewhere about 3.6 per 1,000.

In regard to disabilities classified under disease

of the heart which still are a frequent cause—not only of rejection on enlistment but also of admission to hospital and invaliding, there is no doubt that much of the high incidence in the past was due, as pointed out by Dr. Maclean, then Professor of Military Medicine, to the mischievous restriction to which the chest of the soldiers were subjected at a time when the maximum of exertion was demanded. In 1866 at least 14 per cent. of discharges were due to heart disease.

Delirium tremens, which in those days accounted for a mortality of 1 per cent., has now practically disappeared from army medical returns. Probably never in its history has the army been so temperate as it is at the present time, and to this can be attributed much of the improvement in health and physique which exists to-day.

I am not concerned at present to enlarge on this subject, but the question originally put by Edmund Parkes as to whether there are any circumstances in the life of the soldier in which the issue of spirits is advisable deserves some consideration. It does not appear to be generally known that alcohol forms no part of the soldier's ration either in peace or war, nor to my mind is it ever really necessary except under exceptional circumstances, and then only on the advice of a medical officer. We all know that in the late war a ration of rum on occasions was beneficial in the exceptional circumstances of life in the trenches, when men were exposed day and night to inclement weather, fatigued beyond measure and exposed to constant and unremitting mental strain. Until we find a suitable substitute, a certain amount of alcohol in the shape of spirits seems to me to be beneficial as a nerve or gastric stimulant to men under circumstances such as these, but habitual use is not justified under any conditions of service.

Special Research.

Within the last few years there is one direction in which Hygiene has made marked progress, and that is, in what may be termed physiological and bio-chemical Hygiene. From the study of this branch of Hygiene, more and more do we see what possibilities are opened up to us, and the bearing it has on the improvement in the life and welfare of men in the service. The Army Hygiene Advisory Committee has paid great attention to the work of the soldier and have already issued several reports, which are of great practical value. Especially would I mention the work in 1917 of Professor Cathcart and Captain Orr, on the energy expenditure of the Infantry

recruit in training, undertaken to determine the food requirements for the performance of military duties. Beyond the two researches conducted in 1913 under the direction of Colonel Melville on the energy requirements of marching there had, up to this time, been no serious investigation of the food data, and the work of Professor Cathcart and Captain Orr fulfilled a much-felt want. The result of their investigation has been to facilitate the construction of army diets under all conditions of military training and service.

The recent physiological observations and experience of Professor Cathcart and his co-workers, making use of the perfect methods of research of modern science have successfully demonstrated that the economic load of the soldier should not exceed one-third of his body weight. This may be regarded not only as a close approximation to the truth, but possibly will not be changed by further or better grounded work. It is true that the economic load of the soldier has been recognised as a third of the body weight for many years, but it is due to Professor Cathcart that the limit of the economic load has now been decided by practical scientific observation, never achieved or attempted before. The practical outcome of this is that the average soldier weighing 135 pounds should not be expected to carry more than 45 pounds properly distributed if his maximum fighting efficiency is to be assured. Although it is not expected that this standard can at present be attained, because modern warfare necessitates so much to be carried for protection alone, still it serves as an ideal standard around which to work, and already the weight now carried is very greatly diminished from that which gradually accumulated in the past war. I would refer those of you who desire further particulars to the Report No. 3 of the Army Hygiene Advisory Committee, published in the June, July and August numbers of the R.A.M.C. Journal.

Let me also mention the investigations of Captain A. G. Stevenson, of the R.A.M.C., and Captain R. L. Brown, Royal Engineers, on the motion study of digging and the energy expenditure involved. From a military, as well as a civil point of view, this question is of considerable importance, and with the exception of one or two researches in shovelling by American workers, no serious investigation of digging had been undertaken with the object of increasing efficiency of output and economising energy. During the late war skill in digging was thought to be of a poor type and was lacking in uniformity; accordingly, a digging drill, based on commonsense principles with due regard to the methods of skilled navvies,

was introduced as part of the training of recruits in the Royal Engineers. It was thought that a complete scientific investigation of the whole problem, therefore, would still further increase efficiency in digging, and as a result of this piece of research, a new drill resting on a sound scientific basis is being introduced for both the Royal Engineers and the Infantry.

Mention should also be made of the series of analysis of the commoner food-stuffs by Professor Plimmer carried out during the War and completed under the Directorate of Hygiene and published in 1921.

During the late war, especially in the Army, an authoritative series of analyses were greatly required, since much of the data already in existence referred to food in countries other than our own.

Owing to the lack of a common standard, there was no uniformity in the energy value of rations constructed in the different theatres of war, and the need of a standard series of the food-stuffs of our country was much felt. This most important and valuable piece of work now forms the basis of a common standard of food values for all branches of His Majesty's Services.

Some interesting work has been carried out during the past year with a view to the determination of the food requirements of growing boys.

In order to obtain some standards for comparison, it was considered that more information was necessary as to the growth and physical development of boys in military schools, and boys in the general population, and the first results obtained made it clear that age alone could not be used as a basis. It could not, for instance, be assumed that taking 75 lbs. as the average for a boy of 12 years, a boy of the same age weighing only 70 lbs. was of inferior physique.

It became necessary, therefore, to establish the relationship between weight and stature, with a view to the utilisation of the latter in lieu of age as the basis.

Here, there are variations between races and individuals, but Professor Dreyer, in his book, "The Assessment of Physical Fitness," gives tables showing that a definite relation exists between trunk weight, and other desired data, irrespective of age.

Weight, again, has variations, which occur in a normal and healthy person, as a result of the virtual impossibility of balancing input and output. A weekly variation of from 3 to 4 lbs. is quite compatible with health, and seasonal variations

are also recognised. There is also the physiological increase in weight which takes place after the age of 21. Notwithstanding these difficulties, it has been possible to construct a hypothetical table showing a definite and progressive increase in weight for each inch in height up to 21 years, and on checking this table by reference to actual heights and weights of large numbers of recruits the results were found to bear a close resemblance.

A further hypothetical table of calorie requirements for the average youth expending average energy, was constructed by Lieut.-Colonel Sylvester-Bradley on the basis of the formula $(H-3) 2=C$, when H =Stature in inches, and C =Total food requirements in large Calories.

From comparison with actual dietary tables as regards known units, the table appears to work out correctly. A diet of this value enables the boy of 4-ft. in height to receive the 2,000 odd calories he requires, and the boy of 5-ft. 3-in., the 3,600, and given the average height of the boys in an institution, the calorie requirements, and hence, the dietary of any given number of boys can be worked out.

Tonsillitis.

Tonsillitis has always been prevalent in the Army and shows an annual ratio of 33 per 1,000 at the present time. Up to now, sufficient attention has not been paid to a disorder which, although generally mild in type, yet constitutes a distinct cause of inefficiency. It, undoubtedly, is a disease respiratory in transmission, and associated with overcrowding and neglect of efficient ventilation. This is borne out by the fact that troops in camps and under canvas, even in winter, rarely suffer from the disease, except under the conditions of overcrowding. During the winter of 1914-15 hutted accommodation was inadequate in many camps in this country, and overcrowding became excessive. It is not surprising, therefore, that outbreaks of tonsillitis were very frequent and the type so severe that the disease was often prefixed with the name of the camp in which it originated, e.g., "Bulford Sore Throat." The disease is frequently met with in barracks in hot dry countries during the spring months, and is attributed by some military medical officers to dust. It is also of interest to note that the incidence of Tonsillitis is far greater among troops in Egypt, Palestine and India, than at home.

During the war in France, Tonsillitis was infrequent and certainly the incidence was low among men in the line. The disease appears to be more prevalent in old barracks, where overcrowding is apt to occur, and there has been a

marked incidence among troops on board transports. Prior to the improvements in the accommodation on transports which have recently been sanctioned, the incidence of Tonsillitis on board ship was 68.8 per 1,000, exactly double that in barracks at Home and in Foreign Stations. In this connection there appears to be some relationship between Tonsillitis and minor septic diseases, both of which account for a relatively large number of admissions to hospital at Home and Abroad, and on board ship, and the only remedy at present would appear to be greater attention to the allowance of space per man in barracks, aiming at a clear space of 3-ft. or more between adjacent beds.

It is generally conceded that the spread of infectious disease affecting the respiratory tract is influenced in Army life by a variety of circumstances of which overcrowding is probably one of the most important.

All epidemiological experience points to the very marked effect which overcrowding exerts upon the spread of disease. It is a matter of common knowledge that where diphtheria occurs among men who are crowded together, carriers of the Klebs-Löffler bacillus are unusually numerous, and when these men are spread out in well-ventilated quarters the "carrier" condition rapidly disappears. The evil effects of overcrowding together in ill-ventilating wards patients suffering from measles or influenza are well known. The severity of the disease increases, and deaths from pneumonia as a complication may reach a high figure. One recalls the high rate of mortality from pneumonia, which occurred in 1918 on the overcrowded transports carrying American troops. All experimental evidence supports the view that the distance between beds is of paramount importance, and that quite a moderate degree of spacing out of beds, combined with simple methods for improving ventilation, is highly effective in reducing carrier rates.

Proximity of heads and degree of ventilation are, therefore, the criteria by which the adequacy of accommodation in barracks, quarters and on board ship, should be judged. During the war, and since, I have always emphasised the importance of considering wall space as a guide in the prevention of overcrowding.

In one of the Commands, an attempt has been made to space out the beds in barracks so that the heads of the occupants are separated by an interval of 6 feet, where the number to be accommodated, the shape of the room and the position of the window admits. The officer commanding

the unit notifies the officer in medical charge when closer spacing has to be adopted, so that a close watch for evil effects arising from this cause can be kept.

In regard to Tonsillitis, the Pathological Directorate in association with the Hygiene Directorate have instituted investigations to determine the bacteriological flora of Tonsillitis, and the bacteriological flora of the throats of contacts in barrack rooms from which cases of sore throat are constantly reported, to ascertain prevalence of carriers, and it is hoped some practical solution in the way of prevention may result.

Sandfly Fever.

During the war Sandfly Fever was very prevalent in Egypt, Palestine, Macedonia, and Mesopotamia, and caused much sickness among the French troops at Cape Hellas. In badly infected areas it was possible for 50 per cent. of the troops to develop the fever within a few weeks under field conditions.

Since the war, the disease has caused some anxiety not only in Mesopotamia, Egypt and Palestine, but also in India, Constantinople, and Malta, and recently in Jersey, and a great deal of scientific investigation is being carried out as to the best means of prevention under all conditions of the soldiers' service.

The most recent work on the subject has been contributed by the Royal Air Force Sandfly Fever Commission, in Malta, who issued their report in February, 1923, on the prophylactic measures directed against phlebotomus. The measures suggested are divided into general, to be carried out by the unit as a whole, and personal, to be carried out by the individual. Among general measures are advised the levelling and drainage of the ground, filling in of cracks and holes in walls, repair of windows and doors, ventilators, and rainwater gutters. Facing, painting and tarring walls and the regular limewashing and painting of interiors. They recommend also spraying huts and other buildings every week with a 1 per cent. solution of cresol. Among personal measures, bathing after dusk, the wearing of slacks after sunset, the soiling of the ground must be prohibited. The use of sandfly nets and repellents such as camphor in beds, with the utilisation of natural air currents, and a liberal supply of electric fans are considered essential.

In the near East we found it necessary to issue sandfly nets for the use of all troops, but have not placed any reliance on repellents. The mention of mosquito nets brings us to a most important consideration and one in which we have now come to a definite conclusion, namely, the standardisation

of mosquito netting for protection against mosquitos and sandflies.

A great deal of confusion existed in regard to the factors necessary to determine the mesh and the method to be employed in its calculation. Measurements were based on so many holes to the linear inch, but it was not clear to anyone what this really meant or whether the measurement was to be taken along the warp or along the bobbin. These measurements also did not correspond with those used in the trade, and much confusion resulted. The measurements formerly recommended were as follows: a mesh of 12 holes to the linear inch against ordinary mosquitos, of 16 to 18 against anopheles or stegomyia, and of 22 against sandflies.

Colonel MacArthur took the question up in January of this year, and the result of his work has smoothed out our difficulties and placed the standardisation of mesh for army use on a clear basis. His article on the subject appears in the January number of the Journal of the Royal Army Medical Corps. Measurements are now taken in two directions, horizontally along the warp and obliquely down the bobbin, the corner hole being counted twice; the thickness of the thread being taken also into consideration.

Colonel MacArthur considers that cotton netting of 25/26 holes to the square inch and woven 30/S or 40/60 cotton will exclude mosquitos when used as a mosquito curtain under natural conditions. A finer mesh, however, is desirable for veils.

The standards now recommended for Army use are the following:

	Counts.
Mosquito netting ...	28/29 hole.
Mosquito veil netting ...	40 "
Sandfly netting ...	46 "

Rations.

Very shortly after the termination of the war it became necessary to revise the rations of the soldier both for Home and Abroad, and also the scale of diets for patients in military hospitals. Naturally during the war the scale of rations had considerably increased above that required in peace, and the return to a fixed peace scale was not only in the interest of the soldier, but made for considerable saving in public expenditure. Prior to the war, the soldier received $\frac{1}{4}$ -lb. of meat and 1-lb. of bread supplied as a free ration, and in addition a money allowance of 3d. per head was given to supplement the ration issued by Government. Dr. Pembury calculated that this ration gave an energy value of 3,369 calories, while if the amount purchased by the soldier out of his own pocket was included, each man might receive 4,000 calories per day.

A very great improvement on this ration has been made since the war, and the soldier to-day receives an ample ration at Government expense. From a scientific point of view this is most desirable, since a standard ration makes it possible to study the relationship to energy expended during training and otherwise. The new rations both for Home and Abroad were carefully considered by the Army Hygiene Advisory Committee and a standard fixed, below which it would be unsafe to go. Efficiency and economy had both to be considered, and the ration as it stands to-day has proved to be entirely satisfactory.

The daily energy expenditure of the soldier at the present time amounts to somewhere about 3,380 calories and the ration for Home Service was based on this daily expenditure of energy. Other factors had also to be taken into consideration, such as food for growth, so the energy value of the present ration is equivalent to 3,600 calories per diem, and it must be remembered that the soldier, no matter how good the ration, naturally supplements his ration by meals and otherwise out of his own pocket. It is surprising how much the young recruit patronises the Regimental Institutes for additional food to satisfy his needs, and doubtless the growing lad should eat as much as he feels inclined, irrespective of all laid-down principles. Variety is obtained in the ration by allowing a certain amount of commutation, and daily menus are prepared by all units, based on a monthly menu issued by the Supply Branch of the Army. In addition, not only economy but also greater variety and palatability has been effected by improvement in the cooking generally. During the earlier part of the war the cooking left much to be desired, and much waste of food was attributable to this defect alone.

Regimental cooks are now most efficiently trained at the Army School of Administration and Hospital Cooks at Aldershot, and the result has had a most important bearing on Army efficiency.

Before commencing training as a cook, every man must be certified by a pathologist that he is not a carrier of enteric or dysentery germs, and in special cases this examination may be extended. This also applies to all men employed in the preparation of food, and in both cases men suffering from diarrhoea are ordered to report sick at once.

In preparing an army ration one has to consider not only the energy value, but also its portability, its variety, its suitability to varying

climatic conditions, its keeping properties, and the kind of food men are accustomed to, among other matters. During the war in France scales of ration had to be considered for various races of mankind, but even so, the impression left on my mind was, that coloured races would readily take European food if it were offered to them, and that their diet, varying according to supply, depended largely on the necessity for consuming food that alone was available. From a long and careful study of the requirements of an Army in the field in temperate climates, I am certain that the needs can best be met by a sufficiently varied diet having an energy value of about 4,000 calories. Greater than this is wasteful, and less, is uneconomical also, since under stress of active service a man to be efficient in all respects must be well fed. In addition, the diet must contain a right amount of fat and a sufficient supply of fresh vegetables. In regard to the first, we should not go below 75 grammes of fat per man per day. There is no difficulty in this, because, in a ration containing 12 to 15 ounces of meat, there will always be an excess of fat. By good management, suet may be utilised for puddings and dripping can replace butter to a great extent, but wastage is now prevented in the Army by saving all the waste fat, even that from the used plates, which is rendered and sold, the soldier partaking of the profit.

A sufficient supply of fresh vegetables is now insisted upon in all scales of rations and dried vegetables in lieu have been condemned.

It would here not be out of place to remark that all messing utensils used by the men, after use, are sterilised in boiling water or in some cases in soap and water. The Army and Navy Canteens are bringing out a special apparatus to effect this conveniently. Table appointments have been improved and great care is exercised in the preparation and storage of food. Food safes are insisted upon for all units and bearing in mind the danger of food poisoning, the preparation and partial cooking of food overnight and re-heating the next day before consumption is discouraged.

Hospital diets during the war were based on an allowance of each food constituent per 100 patients, as originally devised by Sir Napier Burnett. This system was carried out most successfully up to quite lately when, owing chiefly to the reduction in the number of patients in each hospital, a return to a fixed scale, to be regarded as a guide, was made for economical reasons and convenience of working. The extras allowed, however, are considerably in excess of those before the war in spite of economy effected

With the present prices of food, patients should be well fed for 2s. 7d. per day and officers for a little more.

Conclusions.

I have to some extent indicated the lines on which we have been working, but much remains to be done, especially in regard to the prevention of disease among armies in the field and improvement in the general efficiency of the man as a fighting unit. During the past war, many diseases hitherto unfamiliar in the field became convincingly evident and although overcome or kept in abeyance they were nevertheless the cause of much wastage, which, if we had known, might have been prevented.

I need hardly remind you of the old saying, "In war it is the unexpected that happens." There are still problems of the late war left undetermined. Although the incidence of nephritis declined in the last year of the war, we cannot say that we have satisfactorily arrived at the etiology of the disease or have laid down adequate measures of prevention. Undoubtedly the progress of science will show the way to prevent or lessen the incidence of many diseases, such as influenza, which caused more deaths in France in a few months than did all the rest of the infectious diseases during the whole course of the war; but it must be remembered that even well considered measures of prevention dictated by science, may meet serious obstacles to their success under the difficult conditions of active service in the field. No war in the future will present just the same conditions as in the past and it is certain that new features will be introduced which may tax our energies and zeal in the same way as formerly. In preparing for war, it is useful to visualise every disease and devise a plan of campaign for its prevention, which although not complete in every detail or exactly suited to the conditions which may arise, still will offer a sound basis for attack and any modification will be met more easily than if we had not considered it at all. The occurrence of Trachoma and such diseases as Nephritis and Trench Foot rather took us by surprise, and although the measures of prevention were in part known, their application was entirely new and called for exceptional measures in difficult circumstances. The chief cause of wastage from disease in the last war may be attributed to venereal disease and uncleanness. Both of these can be prevented, and we are endeavouring at the present time to devise measures which should prevent or lessen their occurrence in the

future. In regard to uncleanness, I may mention that owing to the measures taken from the very first to prevent vermin and uncleanness, the troops lately in the Near East were kept entirely free and no wastage from this cause resulted. The conditions were not quite the same as if the troops were actually engaged in warfare, but even so, there would have been little complaint.

At the present time a War Office Committee is investigating the whole question of the prevention of vermin and uncleanness in the field, and it is anticipated that our Army in the future will be provided with both efficient cleansing sections and mobile laundries in the field, and on the Lines of Communication, and that wastage from this cause will be reduced to a minimum. Other nations are also considering this question from the practical side.

I suppose that the Navy and Army Medical Authorities of this country will always be hampered to a certain extent by public opinion in carrying out preventive inoculation against disease. In the late war our Army was the only one in which inoculation against typhoid or vaccination against small-pox was voluntary.

There is no question that protective inoculation opens up a greater field for the protection of troops on active service, and following the success of inoculation against Enteric, it is probable that the best results will be obtained against dysentery, still a heavy scourge of armies in the field, by a similar vaccination whereby much inefficiency will be prevented and many lives saved.

In the report on the Dysentery Epidemic in the department d'Ille-et-Vilaine in France, 1921, attention was drawn to the fact that of all prophylactic measures, a vaccine given either subcutaneously or by the mouth appeared to be the most efficacious.

As an argument against vaccination it has been contended that although a very large percentage of the British troops in France were not efficiently protected by vaccination yet they did not suffer from small-pox. The truth of the matter is, that the British Army was surrounded by an efficiently vaccinated population in the shape of the enemy in front and the Belgians and French alongside and were thus protected, otherwise the occurrence of small-pox would have been inevitable. In Mesopotamia where no protective barrier existed, the incidence of small-pox among our troops, as is now well known, became a deadly menace. I have probably had as much experience of Army

Sanitation in the field as any one, and I am convinced that although efficient sanitation goes a long way in prevention, you cannot under the exceptional circumstances attending active service in the face of the enemy entirely prevent small-pox, or intestinal infectious disease by sanitation alone. There are certain zones of active operations where efficient sanitation is impossible and reliance will have to be placed on protective inoculation until some further advance in Science renders this unnecessary.

I will not weary you by enlarging further on a subject which is of intense interest to us all, and I am conscious that I have not put the matter before you in as clear or as interesting a manner as I could have wished, but let us remember to our satisfaction that we, whether Civil, Naval or Army Hygienists, are in the happy position of representing a service which in war gains victories not by the destruction of life, but by our efforts in saving life, and that no one appreciates our work more than the Sailor, Soldier or Airman himself, which is the best return for any self-sacrifice we make, or feeling of disappointment we may have, in working for such a result.

THE ECONOMIC CIRCUMSTANCES OF THE COUNTRY AS A WHOLE, AND THE VARIOUS RATES BY MEANS OF WHICH HEALTH IS MEASURED.

BY

R. J. EWART, D.Sc., M.D., F.R.C.S., M.O.H.,
Barking.

The following summary of Dr. Ewart's paper, read at the meeting of the M.O.H. Society on Friday, March 16th, 1923, was forwarded by him to the Editor with a note promising the full paper at a later date. Unfortunately, this promise could not be kept owing to Dr. Ewart's sudden death, the circumstances of which were referred to elsewhere in this issue.

The paper dealt in the first instance with the relationship of man to his bacterial environment, and the reader suggested that the cause of the economic revolution of the nineteenth century, was dependent on the control of Small-Pox.

He supported his argument by numerous references to the reaction of certain populations to organismal changes, amongst which he included the disappearance of the economic surplus in the Northern States of Italy, due to the introduction of syphilis in the year 1500, and as a consequence

the death of the "Renaissance." Passing from this theme, the nature and peculiarities of the economic evolution of the XIXth century were discussed, and the author seemed to be of the opinion that foreign trade was the best measure of its progress. This was shown to be capable of division, into firstly, a fluctuation measured by the percentage number of trade unionist employed from year to year, and secondly, a general steady upward trend as measured by the amount of food and other necessities of life, consumed per head of the population, on what could be taken as an alternative of the value of real wages.

After discussing in some detail the probable origin of fluctuation of prosperity, the author compared by means of graphs, the relationship between fluctuation in employment, value of real wages with the death rate from certain causes. The conclusions arrived at were of extreme interest, and may be briefly stated in the following manner.

The change in the epidemiology of scarlet fever, which occurred about the year 1850, would seem to have been due to the migration of whole families from town to town, according to industrial necessity. Previous to 1830, areas or towns seemed to re-act independently, afterwards that the county re-acted as a whole due to this circumstance. The high degree of immunity at present attained was stated to be due to this course.

It was suggested that the changes in infantile mortality were due to variations in the bacterial content of the food supply. The rise previous to 1899, when a fall was expected, was said to depend on the deterioration of the milk supply, dependent on the increased time of transport, and the fall after that date, was the replacement of this contaminated fluid by the milk product. The sex ratio at birth also seemed to be dependent on economic factors. It was stated that the influence of the food supply on the germ plasm was to naturalise the sex differential death rate before birth. Should, however, a sudden change occur in that community, these two factors become separated and an excess of boys or girls arose according to the conditions. The relationship to phthisis was only briefly referred to as the matter had been previously dealt with.

Referring finally to the general death rate, the author laid stress on the fact that it was unaffected by fluctuation in prosperity, but was highly associated with the value of real wages. He explained

this as being dependent on the Poor Law, which was so adapted as to maintain the health of the community during periods of depression, without interfering with its economic life.

The address was concluded on a warning note. The author expressed his opinion that the liberal food supply at the present moment, was the main factor upon which the favourable state of the public health depended, but that the means adopted was interfering with the economic life of the community, and as a consequence, the value of real wages might come down. He pointed out that if such did happen, the general and phthisis death rates would rise, but that the infantile mortality would not be affected.

Discussion.

The President considered that the question of the relation of death rates of certain infections to movements of populations raised many points. The importation of dried milk as far back as 1889 was probably intended to refer to condensed milks and not dried milks. On the question of puerperal sepsis, it was well known that the more interference with a pregnant woman the greater the liability of sepsis, the mortality in cases unattended by doctor or midwife being less than in those receiving such attention. The paper contained much material for thought, and would be read with great interest when published in extenso.

Col. F. E. Fremantle, O.B.E., M.P., moved a vote of thanks to Dr. Ewart for his wonderful assiduity in compiling such a wealth of information and figures, and expressed the hope that the paper would be reproduced with its charts complete. In the meantime he accepted them with the question mark with which every well-trained medical officer of health received new propositions, and while statistics would probably be found very useful and enlightening, yet in his opinion they would not bear so simple an interpretation as that put on them by Dr. Ewart. Factors other than those adduced had to be taken into consideration, not the least of which was the psychological aspect.

Dr. G. F. Buchan (Willesden), in drawing attention to a number of fallacies, acknowledged his indebtedness to those gentlemen who made possible the mathematical study of the various factors concerning health, because it was probable that the public health service profited by the errors they made. Though any endeavour to correlate these factors in a mathematical way was laudable,

he supported the view that the psychological factor was probably more important in such things as, for example, the marriage rate and even the bank rate.

Dr. Ewart, answering the point raised by the President, stated that the imported milk product referred to was condensed milk because the sugar was dutiable and only dutiable articles were represented in the Blue Book returns. On the general discussion with regard to statistics he urged that the figures must be taken as they stood. As to what deductions were made was another matter, for there was no limit to the interpretations that human ingenuity could put upon them. If there was a simple explanation and one that was satisfying, it was probably correct and well worthy of consideration. Any mathematical process which allowed a thing to be measured enabled one to begin to know something about it.

Col. Herbert Jones (Herefordshire Combined Districts), with the object of securing a fuller discussion on future occasions, formally moved that the Council of the Society be recommended to revert to the old custom of having the principal papers set up before-hand and galley slips pulled for distribution to the members. This motion was put to the vote and carried.

THE LEAGUE OF NATIONS, THIRD INTER-CHANGE OF HEALTH PERSONNEL IN THE UNITED STATES.

BY

CHARLES PORTER, M.D., B.Sc., etc., Medical
Officer of Health, Metropolitan Borough of
St. Marylebone.

III.

Following the addresses designed to give the members of the Interchange a grip of the organisation of the Public Health Service, came a series of talks by the Assistant Surgeons General on the work of the divisions of which they have charge, and by the chiefs of several of the departments and bureaux giving attention to health matters not dealt with directly by the Federal Health Department. Most of these lectures were followed by visits to places in which the work described might be illustrated or, if this was impossible, then to some feature of public health or general interest.

The first of the series of what may be called "Divisional Addresses" was given by Assistant-Surgeon-General J. D. Long, who described the work done in relation to foreign quarantine and

the medical inspection of aliens. As already indicated, all the members of the Interchange are to be given an opportunity of studying the methods adopted in carrying out these inspections, and it is probably convenient to postpone fuller reference to this matter till this study has been made. In the meantime it may be noted that so far as immigrants are concerned efforts are being made to ensure that the bulk of the inspections of immigrants shall be carried out before *embarkation for the States* in order not only to reduce the amount of work on this side, but also to save time and worry to the immigrants who may happen to be unfortunately placed so far as the quota for their nation is concerned. As regards the power to make these inspections it was pointed out that this was obtained indirectly through the consuls at the ports who refuse to grant a bill of health until the quarantine officer certifies to him that he may do so. If a ship sails without such a bill, liability to a fine of 5,000 dollars arises, and in addition there are delays which may prove very costly. An address which was listened to with great interest was that given by Dr. Draper, Assistant-Surgeon-General in charge of the department concerned, with Domestic Quarantine and the Prevention of Interstate Spread of Infection. Dr. Draper, with the exception perhaps of Dr. Stimson, was the member of the service with whom the interchange officers came most in contact, he having been mainly concerned in the drawing up of the programme to be followed. In the service itself he has the reputation of having induced more authorities to adopt schemes than perhaps any other member of the staff. The interchange officers having become acquainted with him, having heard him speak and having been conducted by him on demonstrations found no difficulty in subscribing to this belief.

A very interesting address by Dr. Smith, of the Service, dealt with the Relief Activities of the Public Health Service, the hospitals, sanatoria, etc., provided for seamen, and also with the leprosy problem in the United States and the leprosarium provided for these cases. A certain amount of fear exists that this disease may in time become more widespread in some of the States, and that the methods now in operation for combating it, and the provision made for dealing with the cases are not the best. The various methods of treatment commonly used have been tried, but apparently not with any more success than is obtained elsewhere. Unfortunately none of the delegates were able to

give Dr. Smith much information or assistance in connection with a problem in which he appeared to be deeply interested even though some come from countries in which leprosy is or has been fairly prevalent.

Dr. Stimson, in his address on the Research Activities of the Service, showed that these were in two directions, viz., in the field, and scientific, in the hygienic laboratories in Washington. The former are carried out by officers detailed to take up some specific condition, e.g., cancer, goitre, etc., in some certain area where the disease appears to be most prevalent. In these investigations assistance, if required, is provided by other departments, not the least important being that coming from the statistical department which goes fully into the whole matter from this side before the actual work begins. The work at the laboratories is carried out by picked men and women, each devoting himself to some subject in which he is particularly interested. The laboratories to which a most interesting and instructive visit was paid are probably amongst the most fully equipped in the world. Every encouragement and every assistance is given to the worker who is left free to pursue the subject—pharmacology, protozoology, chemistry, etc., in which he is interested fully and freely and unhampered by the necessity of attending to anything but the scientific part of the work. One of the activities carried on, that in regard to Biologic Products, has already been referred to, and we had the inestimable advantage of listening to an address by Dr. McCoy, whose investigations in this direction are so well known. In the United States all substances of this nature are manufactured by private firms, the State itself producing nothing. In order to obtain control over them, however, it is insisted that any that are to be sold elsewhere than in the State in which they are manufactured or that are to be exported from or imported into the United States, shall be satisfactory in the view of the health department. Further, the place of manufacture, the methods adopted, and the personnel must also be approved. As a bacteriologist Dr. McCoy is, of course, well known, and from what we heard and saw it was perfectly obvious that the greatest possible care was taken that the people of America should be guarded against exploitation and from danger arising out of the use of sera, vaccines and other substances capable of being described as biologic products. In order to supplement what has been told us by Dr. Stimson and Dr. McCoy with regard to the activities at the Hygienic Laboratory an opportunity to visit and

inspect was given to our party. The only feeling of dissatisfaction experienced was an account of our inability to afford more time to give to looking over the vast amount of work of all kinds being carried out. The number of departments is very large, and in each most fascinating researches appeared to be in progress. Of these only a little could be shown to us and talked of, the director of each department indeed only being allowed ten minutes to talk and very little more to demonstrate. In Dr. McCoy's department the processes adopted and more or less outlined already, were described, and specimens of the various products dealt with demonstrated. Of sera, anti-toxins, and toxin-anti-toxin mixtures there were, of course, many. The various manufacturers and distributors of diphtheria anti-toxin, it would appear, from the specimens, make this material up in such a way that the container serves as the barrel of the syringe and the plug as the plunger, the needle and the plunger rod which screws into the plug being packed with the container. For convenience it would be difficult to conceive of anything better, and if such an arrangement could be made available at home I feel sure that much of the difficulty now experienced in inducing practitioners to administer anti-toxin early enough would be overcome.

One of the most interesting talks given to us was by Dr. Francis who was responsible for working out the details of the new disease, Tularaemia. This is an acute glandular affection of rabbits and ground squirrels carried by flies to man and extremely prevalent in certain states, more particularly Utah. The fly involved is the *Chrysopa* and the condition is exceedingly infectious to man and highly fatal to guinea pigs. In this animal the post mortem appearances closely resemble those of plague and the organism is also not unlike appearing in weal and rod forms. These grow well on egg medium and indeed on any material rich in system. An anti-toxin can be obtained from horses by appropriate methods and may be used either for cure or prophylaxis. As Dr. Francis says, this is a new disease, completely worked out from the very beginning, the reservoir, the vector and the organism all discovered and the prophylaxis and cure also provided for. Altogether a most remarkable achievement.

As already noted one of the health activities not definitely under the Surgeon-General and in the hands of his department is that in connection with Maternity and Child Welfare, for which a special bureau in the Department of Labour is

responsible. One morning was devoted to this subject, investigating the arrangements made, and listening to addresses given by Dr. Abbott, who is in charge, and her assistant, Dr. Root. We also received a packet of literature which, with the exception of that handed to us by Dr. White, who addressed us on Venereal Diseases and Social Hygiene, was the largest received up to that time. Apropos of literature, of which we have received and shall receive considerable, it may be noted that in all departments assistance in disposing of it is readily granted, the various officers expressing the greatest willingness to send it home for us. This is fortunate, as otherwise it would add considerably to the bulk of our luggage, which as the tour progresses, is likely to become more and more of an embarrassment. It is proposed to submit a separate note on the activities of the Children's Bureau and the Shepherd-Tourner Act later, and nothing further, therefore, be said of Maternity and Child Welfare Work now.

Dr. White who told us of the activities of the Social Hygiene Division had a great deal to say with regard to work done in relation to Venereal Disease. Cases generally are notified and great attention is paid to propaganda work in relation to which considerable use is made of films. One of these, "The Science of Life," was shown to us by one of the members of the division, who pointed out that the main object of this film was to show modes of spread of infection, the disease chosen for the purpose being tuberculosis. No reference is made to Venereal Disease in the film or in the talk that is generally given when it is shown; this being considered unnecessary. With regard to literature it may be stated that this in many respects is much the same as that used by us, though less is now being done on account of the fact that the appropriation has been cut down. An opportunity was given to the members of the party to visit the Venereal Disease Clinic in Washington of which all availed themselves. This is conducted on somewhat different lines from clinics in England, and though it is perhaps unfair to judge so soon, this side of the work appears to be less well developed than with us. Treatment is not, in general, free, it being regarded as not either wise or proper to give free treatment not only in this but other conditions, e.g., tuberculosis, and in the dental and official clinics.

One of the most delightful addresses of the series was that given by Dr. Frost, of the Public Health Service, who, in addition, lectures on

Epidemiology at the John's Hopkins University in Baltimore. The subject he dealt with was "Researches on Stream Pollution," and he succeeded in giving an excellent idea of the situation in regard to this matter at the moment. The problem facing those who desire to see sewage purification methods adopted is very much complicated by the fact that though the bulk of communities discharge their sewage direct into waterways and bodies of water that are used as sources of supply the risks are comparatively small. This results, first because the distances between large towns is very great—150 to 400 miles; secondly because the rivers are large and the sewage is very soon tremendously diluted and thirdly because self purification is very effective. In any case also, by means of water treatment, which most communities have adopted, any possibility of danger can be removed. The great fear of engineers at the present time is that though just at the present time water purification may be ahead of water pollution, this has gone as far as it can go and pollution may, in the course of, say, two decades, overtake purification and danger will arise. All the research work that is being done, most of it on the Ohio river, is with a view to securing the adoption of a national policy, formulated in advance, and consistently followed over a period of years. In the matter of sewage treatment most of the cities appear to be backward and unwilling to set up plant. Indeed at present less than 20 % of the population of cities of the first rank are served by sewage treatment plants, and only 22 of 83 such cities have arrangements for treating their sewage. Many, e.g., Washington, do nothing more than merely screen it or use screens and tanks. The predominating system, in the more advanced districts, is the filter, though electrolytic methods are greatly favoured. The activated sludge method, is not widely used. According to Dr. Frost it has been installed at Milwaukee. The Federal Health Department has not much power in relation to steam pollution, the State departments being mainly concerned and having usually a bureau of sanitary engineering in the Department of Health.

The United States Public Health Service has carried out a number of useful investigations into the subject and is frequently called in to assist the states in making investigations and to advise in connection with local problems of sewage disposal or water supply. In connection with the address of Dr. Frost a visit was made to the various plant connected with the water supply of Washington. All the water used in the city is

taken straight from the Potomac, some miles outside the boundaries. Thence it is carried to two settling tanks, being afterwards submitted to sand filtration. Chlorine is not used, the only chemical added being alum. The bacterial count after filtration is round about 10 per cc.

As during our visit we were destined to spend a good deal of time in studying rural hygiene and the problems that the state and county health officers have to encounter it was considered advisable to bring us into contact with one of the members of the service greatly concerned in this matter. Dr. Lumsden who gave us a most racy and lively talk on "Rural Health Work" has been for some years engaged in visiting various states in the union and assisting the state health commissioners in bringing home to the authorities of the rural areas the need for sanitation and health work generally. He described to us the methods adopted by the Federal Government in order to assist County authorities in setting up Health Departments by making grants which the local authorities are expected to cover and to increase year by year while the Federal grant diminishes. In connection with the making of these grants very great assistance is obtained from the International Health Board, the successors of the Rockefeller Commission. The equipment that it is desired to see in a county is a whole time medical officer, with one inspector, one or two public health nurses and a clerk. The total cost of such a unit is about 12,000 dollars per annum. The salary of a sanitary inspector is about 125 dollars per month. In some of the lesser districts, where it is found to be impossible to afford a complete unit, good results are claimed to have followed the appointment of a "sanitary officer" who is not medical but appears to be a kind of super sanitary inspector. Many of the members of the service in Washington and elsewhere speak with great enthusiasm of the success obtained by these officers and many counties quite unable to afford to appoint a medical officer are being encouraged to adopt the sanitary officer plan.

The activities of the Division of Sanitary Reports and Statistics were described by Dr. Lloyd, the Assistant Surgeon-General in charge of the Division. In his address Dr. Lloyd gave an outline of the history of the development of the system of reporting and described the methods of obtaining information for reports, particularly morbidity, and mortality statistics from various areas. In all, some 560 cities send in reports as to number of cases notified and of deaths

reported, but as the Department has no real right to demand them the arrangement is purely voluntary. Collaborating and assistant collaborating officers are appointed in practically all states and these are, the former, local health officers and the latter some member of the health staff. Each is paid a small salary by the Federal Government in order to make him a Federal Officer and give him the right to use the postal facilities free for his returns. The system of distributing the information thus collected is very complete by weekly, monthly, annual and other reports. Public Health Education forms part of the activity of this division but as it is my intention to write a special note on this and propaganda methods generally after I have had an opportunity of studying them in the various states and districts visited, I only mention here that I was greatly interested to hear Dr. Lloyd express the view that lectures were more effective than any other method that might be adopted, though popular articles in the press were also very useful.

In order to receive instruction in the methods adopted in the United States in connection with obtaining information as to births, deaths, etc., and the taking of the census, the party visited the Bureau of Census which is part of the Department of Commerce. It was pointed out that although the returns generally were very complete there was no law behind registration of births, deaths and marriages, and in spite of the fact that the Bureau had prepared standard birth and death certificates not all the states had adopted them. As to the census this, it was pointed out, was taken decennially and at various times, generally quinquennially, other censuses were taken by the department, e.g., of manufactures.

Most interesting addresses were delivered at the Bureau of Animal Industry and the Bureau of Chemistry, at the former by Dr. Ditlewicz, on "Federal Meat Inspection," and at the latter by Dr. Dunbar, on "The operation of the Pure Food and Drugs Acts." "Meat and Food Inspection" being the subject to which I have been directed to give special attention with a view to submitting a report at the final conference I refrain from making further reference to these matters at this stage. Though from what has gone before it might be imagined that all the time of the party had been devoted to setting at the feet of various members of the Public Health Service and listening to addresses this was not quite the case. Much of the time was indeed spent in this way, the first part of each day being given to it, the afternoons in general being occupied with visits

to places of interest from the public health or historical or national point of view. Also the party received a considerable amount of hospitality, of a public or private nature. Most of the representatives were entertained at the Embassy or Legation of their nation, but of this type of hospitality, it is almost unnecessary to say, the British representatives had no experience, though this, of course, might have been due to the regrettable absence from Washington of our Ambassador on account of illness. Of the warmth of the native brand of hospitality it is almost impossible to say too much. Unfortunately the Secretary of the Treasury was unable to entertain us himself, but Mr. Wadsworth, the Assistant Secretary, entertained the entire party to lunch and made it most clear that we were very welcome visitors, and that everything possible would be done to ensure that we should see and do all that would be seen and done in the time at our disposal. In regard to this luncheon it may be said that it was partaken of at a round table that could have been exceeded in size only by that provided by the late King Arthur for his Knights. Practically all the clubs in the city opened their doors to us and made us honorary members for the period of our stay, and several of us had our first introduction to the "Country Club" of America while in Washington. Clubs of this kind are a great institution and by those who desired a rest and liked playing or watching golf and tennis were greatly appreciated. Even more highly appreciated were the opportunities offered by members of the Health Service of seeing the home life of American colleagues. Several delightful parties were arranged and greatly enjoyed by the members who were privileged to attend. Most of the members of the staff are, to an extent, birds of passage never knowing exactly whether or not they are to be in Washington for a longer period than the normal four years of the tour. Nevertheless they try to make a home, hiring or, as they are compelled to do, buying a house. As all possess an automobile or a Ford (this is a common phrase) they usually live well out of town, and in general the guests were driven to and from their hotel by the host. This fact is mentioned mainly in order to give some idea of the extent of the kindness and hospitality received. Reference has been made already to some of the visits of inspection made, e.g., to the Hygiene Laboratories, the Venereal Disease Clinic, etc. In addition, two afternoons were devoted to visiting the Military (Walter Reed) Hospital and the Naval Hospital. At both of these institutions extraordinarily good work

appears to be done. In connection with each there is a school and courses of instruction are given at intervals during the year. At the Naval Hospital, the visit to which was a particularly delightful one, great attention is given to the teaching of Hygiene, The Commandant, Captain Butler, being a recognised authority on Tropical Hygiene.

Amongst public buildings visited the most important and interesting were the Capitol, the U.S. Treasury and the Surgeon-General's Library and Museum. At the first-named the system of ventilation was demonstrated and at the second the method of printing notes and postage stamps. Amongst the latter the black two cent stamp bearing the head of the late President. The library of the Surgeon-General is, of course, well known and all were greatly interested to see the place where the famous index is prepared. As in duty bound all of us visited Mount Vernon, the home of George Washington, making the journey by water. Daily during the summer many hundreds of Americans visit this spot and play their part in keeping green the memory of the most famous of all the Presidents.

In Washington the party divided itself into three groups, one setting out on the evening of Saturday, 22nd September, for Montgomery, Alabama; the other on Sunday morning for Raleigh, North Carolina, and yet another on the afternoon of the same day. As the present writer is a member of this last named group (Group I.) it is probable that more will be heard of its doings than those of either of the others.

NOTES FROM THE BRANCHES.

METROPOLITAN BRANCH.

DEPTFORD DELIBERATIONS.

Dr. Charles S. Thomson (Deptford) has issued a spirited report, and included in it are short articles on Cancer, by Prof. Sir Thomas Oliver; on Insulin in the Treatment of Diabetes, by Dr. George Allan, of Glasgow University; and on Rheumatism and Heart Disease in Children, by Dr. Poynton, of University College Hospital. On the question of vaccination Dr. Thomson does not mince words: "I solemnly warn and charge your Council to approach the Government to withdraw this conscience clause and to enforce vaccination in infancy and adolescence. I wash my hands of all responsibility if any citizen dies of small-pox." On infant life he is no less emphatic: "Deptford is one of the safest places in the world for a baby

to be born in. The infant mortality rate of 74 per 1,000 born will fall to 30 within five years. I have said so! let no dog bark." With a view to obtaining information from general practitioners as to the prevalence of sickness in the borough and the treatment of chronic rheumatism particularly, Dr. Thomson circularised local doctors and publishes their replies. From these it is clear, in his view, that it would benefit the nation if these practitioners could work in "teams" in the treatment of disease and to a certain extent in consultation centres. "Health Week" was celebrated successfully in Deptford and the medical officer of health appeared in two pulpits, to further its aims.

"MARKING TIME" IN LAMBETH.

Dr. J. Priestley (Lambeth) remarks that economical considerations have resulted in a process of "marking time"—no new schemes being introduced in 1922, but there has been, concurrently, a general "tightening up" of administrative measures with a view to lessening expenditure without loss of efficiency, the latter condition, unfortunately, not always accompanying the former in public-health administration. Indeed, he adds, all experienced observers are agreed that the more advanced and up-to-date a local authority's public health administration, the greater the expenses involved, and, consequently, that economy in public-health administration may mean waste in human health and life.

VISIT TO MESSRS. LYONS' FACTORIES.

On Friday, November 2nd, a number of the Metropolitan Medical Officers of Health and their wives accepted the invitation of Messrs. J. Lyons and Co., Ltd., to visit the firm's factories at Cadby Hall, Kensington, and at Greenford. The guests were received at the Kensington depot by the Directors, who personally conducted the party over the various departments, including those dealing with meat, fish, bread, cakes, pastries, and syrups and jams. Particular interest centred round the laboratories, where details of the work done in connection with the chemical and bacteriological examination of foodstuffs were given. Luncheon followed during which the President of the Branch (Dr. Frederic Thomson) conveyed the thanks of the members for the courteous way in which they had been afforded every facility for seeing the firm's well-equipped factories under working conditions, Mr. Alfred Salmon replying briefly on behalf of Messrs. Lyons. In the afternoon the party proceeded first to the Lyons' Sports Ground at Sudbury, and then to the new

establishment at Greenford, where several hours were spent in the factories devoted to tea, coffee, cocoa, custard powder, chocolate, and confectionery. At the conclusion of the visit, which was excellently arranged and proved of great interest, the members were entertained to tea.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, December 14th, 1923, the President (Dr. T. W. Naylor Barlow) in the chair.

The minutes of the last meeting were approved and signed. The following candidates having been duly nominated, were elected to the Society:

As Fellows.—Carpenter, Hayward, M.B., B.S.Lond., M.R.C.S., L.R.C.P., D.P.H.; Cathcart, John, M.B., Ch.B., Edin., D.P.H.; Craig, Jas. Robert, M.C., M.B., Ch.B., Glasg.; Cullen, James, L.R.C.P. & S., Ed., L.R.F.P.S., Glasg., D.P.H.; Dalton, Joshua Bower, M.B., Ch.B., Manch.; Galloway, Robert Menzies, M.B., Ch.B., Edin., M.R.C.S., L.R.C.P., D.P.H.; Lamont, Donald Colin, M.B., Ch.B., Ed., D.P.H.; Layton, Thos. Bramley, D.S.O., M.S., Lond., F.R.C.S.; Lilley, Chas. Herbert, M.B., Ch.B., St. And., D.P.H.; McIlroy, Anne Louise, M.D., D.Sc., Glasg.; Minckley, Henry Richmond, M.R.C.S., L.R.C.P.; Murray, Sydney Ellington, M.B., B.S., Durh., L.M.S., S.A.; Rankine, Mary Doughty, M.B., Ch.B., Ed., D.P.H.; Reid, Marguerite Anne, M.B., Ch.B., Aberd.; Richards (Mrs.), Noel Olivier, M.B., B.S., Durh., Glasg.; Stocks, Arthur Vernon, M.A., B.Ch., Cantab., M.B., D.P.H., Vict.; Valentine, Jessie Mary, M.B., Ch.B., Birm., B.Sc., St. And., D.P.H.; Weston (Mrs.), Mary Elizabeth, M.B., B.S., Lond.

As Associate.—Turner, Edward Ernest, L.D.S., R.C.S., Eng.

A number of candidates were nominated for election at the next ordinary meeting.

Dr. Harold Scurfield then delivered his address as President of the M. & C.W. Group, on "Lines of Advance in Maternity and Child Welfare Work," which with a report of the subsequent discussion will appear in an early issue of "Public Health."

The proceedings closed with a cordial vote of thanks to Dr. Scurfield for his interesting address.

METROPOLITAN BRANCH.

A meeting of this Branch took place at the Society's House in London, on Friday, 30th November, 1923, the President (Dr. Frederic

Thomson) occupying the chair. Twenty members were present.

The Branch expressed agreement with the revised order of procedure in regard to the treatment of tuberculosis, drawn up by the London County Council, dated 28th November, 1923, and it was arranged that this should come into force on 1st January, 1924. An inquiry from the M.O.H., London County Council, as to whether or not the Branch would acquiesce in a proposal that appointments of tuberculosis officers who have had no previous experience of tuberculosis work should be on probation for the first year, on the understanding that this requirement would apply to the whole country and not to London only, was referred to the Tuberculosis Group for their observations.

That action in London under the Rats and Mice (Destruction) Act, 1919, should, as far as possible, be uniform, and that the Act could be strengthened considerably if the responsibility for ridding property of rats and mice were placed upon the owner as well as upon the occupier, were the views which the Branch directed should be conveyed to the Metropolitan Boroughs' Standing Joint Committee in response to their communication, seeking advice on a report from the Battersea Borough Council on the subject.

"The Surface Disinfection of Infected Rooms" formed the title of an interesting paper read by Dr. H. R. Kenwood. Discussion of the paper was adjourned until the next meeting.

It was reported that a Nursery School Association had been formed, and that Miss Margaret McMillan, who had been appointed President, was anxious to make the movement known and to enrol members. Enquiries with regard to this new association should be addressed to Miss McMillan, the Rachel McMillan Training Centre, 232, Church Street, Deptford, S.E.8.

HOME COUNTIES BRANCH.

The third meeting of the Session 1923-24 of this Branch was held at the House of the Society, on Friday, 7th December, 1923, at 3.30 p.m.

The minutes of the previous meeting were read and approved.

The Secretary reported that the Meeting normally arranged for the first Friday in February will take place on January 25th, in conjunction with the Fever Hospitals' Medical Services Group, when Dr. A. F. Cameron will read a paper on the diagnosis of small-pox.

The Secretary also submitted the Public Health (Dried Milk) Regulations, 1923.

The report of the representatives on the Council was received. The principal subjects under the consideration of the Council were:—

The Draft Memorandum of the Ministry of Health on the duties of Medical Officers of Health.

The recommendations of the Salaries Committee of the Council on the scale of salaries.

Dr. T. S. McIntosh then read his paper entitled "Some Remarks on Infection and Infectious Diseases."

Dr. McIntosh suggested that all efforts to control infectious disease were directed to prevent access of the infecting agent to the Human subject and that infection was not the sole, or perhaps the most important, factor in the spread of infectious disease. He suspected that common infections may live outside the body or in the normal person in some unrecognised form. He instanced the case of enteric fever breaking out amongst troops due to alleged "carriers" who were impotent to cause epidemics amongst the civilian population amidst whom they had lived, the deduction being that an additional, presumably environmental, factor had been superadded. He held that three factors were concerned in the production of infectious disease: (1) The infection; (2) The susceptibility of the individual; (3) An unknown combination of environmental conditions which increases the virulence or otherwise aids the infecting agent or increases the susceptibility of the individual.

Dr. McIntosh emphasised the susceptibility of the individual, its variability in different persons, and in the same person at different times, and sought the reason of the varying susceptibility. The loss of milk souring and the spreading of infantile diarrhoea, both of bacterial origin, did not advance *pari passu* with the rise of temperature to the same extent in June as they did in August. Some unknown factor in addition to rise of temperature must be added. He suggested that this additional cause was known in the case of pneumonia and the common cold and that it was chilling of the body. Even in diseases like measles, whooping cough and influenza where the infecting agent is very important, other factors must operate or the seasonal incidence of these diseases and the rise and fall of epidemics would be inexplicable. The comparative infrequency of multiple cases of scarlet fever and diphtheria in the same house supported this view. An analysis of cases of scarlet fever and diphtheria in Hendon and Willesden, with special

consideration of secondary cases and return cases and the incidence amongst unprotected contacts, shews that though the incidence amongst contacts is greater than amongst the population at large, the total incidence amongst these contacts is relatively small, indicating again that some other factors than infection is a dominant cause. The fact that isolation has failed in the cases of scarlet fever and diphtheria, gave little hope that a better result would follow the isolation of tuberculosis, a disease much more difficult to recognise and control. In all these cases success could only be looked for in the recognition of the unknown influences which favour the spread of infectious disease.

A very interesting discussion followed in which the President, Drs. Buchan, Cates, Forbes, Warren, Kirkhope, Gilmour, Nash and Clements took part. The opinion of the meeting appeared to be divided as to whether the failure to control infectious disease was due to such influences as Dr. McIntosh suggested, or to our failure to apply our accepted methods as rigorously as was done, for example, in the case of small pox.

Dr. McIntosh was heartily thanked for his paper and the hope was expressed that he would arrange to have it published.

MIDLAND BRANCH.

Meeting held at the Health Department, Grey Friars, Leicester, December 6th, 1923.

Present: President, Dr. A. Hamilton Wood, and 16 members.

The minutes of the previous meeting having been already published in "Public Health" were taken as read.

Apologies for absence were received from Dr. T. Naylor Barlow (President of the Society), Drs. John Robertson, Ridley Bailey, Gibbons Ward, Auden, Goldie, Wilkins, Ferguson, Mason, Turner.

Correspondence.—From Dr. Ridley Bailey with regard to his position as Joint-Trustee. The Hon. Sec. was instructed to make further inquiries on this matter.

Report of Branch Council.—(1) The Branch approved the recommendation that one of the forthcoming meetings of the Association be held at the Carnegie Institute, Handsworth, at 5 p.m., and that Dr. John Robertson's kind offer to read a paper on this occasion be accepted.

(2) The recommendations of the Council of the Society with regard to the proposed formation of

a North Midland Branch were submitted and discussed. After an amendment urging the formation of a North Midland Branch had been defeated the following resolution was unanimously passed:

"That the Central Council be requested to prepare a scheme for Local Sub-Branches so as to avoid the formation of new Branches."

(3) On the instruction of the Branch Council the Hon. Sec. read a communication which he had sent to a member who had failed to support the policy of the Society as regards a recent appointment, together with extracts from the reply received. It was resolved that a copy of the letter be sent to the Executive Secretary for his further information.

The Hon. Sec. was empowered to distribute certain gratuities to those members of his staff who had done clerical work for the Branch during the past year, such expenditure not to exceed two pounds.

The President then called upon Dr. Killick Millard for his Paper on "Birth Control from a Public Health point of view."

After referring to both the cosmopolitan and the national sides of this great question, and indicating the main arguments affecting these aspects, the speaker proceeded to a consideration of the effects of "Birth Control" on the health of the public.

The arguments advanced in favour of Birth Control were (1) The wastage of child life and the high infant mortality rate so generally associated with a high birth rate, (2) The adverse effects on the mother of too frequent reproduction; and (3) The reduction below the poverty line of many families owing to their rapid increase in size.

Against the tragedy of the only child he set the unfortunate necessity of early child labour in families where the children were numerous.

The two alternatives then considered by Dr. Millard were (a) The employment of Birth Control by the poor, or (b) Some method by which the more educated classes could be induced to rear families the size of those in the Victorian era. The latter method was dismissed as impracticable and the speaker then discussed the practicability of some system of Birth Control for that class of the community which was least thrifty and provident.

In conclusion Dr. Millard said he regarded Responsible Parenthood, with its corollary of restriction of the size of the family where circumstances called for it, as a higher and nobler ideal than that of unrestricted breeding. He further believed that the only practical method

of effecting restriction for ordinary married couples was by the use of contraceptives. He believed that certain methods, if properly used, were without any serious ill-effects as regards health.

Dr. Sidney Barwise, Dr. Davison, and the President having contributed their views it was then deemed advisable to adjourn the further discussion to a future meeting owing to the lateness of the hour.

YORKSHIRE BRANCH.

The October meeting was held in association with a public conference called by the Yorkshire Federation for Maternity and Child Welfare at the Town Hall, Bradford, on October 25th. The Lord Mayor of Bradford presided and addresses were given by Sir Robert Jones, K.B.E., and Colonel Wear, C.M.G. The purpose of the conference was to arouse interest in the project of establishing a central orthopaedic hospital for cripples from the whole of Yorkshire, to be worked in association with local clinics in each centre of population. It is hoped to form a number of local committees to take preliminary steps.

Subsequently the ordinary meeting of the Branch was held when an invitation was received from the Yorkshire Branch Council, B.M.A., to nominate four members of the B.M.A. engaged in public health work to serve upon the B.M.A. Branch Council. Doctors Wear, Kaye, Pearce and Banks were nominated. Dr. Joseph Buck, the Ex-President of the Branch, was elected Vice-President, thus repairing an omission unfortunately made at a previous meeting.

NORTHERN BRANCH.

A meeting was held in the Medical Institute, 7, Windsor Terrace, Newcastle-upon-Tyne, on Friday, 7th December, 1923.

Present: Dr. T. Eustace Hill and 23 members.

The minutes of the meetings held on the 5th October, 1923, and 2nd November, 1923, having appeared in "Public Health" were taken as read and signed by the Chairman.

National Health Insurance Dispute.—It was reported that a copy of the two Resolutions passed by the Branch at its meeting on the 2nd November, had been acknowledged appreciatively by Dr. A. Cox, Medical Secretary, B.M.A., London; Dr. James Don, Honorary Secretary of the North of England Branch of the B.M.A.; Dr. E. F. Murray, Honorary Secretary, Newcastle Division of the B.M.A.; Dr. T. L. Bunting, Honorary

Secretary, Newcastle Panel Committee; Dr. John Livingston, Honorary Secretary, North Lancashire and South Westmorland Branch, B.M.A.

Sunderland M.O.H.—Salary.—The Honorary Secretary was instructed to communicate with the Honorary Secretary of the Sunderland B.M.A. Division with regard to the above.

Dr. T. Eustace Hill's Photograph.—In accordance with the instructions of the Branch a large portrait of Dr. Hill had been executed for presentation to the Society in London. This was on view at the meeting.

The Honorary Secretary was instructed to pay the account for this.

Future Meetings.—It was reported that 43 members had returned cards as follows:—

13 for Monday, 13 for Tuesday, 20 for Wednesday, 21 for Thursday, 22 for Friday.

It was moved by Dr. MacLachlan, and duly seconded, that future meetings be held at 5 p.m. on Friday. An amendment that the hour be 3 p.m. was lost, and the original motion was carried.

Address by the Executive Secretary of the Society.—The Chairman, on behalf of the Branch, extended to Captain G. S. Elliston, M.C., the Executive Secretary a hearty welcome and invited him to address the meeting, which he did at length, dealing with present conditions and difficulties of service.

Considerable discussion followed, and in this Dr. R. A. Bolam, who is Chairman of Council of the B.M.A., took a notable part, emphasising the importance of loyalty.

Annual Dinner.—At the close of the meeting the members adjourned to the dining room for the Annual Dinner of the Branch. At this 39 members and guests were present, it being the largest function of the kind that the Branch has yet held.

Dr. T. Eustace Hill presided and the guest of the evening was Captain G. S. Elliston. Other guests included Dr. James Don, Honorary Secretary of the North of England Branch of the B.M.A., and Chairman of the Newcastle-upon-Tyne Division; Dr. R. Dagger, late Chairman, Newcastle Division; Dr. W. T. Hall, and Dr. T. L. Bunting, Chairman and Secretary respectively, Newcastle-upon-Tyne Panel Committee. Among the members present were Professor R. A. Bolam, Chairman of Council, B.M.A., and Dr. E. Farquhar Murray, Secretary, Newcastle-upon-Tyne Division, B.M.A.

Departing from precedent there was a toast list. After the Loyal Toast, proposed by the

Chairman, Dr. T. Eustace Hill proposed "The Profession," which was responded to by Dr. R. A. Bolam and Captain G. S. Elliston.

"The Visitors" were proposed by Dr. W. F. J. Whiteley, and responded to by Drs. James Don and W. T. Hall. The general tenor of the proceedings was to bring out the closeness of the bonds that exists between the members of the Northern Branch and the rest of the profession and to strengthen, if that were possible, the unanimity that prevails.

"Absent Friends," proposed by Dr. A. T. Paterson, was made the occasion for kindly and sympathetic reference to the illness of the President of the Branch (Dr. A. G. R. Cameron), the Vice-President (Dr. T. Horne), Dr. John Taylor (Ex-Honorary Secretary) and Dr. J. W. Smith, who is the donor and President of the Medical Institute, also Dr. S. J. Clegg now in Durban.

TUBERCULOSIS GROUP.

The following are the officers of this Group for the Session 1923-24:—President, Prof. S. Lyle Cummins, C.B., C.M.G. Council, Drs. A. J. Shinnie (Westminster), A. W. Forrest (Wandsworth), G. T. Herbert (St. Thomas's Hospital), G. B. Dixon (Birmingham), H. Gordon-Smith (Worcestershire), J. A. Watt (Derbyshire), J. D. C. Swan (North Devon), C. F. Pedley (Winsley Sanatorium), A. Neville Cox (Brighton), W. B. Christopherson (Norfolk), S. Knibb Young (Co. Durham), T. H. Peyton (Cheshire), John Guy (Edinburgh), and Prof. E. L. Collis (Wales).

All communications in reference to the Group should be addressed to the Hon. Secretary, Dr. Ernest Ward, at Withycombe Lodge, Torquay Road, Paignton.

WEST OF ENGLAND BRANCH. TUBERCULOSIS SUB-GROUP.

Meeting held at Taunton on November 22nd, 1923, at 4 p.m.

Present: Dr. E. Ward (chair) and ten members.

1. Minutes of last meeting and matters arising therefrom.—No minutes of last meeting were available, but are now appended. (The minute book is still in the hands of a member).

Correspondence read.—Letter from Dr. Short apologising for absence on account of illness.

Account for postage and assistance passed.

2. Discussion on the position of the Sub-Group.

Attention was called by the Secretary to the statement on the agenda regarding the position of the Sub-Group, which is as follows:—

"Members of the Tuberculosis Sub-Group are earnestly invited to be present at this meeting, and decide on vigorous action to increase the membership and attendances at the meetings and improve in every way our organisation and activities. It should be clearly understood that the Tuberculosis Sub-Groups work in complete harmony with other societies, but their aims are not confined to the encouragement of the clinical knowledge of tuberculosis. They envisage widely the improvement of our professional status, evolution and definition of our necessary administrative position, consideration of our medico-political and ethical interests and relationship to our medical colleagues in practice, to the Local Authorities and their officers and the public.

It was agreed that meetings would be held at centres in all areas of the Branch as propaganda, and it was suggested that each member of the Sub-Group should personally endeavour to obtain membership and that of other of their colleagues in the medical services.

3. Pensions Matters.—Dr. Ward reported that he saw Dr. Sandison in March last, as requested, concerning the deterioration certificates (MPMR 5). He was informed (1) that a new and rather shorter form is being issued (MPMSD 31). (2) Payment for this is included in the "lump sum." (3) Instructions about it are to be found in Section 5, Paras. 15 and 16, of instructions for the guidance of medical referees; also paras. 22 (4), page 14, of Ministry of Health Memo. 30 T. (4) If the T.O. thinks the case one for treatment allowances rather than deterioration, it is sufficient simply to state that on the certificate.

4. Collective Research.—Dr. Ward submitted a circular suggesting a method for collective research on the influence of marriage, pregnancy and parturition on tuberculosis. The circular was approved, and it was decided that this be sent with a covering letter to all tuberculosis workers in the West of England who may be in a position and wish to undertake the research.

5. (a) Dr. Ward reported that in order to obtain co-operation of tuberculosis workers, a circular had been sent to all tuberculosis members of the Society of M.O.H.'s (150) describing the work of the Society and Sub-Groups. The members of the Central Committee had also been asked if willing to serve. Some members had belonged to the Committee for years and never been present at a meeting, which was obviously useless. (b) Proposed by Dr. Atkins and seconded by Dr.

Bushnell, that Dr. Pedley and Dr. Swan be elected representatives on the Central Group Committee. Carried nem. con.

It was reported that a certain member of the Tuberculosis Group has accepted and contemplates accepting appointments as Medical Officers of Health at salaries below those recognised by the Society of Medical Officers of Health. It was moved by Dr. Adkins and seconded by Dr. Bushnell that Dr. Ward "represent" the case of the former to the Council, and that any necessary steps to enforce discipline should be supported. Carried nem. con.

6. Dr. Pedley kindly showed charts illustrating the treatment of several cases of pulmonary tuberculosis with Dreyer's diaphyte at Winsley Sanatorium. Dr. Ward also exhibited illustrated posters as used in the French Anti-Tuberculosis Campaign.

7. Salisbury was selected for the next meeting place in February; Hawke Moor to follow that, and Plymouth later.

SCHOOL MEDICAL GROUP.

The Twentieth General Meeting of this Group was held at the Society's house on Saturday, November 17th, 1923. In the absence of the President, Dr. H. R. Kidner, Divisional M.O., L.C.C., was elected Chairman. The minutes were read, approved and signed. Apologies for absence were received and correspondence was read from the Council of the Society expressing thanks for the Group's help in suggesting amendments to the proposed Statistical Tables of the Board of Education for the inclusion in the Annual Reports of S.M.O.'s. The Council also acknowledged the Groups recommendation in appointing Dr. C. J. Thomas to the Special Committee of the League of Nations for arranging courses for foreign health officers. With reference to the expenses of the Group it was noted that the Society's Treasurer's annual report stated "that the question of subscriptions (by the Society to Branches and Groups should be referred to a committee, so that, if possible, a more equitable scheme than the present may be evolved for consideration by the Council." It was then decided to send the following resolution to the Society:— "That in the opinion of this Group, expenses to Groups should be allocated in proportion to the number of members constituting the Group, and this Group would welcome a committee for considering the allocation of Branch and Group expenses as suggested in the last report of the Society's Treasurer." In the meantime it was decided that the usual annual subscription of two shillings and

sixpence should be collected by Sub-Group Hon. Treasurers and be sent to Group Secretary for Group expenses.

The Unification of Health Services was discussed and it was resolved to send the following resolution to the Society:—"That the School Medical Group hopes that the Society is fully alive to the necessity of pressing the Government for the unification of all health services (including the medical work of the Board of Education) under the direct control of the Ministry of Health."

The question of salaries for officers in the P.H. service was postponed for a further meeting of the Group.

The twenty-first General Meeting of the Group was held at the Society's house on Saturday, December 15th, 1923. Dr. C. J. Thomas presided. The minutes were read and approved and signed correspondence was read from (1) the Hon. Sec., Northern Branch, Soc. M.O.H., re the Public Health Acts Amendment Bill. The Group Hon. Secretary was requested to obtain information from the Executive Secretary re same and report to next meeting of Group. (2) From the Northern Sub-Group Hon. Sec. re Pensions Schemes for all Corporation Officials, especially referring to Newcastle-on-Tyne. It was pointed out that any L.A. may adopt a Government Pensions Scheme, and those L.A.'s who already had a less satisfactory scheme could alter and adopt the Government scheme. The Group Secretary was requested to enquire as to what L.A.'s have, and what kind, of pensions scheme and report same to next Group meeting. The Hon. Secretary regretted that Dr. Wells was unable to give a paper on zinc ionisation treatment for otorrhœa. The President, however, took the names of those present who desire to see the treatment conducted at the Cable Street Centre. It was pointed out that of selected cases (80 to 40% of all cases found in schools) 75 to 85% of cures (sterilisation) are obtained after a single application. Many of the unselected cases are found to require mastoidectomy, often followed by ionisation. The L.C.C. rule is that uncured cases after six weeks treatment at minor ailment treatment centres are referred for this special treatment. The earlier cases are more suitable for ionisation, hence the Metropolitan Asylums Board now notify otorrhœas to the L.C.C. on discharge of patients from their hospitals. The new minimum commencing salaries scale for whole-time P.H. Medical Officers, as adopted by the B.M.A. and published in the December PUBLIC HEALTH, was discussed and general satisfaction was expressed thereon. Dr. Slowan proposed and Dr. Wiley seconded, and it was passed unani-

mously "That the Sub-Group Secretaries be requested to submit to Group Secretary particulars of any cases where Medical Officers of Local Education Authorities are not paid according to the scale of salaries approved by B.M.A. and Society of M.O.H."

It was also passed unanimously that the Group Secretary request the Society to provide the Group with full particulars of medical staffs and their salaries paid by various L.A.'s, as found during their recent enquiry.

The leaflet on "Prevention of Decay of Teeth," circulated with the December "P.H." and approved by the Society, was considered. Dr. C. J. Thomas proposed and Dr. Mason seconded, and it was unanimously resolved "That the Society be requested to send this leaflet for publication in the 'B.M.J.' and 'Lancet' and recommend same to be published in the annual report of S.M.O.'s."

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

PREVENTION OF VENEREAL DISEASE.

From Dr. J. J. JERVIS, M.O.H., Leeds.

Sir,—The Public Health Service is indebted to you for appending the note to my letter on the prevention of venereal disease, which appeared in the October issue of "Public Health." In the note you state that "the Portsmouth returns show a 32 per cent. reduction in the incidence of venereal disease during 1921, and a 42 per cent. reduction during 1922, as compared with the year 1920." I would point out that the reduction in Leeds for the same periods was 35.3 per cent. and 50.4 per cent, respectively. These figures are taken from the annual return submitted to the Ministry of Health. There may be other areas in the country which show a similar reduction, and it would be very interesting if a complete comparative statement of the figures for the whole country could be published. Meanwhile I shall be obliged if you will give this letter the same publicity as the former.

Yours faithfully,
J. JOHNSTONE JERVIS.

THE gross value of the property left by Mr. Henry Sharland Pope, M.A., M.B., B.C., lately medical officer of Health for Bridgwater, who died on 10th August last, was £19,827 14s. 10d.

Public Health

THE JOURNAL OF.

The Society of Medical Officers of Health.

No. 5.

FEBRUARY, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

	PAGE
EDITORIAL—	
Medicine as a Career for Women	101
Fat in Milk	102
Widows' Pensions	102
SPECIAL ARTICLES—	
Death Certification (By A. H. Bygott, M.D., D.P.H., Barrister-at-Law, M.O.H. West Suffolk)	103
The Soap and Water School of "Disinfection" (By Prof. H. R. Kenwood and Mr. F. Marchant)	111
Housing Difficulties in Rural Areas (By W. Horton Date, M.D., D.P.H., Deputy County Medical Officer, Devonshire)	114
NOTES FROM BRANCHES—	
West of England Branch	116
SOCIETY OF MEDICAL OFFICERS OF HEALTH—	
Council Meeting	117
Ordinary Meeting	118
Proceedings—	
North-Western Branch	119
Tuberculosis Group	120
Midland Tuberculosis Sub-Group	121
Metropolitan Tuberculosis Sub-Group	122
Public Health at Glasgow University	122
Birth Control and the Ministry of Health	123
CORRESPONDENCE—	
Gratuitous Advertising	122
Fat in Milk	123

Editorial. 69 267

MEDICINE AS A CAREER FOR WOMEN.

From time to time there appear in the Press, either in the form of extracts from speeches or as inspired personal statements to the effect that medicine in general affords a wonderful opportunity and career for women and that in public health in particular there is a great demand for them. Undoubtedly young women and their parents are in danger of being misled by such statements and it appears to be desirable that there should be some warning issued on the subject, and that the public should be acquainted with the facts. For the average married woman the cost of medical training represents an unsatisfactory and unremunerative investment, and both business and the teaching profession, to mention two obvious alternatives, appear to offer a far better field for the employment of money and time in the building up of a career.

During the past two or three years we have received with increasing frequency numbers of letters from qualified medical women. All these letters show clear signs of disillusion following on the enthusiasm originally inspired by the brightly coloured pictures painted by the well meaning enthusiasts whose sole object is to keep up to a maximum the number of women entrants into the medical schools. Many of the writers state plainly that they find it impossible to make a living in general practice, while others declare that the continual grind and petty annoyances of practice are unendurable for women and that they are on the verge of a breakdown in health.

All those writers who are in practice make a pathetic appeal for advice and help with regard to obtaining a public health appointment. It should be clearly understood, however, that public health represents an extremely limited field for women and even among those who have obtained such appointments there is great discontent and

disappointment. The majority of women who hold public health appointments have far less leisure, shorter holidays, and more annoyances and worries than the average woman teacher who has in many instances only a slightly lower salary.

Attracted by the bright prospects held out to them there are large numbers of women every year entering the already overcrowded profession of medicine, and all parents and guardians who are considering possible careers for girls should be warned that there are at the present time many qualified women in actual poverty and that the number of these is likely to be considerably increased in the near future.

FAT IN MILK.

In our January issue we commented upon a pamphlet issued by Mr. Wilfred Buckley entitled, "Some observations on the Butter Fat in Cows' Milk." In the correspondence columns of this issue there appears a letter from Mr. Buckley replying to some of the points we raised, and proposing further investigations into the variability of the butter fat content of cows' milk. Mr. Buckley appears to misunderstand the position. Of course he must find it difficult to view the subject from the standpoint of the medical officer of health whose duty it is to protect the interests of the public and not the milk producer. Mr. Buckley's pamphlet, whether printed and circulated with that object or not, will undoubtedly be used for the defence of milk sellers, fraudulent and otherwise, who are prosecuted for selling watery milk of deficient food value. These milk sellers, all over the country, are evading conviction because it is an undoubted fact that some cows yield inferior milk: in the absence of direct evidence of adulteration the fraudulent milk sellers are given the benefit of the doubt. Although this milk is inferior the same price is paid for it by the public as for the more valuable varieties. No minimum legal standard exists and the present position of affairs puts a premium upon the keeping and breeding of cows yielding large quantities of watery milk. The Court of Appeal has decided that any liquid squeezed from the udder of a cow is "genuine milk," even if it is sold mixed with dung, and a large number of medical officers of health have expressed the opinion that an alteration of the law is urgently necessary. The County Councils' Association is demanding the same reform, and there seems reason to hope that the necessary legislation may be passed in the near future.

No useful purpose would be served by such an investigation as is proposed by Mr. Buckley. It would merely traverse an already well-trodden track and would not help to solve the problem in the slightest degree. The problem which confronts the medical officer of health is how to protect the milk consumer. The Scottish Committee, to whose report we referred in our last issue, have very carefully and impartially considered all the evidence, and have heard witnesses representing very fully all branches of the milk industry, and they have made recommendations which must appeal irresistibly to all minds not blinded by prejudice.

Mr. Buckley's interesting pamphlet might appropriately have appeared as an appendix to the notorious milk circular (Circular 325) issued, and subsequently withdrawn by the Ministry of Health. The Society of Medical Officers of Health took the strongest possible exception to that circular, and public opinion demanded its withdrawal. That same body of opinion is now demanding a minimum standard, chemical and bacteriological, for milk, and when that has been secured the fat yielding idiosyncrasies of individual cows will cease to have any special public health interest.

WIDOWS' PENSIONS.

Messrs. Cadbury Brothers, Limited, of Bournville, have made arrangements to complete their pension schemes by the formation of a fund for providing pensions for employees' widows. This fund will be started on a contributory basis from December 17th, 1923. In the event of the death of an employee, who has attained pension age, his widow will be entitled to a pension equal to one-half of her husband's normal pension. The Fund will be supported by contributions of equal amount made by the Company and by the employees. An employee's contributions to the Widows' Fund will be at the rate of one-third of his normal contributions to the Men's Pension Fund.

The Company has agreed to bear the whole cost of the scheme in respect of periods of service prior to December 17th, 1923. The Actuary estimates this cost at a sum of about £95,000, and the Company has agreed to pay over this sum to the Trustees as a Back Service Gift. The Trustees of the Men's Pension Fund will act also as Trustees of the Widows' Fund.

*DEATH CERTIFICATION.

BY

A. H. BYGOTT, M.D., D.P.H., Barrister-at-Law,
M.O.H. West Suffolk.

Public Health Authorities are vitally interested in death certification and the work at present done by Coroners, as a study of each individual death is likely to suggest measures for preventing many deaths; they can no longer afford to acquiesce in the Coroner's office being ad hoc. It is proposed in this paper that the work at present done by the Coroner should be divided and that which can most appropriately be done by a medical man should be done through the Public Health department, whilst that apparently best done by a lawyer should be dealt with by the legal department of Counties and County Borough Councils, working with the Police. Although it is suggested that registration should be dealt with most appropriately through the same authorities this aspect of the subject is not being considered so as not to confuse our issues.

Although a departmental Committee sat on Coroners' Law in 1909 and reported that "the present law of death certification offers every opportunity for premature burial and every facility for the concealment of crime" no steps have been taken to remedy these conditions, many of which were considered in the report of the Select Committee on Registration and Certification of Deaths in 1893. The office of Coroner dates from the time of the Saxon Kings; much of the law dealing with it dates from the 13th Century and is not well suited to the changed conditions of modern life. The Coroners Act of 1887 consolidated or re-enacted 33 Statutes; this was amended by an Act of 1892 and modified by the Local Government Act of 1888. There are still about 30 outstanding acts dealing with the office which should be consolidated. It is said that the present Government propose to deal with the matter.

The first Registration Act was passed in 1836 constituting the newly appointed Boards of Guardians the local Civil Registration Authorities. This was amended by an Act of 1874 requiring medical practitioners, registered by the Act of 1858, who had been in attendance in a last illness to give to the qualified informant of death a certificate under their hand stating to the best of their knowledge and belief the cause of death. This document to be handed to the registrar when he registered the death. In cases where the

circumstances surrounding a death may be unsatisfactory, provision is made for an enquiry by the Coroner.

The Central Authority dealing with the Registration of Deaths is the Ministry of Health, through the Registrar General. The Lord Chancellor and the Home Office deal with the Coroner. Statistics are published by both Authorities, those furnished by the Home Office being found in the Extract of judicial statistics under Criminal Statistics, an arrangement followed since about 1860. The following figures appear in one of these reports for 1920.

Total number of deaths, 466,130. 113,917 dying in Institutions—including Poor Law 54,531; Asylums 9,299; Hospitals 50,092. *53,714 (11.5%) were referred to Coroners, *15,751 were investigated without inquests; *31,486 inquests were held, and 12,310 post mortem examinations were made in Coroners' cases.

The salaries of Coroners amounted to £77,477 15s. 6d. and their other expenses to £60,270 10s. 5d.

There were 192 verdicts of murder, 89 of manslaughter, 6 of justifiable homicide, 137 of felony, 3,236 of other cases of suicide, 23 of deaths aggravated by neglect of others, 88 from want and exposure, 13,744 from accident or misadventure, and 11,748 from natural causes.

There were 1,733 open verdicts, including 241 from injuries, 921 from drowning, 380 other known causes, 191 unascertained cause, and 337 stillborn.

During that year, there were no male deaths from poison registered as murder, there were five amongst females—one by Prussic Acid, one by Perchloride of Mercury and three from coal gas. There were 186 deaths from poison accidental or self administered, Hydrochloric, Carbolic and Oxalic Acids being chiefly used. There were 75 cases in which the same poison caused death less than four times, these poisons were as a rule, easy to detect.

The proportion of cases disposed of without inquest varied considerably in similar areas. Out of 779 reports to Coroners in Chester Ward, Durham, 63 being lunatics, only 363 inquests were held, whilst in Easington Ward in the same County, 240 reports to Coroners (34 lunatics) 130 inquests were held. In Liverpool, out of 1585 reports to Coroners (206 lunatics) 1,021 inquests were held; in Manchester 1,174 reports (201 lunatics) 689 inquests were held. In Birmingham,

* As these figures do not correspond, it may be that the balance is made up by reports from Medical Practitioners of cases which were not investigated.

* Paper read at Meeting in April, 1923.

1,232 reports (158 lunatics) 523 inquests were held, and for the Central District of London, out of 1,130 reports (84 lunatics) there were 825 inquests.

There are in England and Wales, 330 Coroners—of these, 200 are County, 76 Borough, and 54 Franchise only with 360 separate jurisdictions. The salaries vary considerably, 51 receive under £20 per annum, 60 between £20 and £50, 54 between £50 and £100, 44 between £100 and £150, 33 £150 to £200, 46 £200 to £300, 19 £300 to £400, 15 £400 to £500, 13 £500 to £600, 13 £600 to £700, 1 £700 to £800, and 11 receive £1,000 or more; in many cases, the Coroner defrays his travelling and clerical expenses out of the salary.

The number of post mortem examinations varies considerably. London Central, 825 inquests—753 post mortems; London Eastern, 839 inquests—320 post mortems; Nottingham, 224 inquests—104 post mortems; Liverpool, 1,021 inquests—565 post mortems; Manchester, 689 inquests—384 post mortems; Birmingham, 523 inquests—120 post mortems; South Western Staffordshire, 168 inquests—26 post mortems; and Durham, Chester Ward, 363 inquests—31 post mortems; these examinations are as a rule few in County Districts. Norfolk 163 inquests—12 post mortems; Suffolk, 208 inquests—34 post mortems; Shropshire 120 inquests—14 post mortems; Dorset, 120 inquests—12 post mortems; Westmorland, 31 inquests—3 post mortems; whilst in the Kingston District of Surrey there were 255 inquests and 230 post mortems. These figures show the high percentage of deaths referred to the Coroner and considerable variations in the practice in dealing with them. The Coroner for Chester-le-Street claims to have cut down the number of his inquests by paying a fee of from 5s. to 10s. to doctors for submitting reports on some of the cases. Mr. Ollis, an officer of the Public Control Department of the London County Council, stated that inquests were held on about 10% of all deaths occurring in London. The number of open verdicts is very high. The number of murder cases from poison is very low; and considering the four important cases which have been before the courts recently it seems possible that with a better system of enquiry more of these cases might be discovered; deaths from accidents are high and many of these are preventable—these figures are an unanswerable argument for the improvement of the system and associating it with other health activities. A Medical Officer of Health was in general practice for about 8 years, during which time he met with three cases

which were most probably murder but the alleged offenders were not brought to justice largely because of the absence of a more satisfactory system of investigating such deaths.

Both Committees went into a considerable amount of detail in the course of their investigation, but that dealing with Coroners was restricted in its recommendations chiefly to a few minor reforms whereas apparently the whole office of the Coroner needs reorganisation. The chief recommendations of the Select Committee of 1893 on Death Certification and Disposal of the Dead were that:—

- (1) All deaths not certified by a registered medical practitioner should be reported to the Coroner,
- (2) that all registered medical practitioners should certify on a proper form,
- (3) that they should verify the fact of death and examine the body after death,
- (4) that they should receive a fee of 2s. 6d. for certifying the death,
- (5) that death certificates should be sent to the Registrar by post as confidential documents,
- (6) that public certifiers should be appointed in every sanitary area to investigate deaths, reporting to the Coroner if in his opinion the circumstances surrounding a death were not satisfactory.

After hearing various witnesses on this point it was recommended that the public certifier should be the Medical Officer of Health.

The Committee on Coroners recommended the abolition of Franchise Coroners; that the Coroner should be paid by salary and not by fee; that a Central Authority, the Home Office, assisted by representative Coroners should have power to make rules for the practice and procedure in Coroners' Courts; that the office should be pensionable, Coroners retiring at 65; that the Coroner should be a magistrate; that the clerical and travelling expenses of Coroners should be paid and that their records and depositions should be the property of the local authority and not the private property of the Coroner; that the deputy Coroner should act as in a County without a certificate of the Mayor or other justices each time he holds an inquest; that the verdict of *Felo-de-se* be abolished; and that the Coroner should have power to order the production of documents. They were unable to make up their minds entirely to substitute private enquiries as in Scotland or the conduct of enquiries without juries, expressing the opinion that the jury system was deeply rooted in English life. This view has not been

borne out by experience as for the past eight years, many inquests have been held without juries and there has been no widespread objection to the system.

A very interesting paper was contributed by Dr. Brand, Lecturer in Forensic Medicine at Charing Cross to the Medico Legal Society in 1913, in which he suggested that a private enquiry by a Medical Coroner should replace the present system and that the office should become definitely a medical one instead of a legal one; this view has much to recommend it. He does not deal with the interest which Public Health Authorities have in this question neither does he suggest how they could help in this matter.

The compass which guides the Medical Officer of Health is his vital statistics especially the death returns, and he ought to be brought more intimately into contact with individual deaths than at present. Thirty years ago the Select Committee suggested he should act as Public Certifier. Since then he has improved and consolidated his position, he is now invariably a man of standing in his profession and is not engaged in competitive private practice either as a doctor or as a solicitor; he is capable of organising the work of ascertaining the cause of death and of referring to the legal department which includes the police, any case in which legal action is required. It is therefore suggested that the office of Coroner, as it exists at present, should be abolished, that enquiries as to the cause of death should be dealt with by the Medical Officers of Counties and County Boroughs and that any legal action required should be undertaken by the Clerk to the County or County Borough Council, assisted by the Police; and that in populous places the existing Coroners for the present, to save compensation, be attached to this department. It is recognised that considerable reforms are overdue in co-ordinating both legal and medical work by local authorities, but all these departments are now capable of undertaking this work. On their present basis the public are now supporting a costly and inefficient system.

When the Coroner holds an enquiry the procedure is mediæval and gives the maximum waste of time and undue publicity to the affairs of a family in great distress; if the case involves a prosecution proceedings are duplicated before the Coroner and before magistrates and these tribunals may arrive at entirely different conclusions; there may also be departmental enquiries by the Board of Trade in Railway Accidents. There is no official regulation of procedure in the Coroner's Court, the laws of evidence are disregarded and

an investigation must deal with a body, which may be in an entirely different district to which a crime was committed against a person. These tribunals may commit an offender for trial at two entirely different Assizes, in one case a Coroner committed for trial to the Assizes at Bodmin, whilst the magistrates committed to Exeter. If the magistrates do not commit, the prisoner is sent for trial on the Coroner's warrant, the case is not dealt with by the Grand Jury but goes straight to the Petty Jury; counsel being briefed the case is withdrawn, but the prisoner against whom no charge is likely to be made remains in prison till he is brought up at the Assizes. A young man at Newport is at present held in prison in this way on a charge of murdering his mother by the administration of arsenic.

If a man falls into the sea from an aeroplane in the sight of crowds of people and the body is not recovered, the Coroner cannot hold an inquest, neither can he if the body is entirely destroyed by a furnace, there must be human remains as the foundation for the inquest.

Some persons including Coroners suggest that the Coroner be made a magistrate, and enquire into fires and other cases possibly associated with crime, such as street accidents. This jurisdiction to be of a limited nature. The universal provision of stipendary magistrates is a policy for which something might be said; it would have been an expensive way of dealing with 192 cases of murder, 89 of manslaughter and 6 of justifiable homicide in 1920, especially as in many of these cases the evidence was very clear.

Up to 1887 County Coroners were appointed by the freeholders in the County and the possession of a grave space was claimed as a qualification for a vote; since then these appointments have been made by County Councils. The case of Franchise Coroners, which constitute about one sixth of all Coroners, perpetuates a grave anomaly their salaries and expenses are paid by County Councils, the Coroner being nominated by a private individual or Corporation; up towards the end of the last century they were paid by the donor when the present practice slipped in. In one case a company registered under the Company's Act nominates; in the County of Huntingdon there is no County Coroner, five franchise receiving salaries of £12 to £24 per annum. In the Liberty of Romney Marsh four justices appointed constitute the court, most of the duties are performed by an assessor paid by fees. The Governor of the Isle of Wight is a Coroner, he acts by deputies, the Bailiff of Corsham Manor is elected Coroner

by the tenants. In Suffolk there are three Franchise Coroners, one elected by the Lord of the Liberty of Bury S. Edmund's, which goes with the ownership of an estate, another by the Duke of Norfolk and a third by the Dean and Chapter of Ely. They are usually of small value and islands in the jurisdiction of County Coroners; this anomaly reaches its height in Norfolk where one jurisdiction consists of 23 islands, so that it is sometimes difficult to be certain in which jurisdiction a body lies. The franchise coronership of the City of London is worth £1,450, which goes with the Borough of Southwark worth £126 19s. 4d.; the Dean and Chapter of Westminster appoint the Westminster Coroner at a salary of £564.

Most Coroners are either solicitors or medical practitioners. Some are qualified for both professions, a few possess neither qualification, there is no statutory qualification except for County Coroners, who must hold lands in fee sufficient in the same county whereof he many answer to all manner of people, the possession of a grave space in the County has been held to be sufficient. Some discussion has taken place as to whether a Coroner should possess legal or medical qualifications, even if he possesses both he will practically always be either a doctor or a lawyer. In the suggested transfer of these duties to the Clerks and Medical Officers of Health of County and County Borough Councils, the legal work would be done by a lawyer and the medical work by a doctor.

There is no statutory duty to report to the Coroner except in the case of lunatics and mentally defectives dying in Institutions, infants dying in registered houses, deaths in prison or in retreats for habitual drunkards. In 1914 the Registrar-General instructed registrars to draw the attention of the Coroner to all applications to register a death or deaths coming to their notice not accompanied by a medical certificate; most of the reports received by Coroners come from the police, or voluntarily from medical practitioners. In the smaller jurisdictions the police report is often all that is received, in larger ones there is frequently a Coroner's officer, usually a police officer, who makes enquiries, upon the result of which the Coroner decides whether or not to hold an inquest; some very unsuitable persons have discharged these duties but the Committee recommended that he should be an officer on the strength of the Police force. A Coroner has no power to order and pay for a post mortem examination unless an inquest is held; this is very unsatisfactory as a post mortem will often easily settle the question of the cause of death and that it is obviously due

to disease likely to be unsuspected. He has no medical department at his disposal to investigate cases which may involve highly complicated chemical or other scientific investigations, but he may receive help from the Home Office, who in suitable cases supply the highest possible skill, the fees which he is able to offer himself are quite inadequate for the purpose. The London County Council has through the Public Control Committee endeavoured to meet some of these disadvantages. Quite recently some very interesting cases have been before the courts of poisoning by arsenic; this poison is convenient to use as it is tasteless, very poisonous, and its effects simulate ordinary disease. Fortunately the chemical tests are easy; in the Armstrong case the solicitor on whose life an attempt was made had an investigation made through his father-in-law, a pharmaceutical chemist, which started the proceedings. Such means of discovery is not universally available in cases of poisoning by arsenic and much less available for discovering other poisons more difficult to detect. It has been suggested that a medical man should communicate suspicion in such cases as this to the Coroner after his patient's death; if he does so he is unlikely to get useful help from many Coroners considering the resources at their disposal, and if the Coroner were so indiscreet as to order a public enquiry it might place the doctor in a very unenviable position, if his fears proved to be groundless. The doctor ought to have access to a medical authority backed by all the resources of modern pathology to investigate such a case as this and he should be able to obtain them during the life of his patient if his suspicions are aroused. As a rule the legal enquiry should not commence until the scientific one is complete. The present rule of holding an inquest on a body and having the body viewed by a Coroner or jury is objectionable in that it is necessary to hold the inquest within short time after death, whereas if the body could be buried, the inquest could take place when the evidence had been properly prepared. Of course an inquest can be adjourned but there are obvious objections to this course if it can be avoided. Sir John Bland Sutton states that he laid the foundation of his wonderful knowledge of pathology in a parish mortuary and the 12,000 post mortem examinations made on the instructions of Coroners. Some of them are dealt with at present under very unsatisfactory conditions in private houses, in out-buildings or in old fashioned mortuaries by inexperienced men working without suitable tools or proper means of taking specimens for detailed examination, and would be capable of rendering

important service to legal and curative medicine and afford valuable instruction to medical students, if the work were properly organised. In London in 1920, 3,682 post mortem examinations were made for Coroners in various public mortuaries. If these had been done in one, or a few well equipped buildings, provided where possible with refrigerators and good photographic apparatus and modern appliances, much better work could have been done. This was pointed out by the Dean of the Medical School at Guy's Hospital in the evidence he gave before the Departmental Committee. Pathological investigation receives far too little attention in cases of disease; many of the larger authorities are now providing means for it; the small ones cannot do justice to it out of their own resources. One of the first cares of the Ministry of Health should be to make good this deficiency either by a co-ordination of University or other services. Any practitioner in cases of disease or possible crime ought to be able to obtain the fullest resources of medical research if he requires it, as the Ministry of Health arranged with the University of Bristol in cases of food poisoning by disease germs. At present if a practitioner suspects arsenic poisoning there is no one whose duty it is to help him; whilst if he suggests *B. Botulinus* as a cause his case will be dealt with without cost to him for the highest possible skill. This is work requiring special skill, and ordinary practitioners or police surgeons are not as a rule competent to make these investigations, moreover the general practitioner doing midwifery work would rather not do it. The doctor is however a responsible member of the community; he is often able to render very valuable information as to the life history of his patient and he ought to take an important part in any examination although not necessarily undertaking the technical part of it. As to post mortem examinations, Mr. Troutbeck, a London Coroner, said "I know that men who can be described as little better than hangers on at a public house are employed in the mortuaries—to do mortuary work, I know they open bodies and take out organs before the doctor arrives," and Dr. Trevor, Pathologist at S. George's, stated that he had to take his own assistant to public mortuaries as he could not trust the ordinary attendants to make a body presentable for anybody to come and view it. In spite of this evidence given 13 years ago there is reason to believe that post mortem work in Coroners' cases is sometimes done under very unsatisfactory conditions and that reforms in some of the London mortuaries are long overdue. The view of the

body by Coroner or Jury is absolutely useless; as a rule they only see the face uncovered through a window; the judge and jury, or magistrates in criminal cases do not see it; in rural areas bodies ought to be removed to mortuaries attached to a hospital or institution even if it involves conveyance for some distance, rather than that this operation should take place under the conditions which frequently prevail now. Friends object to post mortems and they have a right to expect them to be done under decent conditions; it has been suggested that women assistants should deal with the bodies of women and such views should be treated with respect.

A Bill has recently been circulated, backed by Col. Fremantle and Dr. Watts, entitled "Coroner's Law and Death Certification Amendment." This deals with some of the recommendations of the Committees: (a) it requires that the registrar shall not give a certificate for burial until he registers the death; this would prevent the convenient custom in rural areas of the registrar giving the necessary burial permit on receipt of the medical certificate and the friends signing the register when the registrar is next in the neighbourhood, but provide for signature within fourteen days. (b) Fees to be paid to doctors are prescribed for visiting the body and for certifying the cause, of death; these expenses would probably have amounted to about £90,000 in 1920 without travelling expenses, about £20,000 more than the total salaries of all the Coroners in England and Wales. The value of an examination of the body by a doctor after it is prepared for burial is limited. (c) Public Certifiers appointed by County Councils, to be paid by fees—this would be unnecessary if the Medical Officer of Health made the investigation as suggested in this paper. (d) Fees are to be paid to practitioners for reports to the Coroner, the necessity for which in the first instance the doctor is apparently the judge. The fees in these cases are to be paid out by Boards of Guardians afterwards reimbursed by the Coroner. This is a most objectionable suggestion; these are Health charges and should be paid direct by the Councils of Counties and County Boroughs. (e) Medical men under penalty of £20 are to report suspicious circumstances to the Coroner; it is suggested that this should not be required until the office of Coroner is entirely overhauled so that an officer may be available who is capable of rendering valuable help in such cases, and known to possess sufficient medical knowledge such as would command the respect of the general practitioner. A statutory form of certificate is to be

used and it is to be transmitted direct to the registrar.

If the reforms provided by this Bill are to be regarded as an instalment of codifying Coroners' Law and making it a useful phase of public life, with important modifications the bill is valuable, but if it is to be regarded as a settlement, leaving such questions as the perpetuation of the franchise Coroner and the absence of facilities for proper pathological investigations, it would be difficult to justify the expenditure proposed.

At present the law does little directly to prevent unqualified medical practice, the fear that the patient may die and the possibility of proceedings, is the most powerful safeguard. The knowledge that a careful scientific enquiry into the cause of the patient's death with a reference to the legal authority would be quite as effective for this purpose as the present system.

In Scotland procedure is very different, a legal officer the procurator-fiscal, holds enquiries into circumstances of deaths, the enquiry usually being in private, public only in case of accidents; he is associated with the Lord Advocate, who directs criminal proceedings, to be taken when he considers it desirable, the procurator prosecuting the offender in the Sheriff's Court; this method works very well. Public enquiries may be very distressing to the friends and enable valuable information to reach a criminal defeating in this way the end of justice.

Much discussion has taken place as to the desirability of inquests in cases of death following the administration of anæsthetics and undoubtedly this practice has prevented the use of anæsthetics for treatment which might give a patient his only chance of recovery; it cannot however be too strongly emphasized that the administration of anæsthetics needs considerable skill and should not be entrusted to inexperienced persons; the possibility of an inquest has not always secured this. With improved transport most major operations could and ought to be done by specialists under suitable conditions and experienced anæsthetists could be employed by better organisation.

The essence of the Coroner's inquest was the finding of the jury; now as most of the cases are dealt with without juries, the verdict in such cases by a responsible officer becomes quite a reasonable proposition. Before the middle of the last century when medical evidence began to have a real value the personal examination and inspection of wounds by members of the public was a satisfactory way of trying to get at the truth in a case of death by violence—it is not now.

In France, Belgium and Germany, death records afford space for reports on the sanitary condition of the deceased's domicile and other useful information, enquiries being made sometimes by the Police or Magistrates. More enquiries might be made in this country on these lines bearing in mind the judgment of Mr. Justice Stephens, who in 1884 in the case of *Reg v. Price*, said:—

"The Coroner has not an absolute right to hold inquests in every case in which he chooses to do so. It would be intolerable if he had power to intrude without adequate cause upon the privacy of a family in distress and to interfere with their arrangements for a funeral. Nothing can justify such interference except a reasonable suspicion that there may have been something peculiar in the death, that it may have been due to other causes than common illness."

The circumstances of each death affords scope for a little enquiry; the public would sometimes be disposed to consider for instance that a man died in a house which was not fit to die in, whereas they would not concern themselves as to whether it was fit to live in. Information would often be desirable as to whether a patient was provided with hospital treatment at a time likely to be of use, and an occasional request for a report from a doctor might make some practitioners a little more careful in seeking specialist treatment for their patients at a time when it would be likely to be of use rather than waiting till the last minute and then rushing the patient to the hospital so that the institution may take the responsibility of the death.

Soon after his appointment the present Coroner for Birmingham, with a high sense of responsibility, in a few striking cases drew attention to the unsatisfactory surroundings of some of the deaths in which he held inquests and did much good by doing so; why should the Medical Officer of Health be prevented from using the same useful methods? In the Select Committee's investigations in 1893, much stress was laid on the valuable work done by some Sanitary Authorities, investigating the circumstances surrounding deaths in some of the large towns in this country.

In the legal departments of the major authorities, with their association with Quarter Sessions and with the conduct of the work formerly done for the registration of electors by revising barristers, there are all the elements for enquiring into the legal aspect of suspicious deaths. The Medical Officer of Health, the Clerk to the Authority, the Chief Constable often all probably

occupy rooms in the same building. Their co-operation is easy; with such machinery at hand it would be easy to put these matters on a sound basis and probably to reduce the cost.

In all deaths involving crime the most important evidence comes from the police, at present, for instance in cases of bodies found in water, deaths of this kind are very often attributed to drowning and many inquests have been held either dispensing with medical evidence or only requiring an external examination of the body; this loose way of dealing with the matter is very unsatisfactory as such cases call for careful enquiry. The police have always, in this country, been a fine body of men, with an increasingly attractive service; it is likely to become superfine. At present there is a tendency to take more interest in offences against property than against the person; given encouragement and association with a department capable of giving them really scientific help, the Sherlock Holmes, now unhappily, as a rule, only the hero of fiction, will become a reality and the public ought not to be satisfied with a case presented as at present; the police are not given a fair chance.

The object of this paper has been to try and focus attention on the very unsatisfactory methods of enquiring into deaths, 11.5 % of which are referred to Coroners and it is suggested that the present system of an ad hoc Coroner whose functions are neither strictly legal or strictly medical could not be made satisfactory. It is proposed, according to modern use, to separate the duties into medical and legal divisions, to transfer them to the Councils of Counties and County Boroughs, through their medical, legal and police departments; the object of this reform being improvement of the public health, increased public convenience, with better facilities for the detection of crime. Up to the time of the great war considerable damage was done to organisation by authorities or persons wishing to secure control over someone else; it is hoped that the downfall of the Kaiser has done much to terminate such futile proceedings. These suggestions visualise a co-operative scheme for dealing with important questions; we want to help one another.

Unfortunately Public Health Authorities were late comers into the primary services of local government, these are days of economy; we are in danger financially of being crowded out by the claims of highways, education, police, etc. Still it is not necessary to be idle, in the carrying out of such reforms as this which could be done without any serious additional cost; we may move forward, strengthen our position and improve our

work; the first condition for this is to realise that we think these reforms are worth working for. If we do and are prepared to work, we shall progress; if we neglect to do so there is such an amount of inertia in this country which will cause us to continue as we are and deprive us of valuable opportunities of increasing the usefulness of the important work which it is our privilege to do.

DISCUSSION.

The President conveyed the thanks of the members to Dr. Bygott for his paper, and was certain that a good discussion would follow. There was one thing that would at once occur to them, and that was the fact that exactly thirty years had now passed since many of the points raised that day had been brought to public notice by the Select Departmental Committee. Probably the most important point emphasised in the paper was the proposed employment of the medical officer of health as the inquirer into deaths. There was no doubt a great deal to be said for that, but those who held large public appointments knew that their time was fully occupied at present. The work could not be done by the individual officer, and it would naturally follow that he would have to appoint to his staff capable men to undertake the duties. The question of unqualified medical practice was a pressing one. In Durham they had had considerable experience in that connection, and as a consequence of such practice a proportion of deaths had been uncertified. The matter had been brought to the notice of the central authorities, with the result that the coroner was instructed to hold an inquiry into every death not certified by a practitioner in public practice, but eventually the county authorities were informed that this procedure was not considered desirable. The point raised as to the type of coroner's officer was distinctly important also. Many of these officers were quite incompetent to conduct an inquiry, and information given by them must very frequently be wrong. There was need, too, for amending the conditions under which post-mortem examinations were held. The President agreed with the views of Dr. Bygott as to the probability of criminals not being brought to justice in many cases under the existing regime.

Col. F. E. Fremantle, O.B.E., M.P., desired to associate himself with the expression of thanks for a paper of such exceptional importance. The difficulty, of course, was to obtain a sufficient idea of the extra work waiting for the public health service to take up outside its present activities. With regard to the legal aspect of the

subject under discussion, he was inclined to think that the general attitude of the legal profession would be very hostile to any proposal of the nature of that outlined in the paper. It would be interesting to know if during the discussion before the Medico-Legal Society in 1913, the lawyer's point of view in this matter was brought out. The question would almost certainly be referred to the legal officers of the Crown, and if the Medico-Legal Society were able to come to any conclusion it might pave the way from the lawyer's standpoint. Those who held appointments as medical officers of health were getting on in their work and could not take on duties which required fresh training and outlook, but there was no reason why these officers should not undertake administrative control if others could be obtained to do the work. The medical officer of health of the future might very well take on the work if part of the training curriculum were devoted to the subject. As to the Bill which he had backed, this had fallen due to be taken in the House that day but had been crowded out by another measure. The Government's position with regard to the Bill, for which the British Medical Association were responsible, would have been that an expenditure of something like £100,000 was involved and they were not prepared to give any facilities. From the general opinion obtained beforehand in conference with officers of the Ministry of Health and the Home Office it was an extremely badly drafted Bill. He was not strongly in favour of the measure as it stood, yet it showed that we were getting on the move, and we had probably now a free pass to introduce an amended Bill next year. There was not the least doubt that the present state of affairs as regards the coroner and his functions was entirely anomalous, but we should want to compile our case carefully as regards the actual evils that accrue from the present system. It could be shown that there was a very good case for reform, and also for abolition of office, and Dr. Bygott's proposals would be more economical, more practical and more in accordance with the public needs than those contained in the Bill of which mention had been made.

Dr. Charles Porter (St. Marylebone) referred to a point already dealt with, viz., the possibility of the medical officer of health taking on part at least of the work now performed by the coroner. It would be necessary, of course, for assistants to be appointed to carry out the bulk of the duties. It seemed hopeless to go forward at the present time with a suggestion that the medical officer of health should occupy the position that Dr. Bygott

wished to have made for him, and it did not appear desirable that he should do so. There might be another method of attaining the result that Dr. Bygott desired. Many people had read papers before various bodies with regard to certification of death to the medical officer of health and of doing away altogether with the lay registrar of deaths. A tremendous amount of good work could be done if medical officers of health were placed in that position, and enquiries could be carried out quietly and efficiently. Then it would be a comparatively easy step to the scheme which Dr. Bygott suggested. With regard to the setting up of two sets of people to act in place of the coroner, it was likely to be cumbersome and probably would not appeal to the practical man as a sound idea. It did not always happen, for example, that the Chief Constable was in the same building as the Town Clerk and the Medical Officer of Health, and it was not certain that the arrangement would work smoothly in all cases if these three officers had a finger in the pie. Dr. Porter greatly appreciated the historical section of the paper, but regretted that Dr. Bygott had not stated what should be done with his suggestions. All sorts of people had to be convinced in a matter of that kind, and Dr. Bygott's paper would need to be read to a very much more catholic body than the Society of Medical Officers of Health. Col. Fremantle had referred to the abolition of office, but that was a matter that always presented difficulty and if coroners were to be got rid of there was a big task ahead.

Dr. Bygott thanked the meeting for the patience and leniency that had been shown in dealing with his paper. Replying to questions, he stated, with regard to the medical officer of health's position in the matter, that of course he could not do the work himself. A great deal of the work done under his name now he does not do himself. Functions of the kind undertaken at present by coroners needed first-class men who must have well-equipped laboratories at their call. Dr. Bygott expressed great sympathy with the President on the subject of unqualified medical practice and considered the best way to deal with the question was to adopt the same procedure as had been applied in the case of unqualified dentists. The coroner's officer ought to be an experienced police officer on the strength of the Police Force, though the representative of the Public Control Committee of the London County Council who gave evidence before the Departmental Committee suggested that this office should be held not by a police officer but by one of the

type engaged as petrol inspectors. Dr. Bygott was particularly glad to see Col. Fremantle, whose Bill he had only obtained after the paper had been completed, and was pleased to learn that Col. Fremantle had no responsibility for the merits or demerits of a measure that did not do him justice. Answering the query as to the discussion before the Medico-Legal Society in 1913, Dr. Bygott stated that the lawyers present did not give the meeting the benefit of their experience. Col. Fremantle had suggested that we should try and tabulate the number of cases in which further investigations appeared to be necessary, but it was to be regretted that they were difficult to obtain. Nobody was very proud of them, and the cases were heard of in such a way that they could not be published. It was interesting to learn that the British Medical Association had brought in the Bill bearing Col. Fremantle's name, and it had shown the need of active co-operation between the various societies concerned. If any of these bodies had views on the subject let them get together and suggest what should be done. Dr. Porter had said that the present proposal was hopeless, but these hopeless questions had to be tackled and must be fought out to the end. Care had been taken not to introduce any "red herrings" into the paper, and reference to certification of deaths to the medical officer of health had therefore been omitted. Dr. Bygott agreed that it would be a good thing if this were done, but felt that it would not cause the amount of inquiry that was desirable. It was much easier in towns to take over registration work than in scattered areas. As to his solution not being a practical one, he had considered the matter very carefully from every possible aspect, and it was his opinion that the proposals were quite practical and would work very well. He appreciated the necessity of an appeal to a larger audience: the general public were being appealed to and we should get reforms if we worked for them.

THE SOAP AND WATER SCHOOL OF "DISINFECTION."*

BY

PROF. H. R. KENWOOD and MR. F. MARCHANT.

If Dr. Charles V. Chapin, Superintendent of Health, Providence, U.S.A., was not the actual founder he has certainly constituted himself the

*A short paper to open a Discussion by the Metropolitan Branch on November 30th, 1923.

chief promoter of the Soap and Water School of Disinfection.

He abandoned the practice of surface-disinfection of rooms after diphtheria in 1905, and after scarlet fever in 1908. In 1910 he drew wide attention to the fact that as the result of his action no appreciable difference could be ascertained. Since then a number of American cities have followed suit; and Dr. Chapin finds that "the most progressive Health Officers believe in the concurrent disinfection and cleansing, of possibly infected surfaces, with soap."

We do not believe that any Metropolitan M.O.H. has followed Dr. Chapin's lead and so become, in his estimate, "one of the most progressive Health Officers." But there is undoubtedly a growing tendency for some others in the Public Health Service of this country to do so.

There is not a word to be said against the questioning attitude of mind towards any Public Health provision, when its result is to lead to a careful enquiry; but surely we cannot afford to discard any precautionary measure directed against the spread of infectious disease unless its futility has been *proved* and it has been found impossible to make the measure effective.

The argument in favour of the surface-disinfection of infected rooms may be briefly put as follows: There are many infectious diseases in which infective elements are given off from the patients in a way which leads to the surface-infection of rooms, and notably is this the case with a long list of diseases in which infection leaves the fauces and nares. Thus, fresh and virulently infective elements must often be given off within 12 to 24 hours of the room being again occupied by others who are healthy. Such infective elements in mucus are certainly capable of surviving for several days—and we know that the B. Tuberculosis survives for several months. Recently at the Royal Naval College, Greenwich, certain penholders of a common stock were found to be heavily infected with virulent diphtheria bacilli, and it seems practically certain that these penholders spread infection for several days.

If these facts are conceded it seems certain that surface-disinfection of rooms cannot be neglected without persons being exposed to risks. What then is the case for abandoning surface-disinfection? No one disputes that the bulk of infection is probably spread fairly directly from person to person; but to argue that a not inconsiderable residue of infection takes place in other ways is to oppose oneself to common knowledge and commonsense. Doubtless it is from this consideration

that the doubter of the value of the surface-disinfection of rooms generally hesitates to put his doubts to the "acid test" of discontinuing all such precautions; and he prefers to take a less drastic course, namely, to recommend the use of soap and water and the letting of air and sunlight into the room.

It is with reference to this growing advocacy of disinfection by soap and water, etc., that we wish to offer a caveat. It is advocated by those who, while fearing to abandon all attempts at disinfection, consider the disinfection as generally carried out to be unnecessary. Do they realise that while the chemical agents generally employed are disinfectants, the usual soap and water washing is little more than a "placebo"? Nothing is easier than to prove this fact by a few simple experiments.

While we agree that much of our disinfection of room-surfaces is unsatisfactory, either as to method, or application, is not this an argument for abandoning it as useless? It must be borne in mind that we do not succeed in tracing the origin of a large proportion of the cases notified to us; and although, as we have said, we have no doubt that the majority of these originate from a more or less personal transference of disease, nobody has the slightest warrant for saying that a residuum of such cases does not arise from infection left undestroyed on room-surfaces.

To stop room disinfection in any community and then to find that the number of reported cases does not increase leads us nowhere, except maybe to false conclusions; for there are many factors which determine the varying prevalence of infection and room disinfection cannot be expected to be one of such dimensions as to exercise any appreciable effect upon epidemic prevalence. Obviously it must be futile to attempt to gauge the value of room disinfection from the aggregate numbers of notified cases of infectious diseases after the practice has been abandoned, in large communities. The only experiments that can satisfy, must consist in selecting two homogeneous (homogeneous qua social circumstances, housing, age and sex constitution, etc.), and separated communities; selecting such infections as scarlet fever and diphtheria; applying our best means of surface-disinfection of rooms in one of the communities and neglecting every such precaution in the other; collecting the facts of those who remain at risk in the infected homes of both groups, having regard to ages, immunity acquired from previous attacks, risks run prior to disinfection, cases which develop the disease subsequent to the

disinfection within and beyond a period which would exclude the probability of infection prior to such disinfection; careful efforts to detect missed cases and carriers—and then to compare carefully the results in the two groups, over a year or two. If an extensive *experimentum in vivo* on such lines could be carried out, we should be prepared to stake a considerable sum that evidence of a value accruing to room-disinfection would be obtained; and if the value proved to be but slight we should not advocate that even a small measure of protection should be withheld from any parsimonious regard to the saving of the small annual expenditure which room-disinfection entails.

It is obvious that the disinfecting agent employed in the disinfection of room surfaces must be a powerful germicide, for it must operate within the course of a few hours.

Fumigation is still much practiced in this country, despite the fact that spraying is the more effective method; and room-disinfection is often perfunctorily performed and too restricted in its application (often being confined to the patient's bedroom when other rooms have also been exposed to infection). Thus efficient disinfection raises both qualitative and quantitative issues; both of which are often unprovided for.

The disinfecting agent employed must be in solution to be most effective. Bed and living-room dust is of a nature ("fluffy") which tends to shelter organisms against a disinfecting gas, by reason of the obstacle it presents to penetration when the dust is dry. That is an important reason why a liquid disinfectant, preferably one with a low surface-tension enabling it to spread readily, should be selected; and the washing with a disinfectant solution of floors and other washable horizontal surfaces, and the spraying of other (vertical) surfaces, is the most scientific method to adopt.

Soap and Water.

Now what do "the most progressive Health Officers" substitute for the agents and methods which have scientific warranty as to their effectiveness? Soap and water forsooth!

Post-war-time parsimony appears to have been the main consideration which has led to soap and water being officially recommended for disinfecting purposes in Prussia and Brazil. Some in this country have advised its use in respect only to room-surfaces infected with scarlet fever. Why this limitation to scarlet fever infection? Surely we know practically nothing about the nature and resistance of the infective elements of this disease. Is it because in these days scarlet fever is such a

very mild disease that they are prepared to run risks with respect to it?

Now let us follow the process of "concurrent disinfection and cleaning of room-surfaces with soap and water," and see where it leads us.

The operator takes a pail of water, the temperature (say 115 degs.F.) of which is below the thermal death-point of most known pathogenic organisms; and the soap used is *not* a disinfectant. The first time the dirty floor-cloth is raised from the floor and wrung out in the pail of water the temperature of the water drops some 4 degs.F., and the whole of the water which is subsequently applied to the floor from the same pail must be infected. As the process of washing continues each wringing out of the floor-cloth lowers the temperature of the water a further 3 to 4 degs.F., and adds to its infection. At the end, heavily infected water is left on the wet floor surfaces to dry; and then the infective elements may be dispersed.

In order for soap and water to be effectual it must either destroy or remove the micro-organisms of disease. It does neither; for many such survive and remain after the most thorough washing. If then we believe in the microbial origin of infectious disease, how can we be satisfied with such a measure?

In some experiments undertaken by Dr. E. L. Dove and myself in 1917-18, and published in the *British Medical Journal*, we found that the scrubbing of floors had only a limited effect. With an organism such as *Staphylococcus Epidermidis* (Welch), which has a thermal death-point similar to that of the tubercle bacillus (*viz.*, about 150 degs.F. in 20 minutes) the most that was effected was a partial collection and removal of the organisms in association with dirt. Furthermore, floor-boards smeared with tuberculous sputum were allowed to dry; then washed with soap and water and again allowed to dry, after which washings in sterilized water and scrapings of the previously infected surfaces were inoculated into guinea-pigs. One out of three guinea-pigs developed tuberculosis; the controls from non-scrubbed boards giving positive results in every case.

Recently some very strong soap solution was sprayed on to domestic dust in petrie dishes; agar was then poured into the dishes; and these were placed in the hot incubator for 48 hours. The result was a profuse growth of organisms.

Again, an agar plate was made and the agar was smeared with broth culture of *Staphylococcus aureus*; the surface was then sprayed with a strong solution of soap at 110 degs.F. After

incubation for 48 hours a copious growth resulted.

Therefore, as soap is not a disinfectant to a non-sporing organism of but moderate resistance, a *disinfecting agent* should always be employed in the washing of infected floor-surfaces.

In default of the employment of charwomen by the Local Sanitary Authorities, even the poorer people must be called upon to provide the soap and water washing. What guarantee is there that this will be done? What guarantee is there that when it is attempted it will be reasonably well done? What guarantee is there that it will be done with sufficient promptitude? Who will do the washing in a poor-class home when the mother is the one who is removed to hospital, or when the mother is, as I have frequently seen her, in a state of prostration after the removal of her child? Therefore, either the washing with a chemical disinfectant or the heavy spraying of floors and other horizontal surfaces, along with the light spraying of other surfaces, by an official of the Public Health Authority, will alone afford the best prospects of efficient disinfection.

Sunlight, Sunshine and Fresh Air.

But what about sunlight, sunshine and fresh air as adjuncts to surface washing?

The most that can be said even of sunshine is that if it has any bactericidal action this can only be when it is prolonged over a considerable period of time at maximum intensities. We believe that sunshine may increase the natural defences of the human body against infection; but that, apart from its desiccating effect, it has little bactericidal power within any reasonable period of time.

Recently we have placed domestic dust in the lower portion of a quartz tube, which was then plugged with cotton wool at each end, and exposed to sunlight upon the sill of an open window facing south, for the period of a week. During the period of the test (October 1-7, 1923) the sun was above the horizon for nearly 11½ hours daily, and there were 15 hours of sunshine recorded. In addition, air was aspirated through the tube at intervals, for 36 hours in all. At the end of the week an agar plate was made with the dust, and this was incubated at 37° C. for 48 hours.

Result: The growths obtained were quite as profuse as those from a control-test with the same amount of dust kept in the dark during the same period.

Again, an agar smear was made on the lower portion of a previously sterilized quartz tube; this was inoculated with *Staphylococcus aureus*, and then exposed to sunlight and sunshine on the sill

of the same open window as above, for five successive days and nights, air being aspirated through the tube, on occasions, for 17 hours in all. During the period of this test (Oct. 19-24, 1923) the sun was above the horizon for over 10 hours a day and there were over 20 hours of sunshine recorded.

Result: Growth proceeded similar to that in a control.

Finally, an agar slope was made on the lower part of the internal surface of a quartz tube, and this was inoculated with the delicate organism: *B. Diphtheriæ*. The tube was then exposed upon the sill of an open window facing south, from noon of one day (Dec. 13, 1923) to noon of the following day, in such a way that the sunlight and fitful sunshine had only to pass through the quartz to play directly upon the inoculated surface of the agar slope. The sun was above the horizon for nearly 8 hours each day, and there was about one hour of sunshine recorded. Air was aspirated through the tube, intermittently, for 6 hours. At the end of the 24 hours an Agar slope was inoculated, and incubated at 37° C.

Result: The *B. Diphtheriæ* grew.

In conclusion: Can we afford to employ useless methods when even the best methods hardly meet the needs of the case? If an Engineer has to build a bridge he estimates the maximum load which that bridge might have to carry, and then over and above this he allows a big "margin of safety," which I believe commonly reaches five or six times the estimated maximum load; if he cannot ascertain with some precision the maximum weight to be carried by the bridge he will provide an even bigger margin of safety. Ought not we to follow his example and apply as best we can the agents of disinfection which are capable of providing some "margin of safety," rather than the very feeble agents of soap and water plus fresh air and sunlight?

*HOUSING DIFFICULTIES IN RURAL AREAS.

BY

W. HORTON DATE, M.D., D.P.H., Deputy
County Medical Officer, Devonshire.

This paper is not written with any presumption that the writer is able to shed brilliant light into the dark courts and alleys of this most important and depressing question, and I fear cannot even claim much originality, but in the hope that it

will lead to a discussion and exchange of views which will, I am sure, be valuable to us all. It is a platitude which one is sick of hearing that bad housing is not only one of the causes of many of the preventable diseases, e.g., tuberculosis, venereal, common infectious and contagious diseases, etc., and even defective vision, but has also much to answer for as regards the social unrest which pervades this country. But even platitudes are sometimes true. If a large proportion of the money at present expended on the treatment and prevention of these diseases were diverted to housing it would probably prove a much sounder investment. The men who protected and saved the homes of this country during the great war have not yet, short as memory often is, forgotten the promise of "homes fit for heroes." Indeed it needs heroes to stick some of the homes one sees.

It will interest you to know that your President nearly three years ago persuaded the P.H. and Housing Committee of the Devon County Council to take a more active initiative in this question and since then we have, in co-operation with the district Public Health officials, been inspecting and reporting upon some of the worst houses in the administrative area. This has now been done in the whole of the rural and in a few of the smaller urban districts. Houses of the working classes found in such a condition as not to be "in all respects fit for human habitation" have been reported to the County Council Housing Committee and they in turn have represented them as such to the Local Sanitary Authority concerned.

The object of this action has been fourfold, viz.: (1) To stir up torpid and reactionary Authorities, many of whom adopt a "laissez faire" policy so far as their powers to enforce the repair of working class houses are concerned. One district has not even carried out Housing (Inspection of Districts) Regulations, 1910; (2) In a practical manner to bring to the notice of the Local S.A. the various alternative powers which they have at their command, under the existing housing acts, for dealing with poor or recalcitrant owners; (3) To remind and impress the Housing Committee of the County Council that they are not only a Housing Committee in name but a statutory Committee with considerable responsibilities and powers; and (4) last but not least to encourage, help, and strengthen the hands of the local P.H. officials who very often have a most difficult and thankless task to perform; and from some years of personal experience of this type of

our work I often imagine that the cleansing of the Augean stables was mere child's play compared with the difficulties of the part-time Rural Medical Officer of Health who tries to do his duty in reference to housing.

So far as I know this is the first C.C. who have tackled this problem in this direct manner, and you will be glad to know that our efforts have already resulted in much good work being done, but we are by no means satisfied. The road is a very long one, with a good deal of hill, and many obstacles to be surmounted. Housing is not a hobby to take up if you wish to remain popular with landlords and reactionary authorities.

As during the last three years the original inspections and reports thereon under this scheme have been among my duties and as for some 17 years I acted as part-time M.O.H. of a rural district I may lay claim to having at least a first hand knowledge from two points of view of some of the difficulties of the housing problem and if you will bear with me I should like briefly to draw attention to some of them in the hope that it will inspire you to discuss these difficulties and suggest remedies.

Probably the simplest manner will be to enumerate and comment upon what have been found to be the most common among them.

The greatest difficulty of all is to get either the officials or their L.S.A. to press for even urgent repairs where either the owner is a poor man or the rent is very low. Expediency in finance thus takes precedence of conservancy of the public health. The members of L.S.A. are often themselves the owners of property which will not bear inspection with credit. Cottage property cannot be expected to last for ever or bring in 6% for eternity. Here one can mention with approval the scheme recently suggested for a form of insurance for landlords, assisted by the L.S.A., to provide a sinking fund for keeping property in repair. The owner of a cow which is spreading, or likely to spread, disease has to bear financial loss through such ownership. Why should the owner of a disease-spreading house be specially exempt? There is great reluctance on the part of L.S.A. to utilise their powers under Secs. 12 and 28 of the 1919 Act, for lending money for repairs, for buying and repairing property and then either letting or reselling it, and in many cases even for carrying out repairs and then recovering from the defaulting owner. All these procedures, except the first, have been carried out with success in some portions of this county, and in some cases with excellent results both material and moral.

Perhaps the greatest difficulty of all, and I speak from bitter memories, is that of the conflict between the duty and the financial interests of the part-time M.O.H. Very often some of the worst cottage property belongs to his best patients and some of these owners may also be members of his L.S.A. Of course the policy of the Ministry of Health is gradually to replace these part-time officials by whole-time ones, but the process must be a very long one and it is a question upon which I would invite your serious consideration as to whether it would not be in the interests of the public health if all duties in connection with housing in areas where the M.O.H. is a part-time official were not handed over to the County Council. Let us now consider some of the most common defects found in working class property.

Dampness.—This is most often due to either defective roofs, pervious soil surrounding the dwelling, earth in contact with the house above the ground floor level, absence of eaves gutters, defective windows, or absence of a damp course, or a combination of any or all of these. In my experience the most difficult points to get dealt with in these cases are the provision of impervious paving and the clearing away of soil and the formation of a "dry area." The paving with concrete and cement of a back yard in itself makes for immensely improved sanitation, and yet many L.S.A.'s. are very disinclined to press in this matter.

Floors.—Cobble-paved floors in living-rooms exist in some parts of the county and it is impossible to keep them hygienically clean. In these cases it required much pressure and persuasion to convince the L.S.A. that these floors could be replaced by cement floors without turning the tenants out. But it has been done. Many cottages have defective cement floors, this is not always due to bad landlords but sometimes to tenants who chop wood upon them.

Drainage.—Slop drains are another bone of contention in rural areas, some officials acting upon the assumption that if a cottage has a moderate-sized garden that is sufficient for the disposal of slop water, etc. Theoretically, and if carried out with intelligence, such a view may have some reason, but in practice it usually means that the housewife throws the slops upon the most easily accessible spot, usually close to the back door, and soon the ground there becomes logged and soured as a result. It is wiser and better to insist upon every house having a slop drain in accordance with P.H.A., 1875.

* Paper read at the November meeting of the West of England Branch.

Closets.—In most rural areas these are gradually being improved and the privy is being replaced by the bucket, where water carriage is not available, but L.S.A. are not sufficiently insisting upon the whole closet floor being cemented and given a proper slope and upon the bucket being not enclosed but freely accessible for cleansing of both bucket and floor. One of the rural Sanitary Inspectors in this county has invented an earth closet which obviates the need of a fixed seat. It consists of a cylindrical metal bucket with a removable wooden rim, and a lid to cover the whole aperture. This can stand on an impervious floor and the whole be removed for emptying and cleansing as required. There are still many instances of several families sharing one closet and nothing less than "one house, one closet," in spite of P.H.(A.) Act, 1890, should satisfy any L.S.A. whether it be considered from the point of view of hygiene or of common decency. Would those who argue the other way care to submit their own wives or daughters to such conditions?

Washhouses.—Perhaps in some of the rural cottage property it is not reasonable to insist upon one for every house, but at all events one should be provided for every three or four houses as a minimum.

Food Storage.—Provision for this in the older class of property simply does not exist, and the most common place in which to find the food stored is in a cupboard in the living room, or under the stairs, but I have found it in unexpected places, for instance, in a place imperfectly partitioned off from an indoor hand-flushed W.C., and I have also found it kept in the family washing copper.

Lighting and Ventilation.—One often finds very defective windows not made to open and too small. Quite often this can be reasonably remedied by enlarging the windows and especially by carrying the upper part of the window as near the ceiling as possible.

Fireplaces.—I am of opinion that a cottage which has no bedroom with a fireplace, and plenty exist, is not "in all respects fit for human habitation," and I feel very strongly on this question because I feel sure I have seen young and old die for want of a sick room which could be reasonably and healthily heated during illness.

Water Supplies.—This is a most pressing question in our county where many cottages receive their drinking water from shallow wells liable to pollution. These wells are often placed in a garden which is liberally manured and have collections of house refuse near, usually they are

not rendered impervious for 10 to 12 feet below the surface, nor are they protected from actual surface pollution, and often a defective slop drain is a near companion. I knew one village public-house which got its supply of water from such a well in its garden. Within a few yards was the house cesspit. When the cesspit was full the level of water in the well rose, and you could lower the level of either by pumping out the other. I should not advise the drinking of this water even when fortified with whiskey. In spite of the existence of such conditions it is most difficult to get many of the L.S.A.'s to do their duty by the Public Health and provide piped supplies of wholesome water, or even to properly protect existing wells. These brief and discursive remarks are only intended to be suggestive, and I can only hope that I have provided some pegs upon which you will hang some useful suggestions for coping with what I think all will admit is a difficult but very important problem.

NOTES FROM BRANCHES.

WEST OF ENGLAND BRANCH.

CIDER AND LEAD.

Dr. L. P. Black, M.O.H. of St. Thomas (Devon), R.D.C., with the co-operation of the County M.O. (Dr. Adkins), has recently made some interesting investigations on the liability of Cider to act as a lead solvent. Eight cases of lead colic were discovered in one village and careful enquiry seemed to eliminate all factors but cider as the cause. In only three of the five water supplies involved were lead pipes used and these waters neither contained lead, nor were capable of dissolving it. Cider as issued at village inns is sometimes drawn through long pipes to the bar. It is well known that unlined lead pipes must not be used and they are, therefore, either lined with block tin, or are tin washed. The latter method is not safe, but the former, if reasonable precautions are taken, is satisfactory.

It was uncertain whether the pipes at the particular inns concerned were properly lined, but there was evidence that they had been broken and mended in several places. Lead was not actually discovered in the beverage, but its presence would in any case be intermittent, and there is often difficulty in demonstrating minute traces in cider. Further experiments are being made on several important points raised by the outbreak.

The investigators came to the conclusion that cider, as sold to the distributors, is above sus-

picion. It is comforting to know, therefore, that with simple precautions and provided also that one is in the West Country, there need be no danger at all to the consumer—at any rate, none that can be attributed to lead poisoning.

SOMERSET COUNTY AND THE SCALE.

The following information is obtained from a newspaper report of a meeting of the Somerset County Council, held in January, 1924. The Council was informed that one of the School Medical Inspectors had resigned and that as the salary authorised by the County Council for the appointment was less than £600 a year, which was the minimum sanctioned by the B.M.A., the medical journals had refused to insert the advertisements for the appointment of his successor, with the result that no suitable candidate had applied. The Committee, therefore, recommend the Council to appoint two Assistant School Medical Officers at a salary of £600, without increments. A member said he was afraid they must accept the position as pleasantly as they could, as they were up against the strongest trade union in the country.

This is a wise decision on the part of a Council, which has already had the foresight and initiative to adopt a superannuation scheme for its officers.

SOME EVIDENCE AGAINST VACCINATION.

The following incident which recently occurred in a rather "anti" West of England town, has certain instructive features. After an address on Vaccination a lady in the audience expressed her appreciation of what had been said, but added that she found it rather difficult to accept the speaker's conclusions, in view of a personal experience of her own. Some years ago when small-pox broke out in the town, she was vaccinated as a contact—and five weeks later developed small-pox. As the statement could scarcely be denied, the only thing to do was to point out certain possible fallacies, a proceeding which probably carried very little weight with most of the audience. Fortunately the speaker, who was a doctor, had access to some old records. These shewed that the lady had indeed been vaccinated, on April 14th, 1903, but they also revealed the further information that she was removed to Hospital as a notified case of small-pox on April 18th, four days later. There was no reason to doubt her good faith and it is satisfactory to add that such amends as were possible were made, after the true facts had been pointed out at a subsequent interview. But truly the tongue is an unruly member.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A Meeting of the Council was held at the House of the Society, on Friday, January 18th, 1924. The President (Dr. T. W. Naylor Barlow) was in the chair, and there were present: Prof. H. R. Kenwood, Lt.-Cols. F. E. Fremantle, M.P., and Herbert Jones, Drs. G. F. Buchan, Banks, Lissant Cox, Wheatley, Garstang, Snell, Stirk, Gibbons Ward, McMaster, Jolly, Stocks, Nash, Milligan, Pedley, Ward, Pearce, Joseph, Clements, Fenton, Frederic Thomson, Wilshaw, and Porter.

The minutes of the last meeting having been approved and signed, apologies for absence were received from Prof. H. Kerr, Lt.-Col. A. E. L. Wear, Drs. Eustace Hill, Rees Jones, Evans and Cates.

Correspondence.—(1) From the Society of Medical Officers of Health for Malaya asking for some form of affiliation to the Society. It was agreed that Dr. E. Hamilton-Black, Hon. Secretary of the Malaya society, who is at present on leave in England, be invited to discuss the proposal with the officers of the parent Society. (2) From the National Council for Combating Venereal Disease proposing a conference with representatives of the Society in reference to the production of cinematographic films on public health subjects. It was agreed to refer this matter to the Special Committee on Propaganda. (3) From a Fellow of the Society reporting the refusal of his local Postmaster to accept health posters for exhibition in post offices. It was agreed to ask the Ministry of Health to recommend that Government Departments should reserve space for public health posters in official buildings where advertisements are displayed. (4) From Lt.-Col. F. E. Fremantle, M.P., suggesting that the press and public should be admitted to meetings of the Society on occasions when the subject of the paper or discussion was of general interest to lay persons. It was agreed to refer Col. Fremantle's suggestion to the Special Committee on Propaganda. (5) From the National College of Teachers of the Deaf proposing the adoption of a uniform hearing test for all children in elementary schools. Referred to School Medical Group for observations and report. (6) From Prof. Louis McIlroy suggesting (a) methods for ensuring co-operation between the maternity departments of

hospitals and M. & C.W. clinics, (b) appointment of clinical assistants (unpaid) at clinics to give young graduates an opportunity of acquiring experience of M. & C.W. work. These proposals were referred for consideration by M. & C.W. Group. (7) From Mr. Wilfrid Buckley, challenging certain statements in "Public Health" (January, 1924, p. 74), in reference to the standard of fat in milk and suggesting an investigation to be conducted by the Society at his Moundsmere Dairy Farm. It was agreed to refer the letter to the Editor of "Public Health" for his observations. (8) From a Fellow of the Society drawing attention to the fact that official circulars are being addressed to specialist medical officers in public health departments instead of to the chief administrative medical officer in each area, and pointing out that this practice makes efficient co-ordination of the work of the local health authority more difficult. It was agreed to bring this matter to the notice of the department concerned. (9) From the London and Home Counties Branch of the Library Association asking the Society to make some pronouncement which would reassure the public regarding the risk of infection arising from the circulation of library books. It was decided that before complying with this request, the matter should be referred to branches for any observations they may wish to offer. (10) From the Association of County Medical Officers of Health in reference to the public health section at annual meetings of the B.M.A. It was agreed that no action could be taken in this matter at present.

Representations from Branches.—(1) From the Yorkshire Branch in reference to the inspection of infant welfare centres. (2) From the N.W. Branch regarding co-operation between the National Health Insurance Service and the Public Health Service. It was agreed that any recommendation in this connection should be deferred pending discussion of the subject at the annual meeting of the B.M.A. (3) From the N.W. Branch in reference to the methods of the Ministry of Agriculture for the control of Foot and Mouth Disease. The Council decided that the Society was not entitled to pronounce an opinion on this matter. (4) From the Midland Branch asking the Council to provide for the formation of sub-branches where desirable. This proposal was referred for consideration by the officers of the Society.

Scale of Salaries.—Dr. G. F. Buchan reported certain amendments in the scale of salaries proposed by the B.M.A. at a joint conference on

December 11th in order to simplify the ease for submission to Local Authorities. A proposal to modify the ascending scale for medical officers in charge of departments was strongly opposed, and it was agreed *nem. con.* that salaries approved by the Annual Representative Meeting B.M.A. for this category should be adhered to. It was further agreed that the B.M.A. should be asked to call another joint conference if such should be necessary for recording this decision. Dr. E. Ward was appointed to represent the Tuberculosis Group at any further conference to be held in connection with the scale during the current session.

Representation of the Society.—The following were elected to represent the Society on the Central Council for District Nursing in London: Prof. H. R. Kenwood, Lt.-Col. W. Butler, Dr. Charles Porter, and Dr. James Fenton.

The Public Health Acts.—Recommendations from the branches regarding a Public Health Acts Amendment Bill (see Proceedings of Council, "Public Health," May, 1923, p. 226) were referred for consideration by the following committee: Prof. H. R. Kenwood, Drs. Howarth, Lyster, Snell, Porter, Herbert Jones, Cates, Wheatley, Barlow, Kerr and Ernest Ward, with power to add to their number.

Disciplinary.—In accordance with the procedure laid down in No. 11 of the Articles of Association, it was agreed to terminate the membership of a Fellow who had failed to support the policy of the Society. Two other cases were referred for consideration at the next meeting of the Council.

The Council then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the House of the Society on January 18th, 1924, the President (Dr. T. W. Naylor Barlow) in the chair.

The minutes of the last meeting having been approved and signed the following candidates were elected to the Society:—

As Fellows:

Bourdillon, Lancelot Gerard, D.S.O., M.C., M.R.C.S., L.R.C.P., D.P.H.; Harthan, George Ezra, B.A., M.B., B.C., Cantab.; Johnston, Margaret Winifred, M.B., B.Ch., B.A.O., Belfast; Smyth, Joshua Charles, M.R.C.S., L.R.C.P.; Taylor, John Edgar, L.M.S., S.A.; Topping, Andrew, M.A., M.D., Aberd., D.P.H.

As Associate:

Adams, Sidney, L.D.S., R.C.S., Eng.

A number of candidates were nominated for election at the next meeting.

Dr. Meredith Young read a paper on "The Public Significance of Mental Deficiency," which

with a report of the discussion will appear in an early issue of "Public Health."

The proceedings closed with a vote of thanks to Dr. Meredith Young, the President expressing regret that, probably owing to the long business meeting earlier in the afternoon, the attendance was not so large as the importance of Dr. Young's subject, and its admirable presentation, deserved.

PROCEEDINGS.

NORTH-WESTERN BRANCH.

Meeting held in Liverpool on Friday, December 7th, 1923.

Present: Dr. G. Lissant Cox (in the chair) and 12 members.

Minutes of last meeting were read and confirmed.

A discussion was opened by Dr. Beggs, of Middleton, on the necessity for the co-ordination of the National Health and Public Health Services in which the President, Drs. Wheatley, Barlow, Peyton, Mathieson, Wood and Lethem took part.

It was proposed by Dr. Beggs, seconded by Dr. Wheatley and unanimously resolved: (1) That this Branch recommends that the Council of the Society should advocate better co-operation between the National Health Service and the Public Health Service, and that Preventive Medicine be made a prominent factor in any suggested amendment of the National Health Insurance Act. (2) That in addition the Council should consider the desirability of conferring with the B.M.A. as to the best means of giving effect to the foregoing resolution and of extending such co-operation to every branch of Medicine.

The Annual Dinner of the Branch was held at the Midland Adelphi Hotel the same evening, when 50 persons were present including among the guests: F. C. Wilson, Esq. (Lord Mayor of Liverpool, 1922-23), Sir Burton Chadwick, Esq., M.P., Alderman R. Turner, M.A., M.D. (Mayor of Bootle), Alderman Phythian (Mayor of St. Helens), Professor Beattie and Professor Glynn (Liverpool University), Sir Benj. Johnson, and others were unfortunately unable to be present owing to the General Election.

Dr. G. Lissant Cox (Central Tuberculosis Officer, Lancs. C.C.), the President of the Branch, was in the chair.

Mr. Frank C. Wilson, ex-Lord Mayor of Liverpool, in proposing "The North-Western Branch of the Society of Medical Officers of Health," said Liverpool was the first municipality in the country to appoint a Medical Officer of Health, an Act of Parliament being obtained

for that purpose in 1847. London followed the example of Liverpool two years later. Liverpool was known as "the black spot on the Mersey" about 30 years ago, but he was very proud of the position the City held to-day. That was due to the careful, thoughtful and progressive work and good administration of the Public Health Department. Liverpool has set a wonderful example to many other cities.

Referring to the improvement of the health of the country generally, Mr. Wilson said the Medical Officer of Health for Manchester had mentioned in a recent report that the death-rate had been reduced 50 per cent. during the last 60 or 70 years, the birth-rate had increased, and the expectation of life had been greatly improved. That was due to a great extent to the proper administration of Public Health.

The President, in responding, said the chief object of Medical Officers of Health was the prevention of disease. In carrying out their work they had not to rush off at a tangent on the advice of the visionary, nor yet yield to the influence of the reactionary, but try the difficult middle path. The co-operation of lay persons was essential to the success of their efforts for the good of the country.

Dr. T. W. N. Barlow, President of the Society, in proposing "Our Guests," said that when at a recent function in London he told the Minister of Health that he came from Wallasey, the reply was, "Where is Wallasey"? Evidently the Minister of Health had forgotten one of the brightest jewels in his crown, but when Sir Burton Chadwick attained that office he would not have to ask such a question.

Sir Burton Chadwick, M.P. for Wallasey, acknowledging the toast, said that after the strain of the amazing election, he could not find himself in more fitting surroundings than a gathering of medical men. He was grateful to them for taking him out of the atmosphere of politics, in which, though he had been a victor, he was a somewhat subdued victor, who had received a very formidable and possibly salutary jolt, and saw the wreckage of his party about him all over the country. For all the skill and genius of those present he did not believe they had anything that could take away the depression which pervaded the political outlook of a Conservative at that moment.

The Mayor of Bootle (Alderman Dr. Turner) and Dr. Murray Bligh also responded.

At intervals during the evening Mr. Essler Kerson, of Liverpool, amused the guests with a remarkable display of interesting conjuring feats.

NORTH-WESTERN BRANCH.

Ordinary meeting of the North Western Branch held in the Library of the Public Health Laboratory, York Place, Manchester, on Friday, 11th January, 1924.

Present: The President (Dr. G. Lissant Cox) in the chair, and 28 members.

Nominations for the Presidency of the Society for the Session, 1924-25, were considered, and it was unanimously resolved that Dr. R. A. Lyster, Medical Officer of Health for Hants C.C., be nominated by the Branch.

The following resolution with regard to Foot and Mouth Disease was moved by Dr. T. H. Peyton, seconded by Dr. E. H. Marcus Milligan, supported by Dr. W. Allen Daley and Col. H. P. Barrow, and carried, the Hon. Sec. being instructed to forward it to the Council: "That the North Western Branch of the Society of Medical Officers of Health, having regard to the apparent failure of the methods adopted by the Ministry of Agriculture and Fisheries in the endeavour to prevent the spread of Foot and Mouth Disease and the probable detrimental effect of the Public Health by increasing the cost of Dairy Products essential to the maintenance of good health recommend the Council to protest against the wholesale slaughter of cattle and urge the necessity of considering in conjunction with the Ministry of Health and representatives of Local Authorities alternative methods of dealing with the disease."

At the conclusion of the business of the meeting Professor Topley gave an address on "The importance of repetition in Laboratory Tests." Professor Topley dealt chiefly with typhoid fever and the allied fevers such as para-typhoid fever. As the result of many examinations of the blood for the agglutination reaction he showed the different curves which resulted when such reactions were plotted out at intervals of days or weeks after the onset of symptoms, and showed especially the different nature of the curves first from persons with an attack of typhoid fever—who had never been inoculated against typhoid fever, second from persons who had received preventive inoculation, third the different curve which resulted from an inoculated patient who later developed typhoid fever.

Professor Topley emphasised the new factor which widespread inoculation against typhoid fever had introduced, and also the uselessness of a single examination of the blood and showed how important it was at the present time to have the examination repeated within the first seven

days of the onset of symptoms. He further indicated the importance of sending to the laboratory at least 2 c.c.s. of blood on account of the large number of organisms allied to typhoid against which each specimen of blood must now be tested if a reliable laboratory report is to be attained.

A cordial vote of thanks to Professor Topley not only for his very interesting address, but also for his kind hospitality in providing tea for the Branch, was proposed by Dr. Daley seconded by Col. Barrow and supported by Drs. McClure and F. T. H. Wood.

TUBERCULOSIS GROUP.

The Group Committee met at 1, Upper Montague Street, on January 18th, 1924, at 10 a.m.

Present: Drs. Peyton, Shinnie, Watts, Gordon Smith, Swan, Pedley, Hebert, Neville Cox, E. Ward (Hon. Sec.) and Professor Lyle Cummins.

Dr. Peyton (Chairman) welcomed the new members of committee and gave a further account of the dealings of the council in reference to recent appointments. The committee were of opinion that success with the Salary scale depended entirely on the loyalty of all branches of the Public Health Service.

(1) Dr. Peyton was elected *Chairman* of committee, Drs. Neville Cox and Hebert, *Vice-Chairmen*.

(2) The *scheme of classification for cases of tuberculosis* adopted by the Society of Medical Superintendents, and which had previously been circulated to members of committee, was discussed. It was decided not to adopt it.

(3) Dr. Neville Cox pointed out the desirability of uniformity in the arrangement of the annual reports of Tuberculosis Officers, and Medical Superintendents of Sanatoriums; and the opportunities presented for collective research. Dr. Ward mentioned work that is being attempted in the West of England on the influence of marriage, pregnancy, parturition and lactation on tuberculosis.

It was proposed by Dr. Cox, seconded by Professor Cummins, and carried *nem. con.* that "A sub-committee be formed to draft a scheme for standardising the headings and data of annual reports of T.O.'s and M.S.'s, also to suggest subjects for periodical collective investigation."

It was further felt that if anything of value is to be achieved it could only be by co-operation with the Tuberculosis Society; the Society of Medical Superintendents and the Ministry of Health. It was also considered that Dr. Lissant Cox should be asked to join. To represent the Group committee, the following were appointed:—Professor Cummins, Drs. Peyton, Neville Cox and E. Ward.

(4) The Secretary suggested that an *annual report* on the work of the committee might be helpful. Dr. Peyton advised also that a brief account of the meetings should be sent for publication to the medical journals.

(5) The Secretary reported that serious cuts in salary in Durham, amounting in one instance to over £200, had been made. All members of the medical staff had suffered reduction. He had corresponded with Dr. Eustace Hill and the Northern Representative on the matter. It was decided that the salaries committee be informed of the difficulty.

(6) Payment to Metropolitan T.O.'s for *consultations at Union Infirmarys* and the circulars thereon were discussed. The view was expressed that the Ministry of Health should be assured of sympathetic co-operation in the case of tuberculosis patients in poor law infirmaries, but that if smooth working in the future was to be secured, the conditions of service as regards responsibility, payment, etc., should be clearly defined.

(7) The *probationary appointments of T.O.'s*, referred to the committee by the Metropolitan branch, was next considered. It was proposed by Professor Cummins, seconded by Dr. Swan and carried *nem. con.*, that "The Group committee is strongly of the opinion that probationary appointments of T.O.'s are undesirable and that the designation of *tuberculosis officer* should only be applied to medical men with adequate experience of tuberculosis work."

"Experience can be gained in or at an institution devoted to tuberculosis, and by post graduate study."

The Secretary was asked to bring the matter before the Council, and, if the step was considered "in order," to send the above opinion to the Metropolitan Branch, the L.C.C., and the Ministry of Health.

It was, however, thought best that a copy of Sir William Hamer's letter to the branch be obtained before any definite action is taken. The Secretary to use his discretion in the matter.

(8) Dr. Ward reported that Dr. Dickinson of Newcastle had been nominated by the Society for the League of Nations T.B. Scholarship.

The committee instructed the Secretary to write Dr. Dickinson and ask him to make notes of his experiences, so that he will be able to give an account of them at a later date.

(9) In discussing further activities of the Group, the following matters were considered important:—

(a) Collective Research.

(b) Greater co-operation between the Societies representing T.B. workers, especially the Tuberculosis Society, the Society of Medical Superintendents, and this Group.

At some future date a joint council of these Societies should be possible.

(c) Each sub-group should hold regular local meetings, and some devoted to clinical subjects.

(d) Propaganda Lectures to local philosophical and literary societies and Workmen's Institutes.

In some districts this was being done.

(e) Posters.

(10) There was a little difficulty in arranging a time for the next meeting suitable for all concerned. 11 a.m., March 21st (Friday), was provisionally fixed.

MIDLAND TUBERCULOSIS SUB-GROUP.

The Second Meeting of the Midland Tuberculosis Sub-Group of the Society of Medical Officers of Health was held at the Cripples Home, Woodlands, Northfield, at 3 p.m., on Saturday, November 24th, 1923, by invitation of Mr. Naughton Dunn, F.R.C.S.

Present: Dr. Watt (President), and 20 members.

The minutes of the previous meeting were read and signed.

Mr. Naughton Dunn then took members around the home and showed the wards and various rooms which had been transformed from stabling into plaster, electrical and other departments.

Mr. Dunn then gave a Clinical Demonstration on the Treatment of Surgical Tuberculosis. Having first laid down the principles of treatment in general he then took the parts most frequently involved in order, showing cases and radiograms illustrating the lesion, treatment (including the method of handling spinal cases) and the results produced by his methods.

At the close the President proposed a vote of thanks to Mr. Dunn, and Dr. Barwise, County Medical Officer of Health (Derbyshire) in seconding, remarked that though he had visited most of noted British and Continental Clinics, in no case did they produce better results, if as good, as Mr. Dunn had shown us this afternoon.

Mr. Dunn invited the members to tea at the close, over which the Matron presided.

METROPOLITAN TUBERCULOSIS SUB-GROUP.

A meeting of the above Sub-Group was held at No. 1, Upper Montague Street, Russell Square, on Friday, January 11th, at 5.30 p.m.

Fifteen members were present at the meeting. Dr. F. J. C. Blackmore was appointed Chairman of the Sub-Group for the Session 1923-24 in place of Dr. H. Wilson (resigned).

The meeting discussed the new procedure of co-operation between General Practitioners and Tuberculosis Officers, the proposed course of post-graduate study for London Tuberculosis Officers and the proposal of the London County Council that Tuberculosis Officers without experience should be appointed on probation only.

PUBLIC HEALTH AT GLASGOW UNIVERSITY.

The University Court of Glasgow have appointed Dr. John Ronald Currie, to the Henry Mehan professorship of public health. Professor Currie, who is 52 years of age, received his early education at Ayr Academy, and graduated thereafter as Master of Arts at Edinburgh University. Proceeding to Lincoln College, Oxford, he held a scholarship there, and took a first class in classical honour moderations. He graduated as B.A. Oxon. in 1896 and as M.A. in 1910. His medical school was the University of Glasgow, where he won distinction in various classes, and became M.B., Ch.B., with commendation, in 1898, and M.D., with high commendation, in 1910. While engaged in medical practice in Birmingham he took the D.P.H. at Birmingham University. Professor Currie's early experience of preventive medicine was gained in the Sanitary Department of the city of Glasgow under Dr. A. K. Chalmers, and in the counties of Stirling and Dumbarton, where he acted in 1906 and 1907 as medical officer of the two counties during the absence of Dr. John C. M'Vail. He was also at this time an assistant investigator under the Royal Commission on the Poor Law. In 1909 he was appointed medical officer of health of the city of Chester, and from 1911 to 1912 held the same office in the counties of Fife and Kinross. In 1912 he entered the service of the Scottish Insurance Commission. During the war he held for three years a commission in the R.A.M.C. and saw service in France and Italy. He acted for some months as Chief D.C.M.S. (Scotland) in the Ministry of National Service. On demobilisation he re-joined to duty with the Insurance Commission, the 1919 he passed into the service of the

Scottish Board of Health, where he remained until August of last year, when he was appointed Professor of Preventive Medicine in Queen's University, Kingston, Toronto, the post he now vacates.

BIRTH CONTROL AND THE MINISTRY OF HEALTH.

At a meeting held on behalf of the Walworth Women's Welfare Centre, in Lady Denman's drawing room, 43, Upper Grosvenor Street, London, on Thursday, December 13th, the Right Hon. Lord Buckmaster presiding, it was moved by Dr. Elizabeth Sloan Chesser, seconded by Dr. Binnie Dunlop, and resolved, *nem. con.*, that "This meeting represent to the Ministry of Health that it is desirable that no official opposition should be raised to the giving of birth control advice at any Welfare Centre, the Medical Officers of which are willing to give such advice."

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

GRATUITOUS ADVERTISING.

From Dr. S. G. Moore, M.O.H., Huddersfield.

Dear Sir,—From time to time I receive gracious offers from manufacturers of widely-advertised proprietary articles. I need not indicate them—the names of a dozen or a score leap to the mind. *Timeo danaos et dona ferentes*. Some years ago the proprietors of one of the most widely-advertised of all, offered me a container described as "an ornamental adjunct to any Clinic." It was of a garish colour, with the name of the preparation standing out in bold characters. I offered to display the advertisement in the Clinic at a charge of £1,000 per annum.

My object in troubling you with this letter is to suggest that the greatest caution is called for when in a public department we use at all any product belonging to the class I have referred to above. The people who resort to our official premises are not usually very thoughtful, but if they were they would be justified in supposing that what a Local Government Department uses is more or less of an official character, or at least is sound and well worth buying.

No doubt this assumption is justified in some—perhaps in most instances, but in others it is at least doubtful, and open to question. I believe that I could name a whole string of these articles

which would be correctly described as waste products from manufacturing processes, or from the stock-yards and slaughterhouses.

In any case if we, Public Officers, do see fit to confer the substantial commercial advantage of endorsing by our use any proprietary article, I think it becomes part of our duty to recover from the owners some substantial financial consideration by way of payment.

Faithfully yours,
S. G. MOORE.

FAT IN MILK.

From Mr. Wilfred Buckley.

Sir,—I have read your editorial comment on the pamphlet that I have privately printed entitled "Some Observations on the Butter Fat in Cows' Milk." You will no doubt allow me to reply to some of your comments, at least to those made in regard to the pamphlet in question.

You write that "The pamphlet is based mainly on observations which were made in 1915 . . . it is difficult to understand why these figures have made so belated an appearance . . ."

The pamphlet gives an account of two investigations, the first made in 1915, the second in 1922. Some of the details of the 1915 investigation I published in my book "Farm Records and the Production of Clean Milk at Moundsmere" (1917) and the complete figures were made public by me in a Paper that I read before the West of Scotland Agricultural Discussion Society in Glasgow on January 28th, 1920, which was published in full by "The Scottish Farmer" on January 31st, and February 7th, 1920.

In regard to the 1915 investigation you make various criticisms:—

1. You write "We are also informed that it was a matter of remark by the County Medical Officer of Health and his Staff that many of the cows were in obviously poor condition, and that the diet appeared to be insufficient."

I do not recall that "many of the cows were in an obviously poor condition," but I am quite sure that the herd as a whole was at least up to the standard of the average herd. The diet before the cows were turned out to grass was that recommended, and for that occasion controlled, by Mr. James Mackintosh of the National Institute for Research in Dairying, whom I, in common with many others regard as our foremost expert on the feeding of dairy cattle. Those interested can form their own opinion as to its sufficiency. I have stated in my pamphlet the quantities of each food fed, but I adjoin to this letter a Table showing the food recommended for

cows in milk by the South Eastern Agricultural College, Wye, and the actual rations fed. The calculations have been made on the basis of the Table furnished by the South Eastern Agricultural College in their very valuable pamphlet, "Winter Feeding of Dairy Cattle," by James Mackintosh, N.D.A., N.D.D.

No criticism is possible of the diet during the second period of the investigation, namely, when the cows were grass fed only.

The milk yield during the period under observation does not indicate an insufficiency of diet, being a daily average per cow of 17.31 pints while fed on winter rations and 19.54 pints when turned out to pasture.

2. "According to the dietary published by Mr. Buckley, there would appear to be by modern notions an insufficiency of vitamins."

This is the first time that I have heard the suggestion that the variation in the quantities of vitamins fed to the cattle actually affects the percentage of butter fat in their milk, but be that as it may, the ration that contains 60 lbs. of roots in addition to the necessary quantities of hay, straw and concentrates, is an exceedingly good ration, and in the opinion of authorities the best possible ration for dairy cattle during April. In any case the majority of cows do not and cannot get a better one at that time of the year.

3. Primarily, the inquiry was intended to be as you state, "an investigation into possible relative changes in the composition of milk by varying the diet of cows." A variation I would add, from a diet of winter rations to an early summer ration of pasture only, but evidently you have overlooked the fact that the change in the chemical composition of milk caused by varying the hours of milking was ascertained (see my pamphlet Table IV, page 9), otherwise you might not have added "It was not undertaken in any way as an investigation bearing in any way on the controversial subject of a minimum standard for milk, and the work then undertaken, and the results then obtained, are not to be regarded as bearing upon that subject. The sampling, method of milking, and all such vital and important factors were without that strict supervision which would be necessary if the results of the investigation were to be used in this respect."

My reply to that criticism is that the fat content of the milk was the same, no matter for what purpose the investigation was undertaken, and that, in my opinion, the work was carefully carried out, both in the milking and in the sampling, etc., but as the County Medical Officer of Health

for Hampshire collaborated with me in the investigation, at least to the extent of providing a member of his staff to receive the samples from the milker, and to make the analyses on my farm, it will be apparent that it is an embarrassment to me to dispute with him as to whether the work was or was not carefully done, although by my personal observation I am satisfied that it was; otherwise I should not have published the figures. I would add that the Medical Officer of Health for Hampshire has never questioned the accuracy of the investigation.

4. "The scarcity of grass at that time of 1915 was also remarkable, and, as a matter of fact, the experiments had to be unexpectedly extended owing to the impossibility of turning out the cows to grass when there was no grass available. Obviously no general conclusions can be based upon these experiments."

It is difficult to understand your contention that the value of such experiments would be invalidated by the variations of weather which determine the growth of grass. In 1915 my cows were turned out to grass on May 6th; in the subsequent years they were turned out on the following dates: May 13th, 12th, 8th, 13th, 5th, 6th, 10th and 7th. In each year there was ample grass when they were turned out.

Your article refrains from comment upon the second investigation referred to in my pamphlet, which, as stated, was conducted by Mr. J. R. Fraser, A.I.C., of the Government Laboratory, on behalf of a Committee of the Medical Research Council, several of whose members were present throughout the investigation. This investigation corroborates the results of the first as far as it pertains to the daily variation in the percentage of fat of individual cows and of the herd.

The question of the butter fat content in cows' milk is of very great importance. You have thrown suspicion directly upon the result of the investigation of 1915 and indirectly upon that of 1922. Such investigations are very easily carried out, and are of the utmost value to those who really wish to ascertain the facts. If the Society of Medical Officers of Health would like to make a further investigation, I should be very glad to offer the necessary facilities for such work to be carried out by them at my farm, where a laboratory is attached to the dairy. If the Society would provide a chemist I should be glad to bear any further expenses which might be incurred.

If my offer be accepted, I would suggest that the time chosen should be ten days before and ten

days after the cows are turned out to grass, which I anticipate may be about May 7th.

TABLE SHOWING THE FOOD RECOMMENDED FOR COWS IN MILK BY THE SOUTH EASTERN AGRICULTURAL COLLEGE, WYE, AND THE ACTUAL RATIONS FED.

Cows yielding.	Recommended by Wye College for cows 1,000 lbs. live weight.		Recommended by Wye College for cows 1,200 lbs. live weight.		*Moundsmere Ration.	
	Starch equivalent.	Digestible Proteids.	Starch equivalent.	Digestible Proteids.	Starch equivalent.	Digestible Proteids.
galls.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1 of milk	8.50	1.20	9.70	1.34	10.98	1.38
2 " "	11.00	1.70	12.20	1.84	12.76	1.96
3 " "	13.50	2.20	14.70	2.34	14.54	2.54
4 " "	16.00	2.70	17.20	2.84	16.32	3.12

* Additional cake is given to cows yielding 3 galls. of milk or more.

I am, Sir,
Your obedient servant,
WILFRED BUCKLEY.

[Apparently Mr. Buckley has not appreciated the point about the analyses. If variations are the object of the enquiry then the essential analyses are made only in order to establish the relative quantities accurately. An enquiry to determine the absolute amount of fat is different, although, of course, it is quite possible that the relative figures obtained here may represent absolute quantities also. The accuracy of the figures is not questioned; they are what they profess to be, namely the relative quantities of fat in the various samples.—ED., P.H.]

CANNED FOODS IN RELATION TO HEALTH

(Milroy Lectures, 1923). By WILLIAM G. SAVAGE, B.Sc., M.D.(Lond.), D.P.H. With 6 text-figures, 19 tables, and 1 chart. Demy 8vo. 8s 6d net. Cambridge Public Health Series.

"A striking phenomenon of the present century is the ever-increasing extent to which the food of the community is presented to them, not in the fresh condition but preserved. . . . Is this drastic change one to be encouraged or is it fraught with its own menace and disadvantages which have to be eliminated or at least guarded against? . . . In this book I have attempted to give a comprehensive review of the whole subject."—From the Preface.

CAMBRIDGE UNIVERSITY PRESS
FETTER LANE, LONDON, E.C.4. C. F. CLAY, MANAGER.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 6.

MARCH, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free
* in advance. Single copies, 2s. 6d., post free.

Editorial.

THE NEW MINISTER OF HEALTH.

The Public Health Service probably includes all branches and every possible shade of political party and opinion, but it is united in giving loyal and enthusiastic support to progressive public health proposals introduced by any party which may be in power at the time. During the past few years the public health work of the country has been under a dark cloud, and the Ministry of Health, instead of leading the way, and stirring up lethargic and reactionary public bodies to a sense of duty, has acted as a brake on the wheel of progress and has appeared to devote a vast amount of time and ingenuity to the whittling down of health expenditure and the obstruction of all new proposals.

During the past few years the Ministry of Health has used its influence to cut down housing schemes and standards, to curtail the provision for maternity and child welfare, to abolish school meals, to extort from poor families paltry contributions for the treatment of school children and tuberculosis, and to discourage or veto all fresh experiments in social provision contemplated by the more progressive of the local authorities. The attacks made by local reactionaries upon public health expenditure have been supported by documents issued from the Ministry of Health and the Board of Education with discouraging and disheartening effects upon health officers all over the country.

For much of the reaction which has taken place during the past few years the local authorities are of course partly to blame. The root cause of the slump has been the fifty per cent. grant which has placed the local authorities largely in the hands of the Ministry of Health and the Board of Education, and these departments in the hands of the Treasury. Forgetful of the fact that the power is, in fact, still in their own hands if they dared

CONTENTS.

EDITORIAL—

	PAGE
The New Minister of Health	125
The Salaries Scale and Norfolk	126
Southwark	126
Leeds	126
Warwickshire	127
Cambridge	127
Health Services. Grant Restrictions to be Removed	128
Registrar-General's Figures for 1923	128
Aberdeen M.O.H.	128
Tuberculosis Conference at Cambridge	128

SPECIAL ARTICLES—

Birth Control and Public Health (By C. Killick Millard, M.D., D.Sc., M.O.H. for Leicester)...	129
A Discussion on Circumcision as the Only Treatment in Cases of Phimosis in Infancy (Opening by Hector Cameron, M.D., F.R.C.P.)	134
Circumcision from the Surgical Aspect (By H. Tyrrell Gray, F.R.C.S., L.R.C.P.)	135
A Note on Cancer Occurrence in Hampstead and Shoreditch (By Sidney Davies, M.A., M.D., Oxon.)	139
The League of Nations Interchange of Health Personnel in America (By Charles Porter, M.D., B.Sc., Medical Officer of Health, St. Marylebone)	141

NOTES FROM BRANCHES—

West of England Branch	149
-------------------------------	-----

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Ordinary Meeting	150
Home Counties Branch	150

CORRESPONDENCE—

The Central Midwives' Board	151
The Soap and Water School of "Disinfection"...	151

to use it, the local authorities have hidden behind the central authority which, in its turn, hides behind the Treasury.

The new Minister of Health, Mr. John Wheatley, has learned his business on a local authority, having served as a member of the Glasgow Corporation for ten years, and he is obviously well qualified to undertake the great responsibilities which now confront him. He may rely upon the good wishes and sympathy of every member of the public health service.

The new Minister has begun well. He apparently intends to clean the slate of past troubles in order that it may be clear for the writing of his own policy. He could not have begun better than by removing the administrative restriction placed by his predecessors on the vital health services of the country. By his removal of the restrictions upon maternity and child welfare, tuberculosis, venereal diseases, welfare of the blind, and port sanitation, Mr. Wheatley has again opened the door for the creation of effective services by the local authorities. There are obvious signs also of a move being made, at long last, towards the abolition of the Poor Law system, which was proposed by the Poor Law Commission of 15 years ago. Every experienced medical officer of health realises how greatly all health matters would be improved and simplified by the unification of all public medical services under the local health authorities.

Another welcome change announced under the new regime is the removal of the restrictions on the feeding of necessitous school children, so that they are no longer to be expected to acquire scholarship while suffering from hunger, and in the near future we may expect to hear some explanation why children in elementary schools require only two-thirds of the air space and a-quarter of the playground area required by secondary school children of the same age.

THE SALARIES SCALE AND NORFOLK.

Undoubtedly the gravest scandals with regard to salaries exist in the county council services. We have on several occasions called attention to the injury inflicted on the whole public health service by the recent appointments in Warwickshire, Staffordshire, Herefordshire, etc., but the experience of the County Medical Officer for Norfolk illustrates still more clearly the necessity for the service to be solid and unanimous upon the minimum commencing salaries of the scale. In 1908 the Norfolk County Council were allowed, owing to professional apathy and the lack of

adequate control by the Local Government Board, to appoint a county medical officer for a county with a population of over 300,000 at a salary of £500. After fifteen years hard work this officer was in receipt of £850 a year—a salary with a smaller purchasing power than his income in 1908. Recently the Public Health Committee recommended an increase to £1,000 but this was altered by this incredibly mean county council to £900. Such is the kind of treatment likely to be given to any officer foolish enough to trust these county councils and to accept a commencing salary below the minimum of the scale. Unfortunately the average County Council is apt to be guided by the meaner ones and the scandalous underpayment in Norfolk is likely to be made an excuse for further meannesses on the part of others.

SOUTHWARK.

The Borough Council of Southwark recently were able to secure an underpaid medical officer of health in defiance of united professional opinion and, as might have been expected, their success in that case has led them to further endeavours to distinguish themselves and their Borough as employers of sweated labour. They are now proposing to appoint a tuberculosis officer at a salary of £600 per annum as compared with £750 which is the scale minimum. We hope and believe that Southwark will not succeed in this second venture, and that no medical man will be found willing to degrade professional services by accepting the office.

LEEDS.

It is a curious coincidence that Leeds and Birmingham, in both of which cities the medical work connected with schools is severely handicapped by the assumption of control by the local Director of Education, are distinguished by a desire to obtain underpaid school medical officers. At Leeds it is claimed that they have secured a recently qualified officer at a salary of £400. We understand that the B.M.A. are investigating the very serious rumours that are abroad in connection with this appointment, and we have no wish to increase their difficulties, but it is impossible to ignore a public scandal of this kind which represents a gross betrayal of the public interest as well as a severe blow to professional prestige.

It is obviously against the public interest for an inexperienced, newly-qualified practitioner to be engaged in the important work of medically

inspecting school children, for the successful performance of which a high degree of skill and considerable experience is necessary. This is an aspect which the Leeds public would do well to consider, and at the same time they would be well advised to investigate the conditions under which their medical work in the schools is being carried out.

From a professional point of view the conditions in the school medical service at Leeds are intolerable even if the pay were adequate. The control of the medical work by a lay officer is an absurdity which should have been removed years ago, and which would be removed forthwith if commonsense were brought to bear upon the subject. The salary offered represents a degradation of the professional standard of living and constitutes a serious danger to the whole of the medical profession. No one realises more than the Council of the B.M.A. the inevitable effect upon medical remuneration all over the country if this degrading appointment at Leeds is allowed to continue. At the moment of going to press we have heard with great satisfaction that the young medical officer referred to above has resigned an appointment which could not have been held except to the detriment of his colleagues.

WARWICKSHIRE.

In our January issue, writing on the salaries campaign, we said:—

"When Professor Bostock Hill retired from the Warwickshire County Council he was appointed Consulting Medical Officer at a salary of £250 and that payment was made an excuse for paying his successor, his former Assistant, a salary so scandalously inadequate that for years it constituted a handicap to the whole County Service. . . . The position so created was thoroughly unsatisfactory, and undoubtedly did damage to the whole Service for many years. . . ."

We have received a letter from Dr. A. H. Wood, County Medical Officer for Warwickshire, objecting to these statements. Dr. Wood says:—

"Now for the facts. Professor Bostock Hill was a part-time officer. In 1915 I was appointed his Deputy at a salary of £550. In 1919 he became Consulting Medical Officer at a salary of £250, and I was appointed County Medical Officer at £800. Next year, 1920, my salary was raised to £1,000. In 1923 Professor Bostock Hill's salary was reduced to £105.

"It is obvious that your statements as to my salary being 'so inadequate that for years,' etc., and 'that the position so created undoubtedly did damage to the whole service for many years,' have no foundation in fact. May I be permitted to suggest that advocacy of this kind—rhetoric based on imagination—constitutes a handicap to the whole salaries campaign?"

We have much pleasure in giving Dr. Wood's statement in full, because his views may possibly be shared by others. It is not the first time that the suggestion has been made that an officer who has injured the whole service by accepting a public office, without advertisement, at a scandalously inadequate salary, has successfully remedied matters if he manages subsequently to get that salary increased. If such a contention were admitted for one moment the whole salaries campaign would have to be abandoned.

The completely inadequate salary accepted by Dr. Wood in 1919 has ever since been used, and is still being used, and will for many years continue to be used by every mean authority as an excuse for paying beggarly salaries. Early in 1924 a list of recent commencing salaries of County Medical Officers was prepared for a certain county council, and Warwickshire was conspicuous on that list with its £800.

The reference to Warwickshire in our January issue was introduced merely as an illustration of the futility of allowing inadequate salaries to be accepted by our members on the excuse that a retiring medical officer was being superannuated. When Dr. Wood accepted the post the salaries campaign was not inaugurated and neither the Society nor the B.M.A. intervened, so that there can be no official grievance against Dr. Wood on that account, but the injury inflicted upon the whole profession by the acceptance of such appointments is unquestionable and obvious. It is, moreover, a curious fact that the year 1919 is one of the years selected by the Ministry of Health in their evidence produced at the Court of Inquiry into the remuneration of insurance practitioners. In that evidence the inadequate average remuneration paid to medical officers appointed during that year was used as a powerful argument for the reduction of panel pay.

CAMBRIDGE.

The town council of Cambridge have succeeded in making themselves supremely ridiculous by the issue of "official duties" of the town clerk which are intended to place that official in "control of the whole of the corporation business" and with "authority to give specific instructions to other officers of the corporation, which shall be carried out by them." These quotations are merely samples of the absurd nonsense contained in this precious document. Fortunately an immediate occasion has arisen enabling the position to be challenged and, the borough surveyor having resigned, the

Institution of Municipal and County Engineers have advised their members not to apply for the vacant post. Perhaps the Ministry of Health will intervene on behalf of the medical officer of health; in any case some official assistance should be given. In the meantime every self respecting local Government officer will avoid Cambridge.

HEALTH SERVICES.

GRANT RESTRICTIONS TO BE REMOVED.

It is officially announced that the Government have considered the position in regard to the public health services—

Maternity and Child Welfare;
Tuberculosis;
Venereal Diseases;
Welfare of the Blind; and
Port Sanitation—

which are directly aided by grants from the Exchequer, and have decided that the time has arrived for removing the present restrictions on grants for the development of these services.

The Minister has accordingly issued a circular to local authorities informing them that he will be prepared, with the approval of Parliament, to make grants on the prescribed basis for such further development of these schemes as is considered advisable by the authorities and is within their existing powers, subject to the ordinary process of approval of particular proposals by the Ministry.

REGISTRAR-GENERAL'S FIGURES FOR 1923.

The Registrar-General has now issued his provisional figures for the year.

Death Rates per 1,000 population:—

England and Wales	11.6
105 Great Towns	11.6
London	11.2
157 Smaller Towns	10.6

Infant Death Rates per 1,000 births:—

England and Wales	69
London	61
105 Great Towns	73
157 Smaller Towns	68

Birth Rates per 1,000 population:—

England and Wales	19.7
London	20.2
105 Great Towns	20.4

It is not anticipated that the Registrar-General's figures will require substantial modification. The birth-rate is the lowest recorded

except during the war years; while the death-rate and infantile mortality rate are the lowest on record.

ABERDEEN M.O.H.

The Public Health Committee of Aberdeen have recommended that Professor Matthew Hay should receive a retiring allowance of £550 per annum from the Town Council. It was also recommended that he should be succeeded by Dr. John Parlange Kinloch, at present Deputy Medical Officer of Health, at a salary of £850 per annum with permission to hold the part-time lectureship at Aberdeen University at a salary of about £300 per annum. Dr. Kinloch is also to receive an honorarium of 400 guineas for his services as Acting Medical Officer of Health during Dr. Hay's leave of absence.

TUBERCULOSIS CONFERENCE AT CAMBRIDGE.

The Tuberculosis Society have invited members of the Tuberculosis Group of the Society M.O.H., and other members who may be interested, to their annual Provincial Meeting which will be held at Cambridge (Pathological Lecture Theatre), on April 10th-12th next.

Programme:—

Thursday, April 10th, 2.30.

- (1) Dr. Louis Cobbett, "A Comparison of Tuberculosis in Man and Animals."
- (2) Dr. E. Ward, "Experiences with Diaplyte Vaccines."

Friday Morning, 9.30.

- (3) Dr. R. C. Watson, of the National Tuberculosis Association of America, "Tuberculosis Work in America."
- (4) Dr. Stanley Griffith, "Lupus."

Friday Afternoon.

- (5) Mr. G. R. Girdlestone, of Oxford, "The Present Day Treatment of Tuberculosis of Bones and Joints."

Saturday Morning.

- (6) A Visit to Papworth, 9.30 a.m.

It is expected that cheap railway tickets will be available.

Arrangements are also being made for accommodation of a limited number of medical men at Clare College at an inclusive charge of 20s. a day. Members in College will mess together. Those who wish to avail themselves of these facilities should communicate without delay with Dr. E. Ward, Torquay Road, Paignton.

BIRTH CONTROL AND PUBLIC HEALTH.

BY

C. KILLICK MILLARD, M.D., D.Sc., M.O.H. for Leicester.

May I be allowed, at the outset of this discussion, to refer to the fact that it was at a meeting of this Branch in October, 1902, just 21 years ago, that I ventured to make my first public utterance in favour of Birth Control. It was in the course of an address which I was giving, as President of the Branch, under the title of "The Role of the 'Anti'; an Apology and an Appeal," and I wrote:—

"There is another 'anti' whose special subject is the population question. He holds that large families amongst the poor are a fruitful cause of poverty and its attendant evils, and he teaches that human beings are not bound, like the lower animals, by the law of nature under which they must, once they are married, reproduce their species to the utmost extent of their physiological capacity, regardless of their ability to nourish and support their offspring. One is compelled to admit that such a doctrine has much to commend it on the grounds of prudence, foresight, and solicitude for the welfare of such offspring as may already exist, and certainly, if it were generally adopted and acted upon, it would greatly diminish our terribly high infant mortality. Yet the doctrine has been received with intolerance so bitter that few care to discuss it, and, as a consequence, many people arrive at conclusions on the subject on one-sided evidence alone."

It will be observed that the term "Birth Control" was not mentioned, the reason, of course, being that at the time I am speaking of this term, which is a comparatively modern one, had not been introduced into this country. As a sample of the intolerance with which the subject was regarded, even as recently as 1911, we may cite a book entitled "Racial Decay," by O. C. Beale, published in that year. This is an exhaustive work, running to over 400 closely-printed pages, in fierce condemnation of birth control and the use of contraceptives, and it abounds in such expressions as these, many of them quoted with approval from other sources: "Filthy practices," "bestial corruptions," "abominations," "immoral filth," "Malthusian apostasy," "pure and unadulterated selfishness," "revolting and ter-

rible," "Satanic gospel," "filthy merchandise," "inconceivable blasphemy," "eternal curse," "damnable wrong." It refers to birth control as a "cancerous growth growing towards our utter destruction," and speaks of "children being shut out from the banquet of life."

Yet a man of the calibre of Theodore Roosevelt, referring to this book, said he believed it to be better worth the study of every sincere patriot than any other book that had been written for years!

We may observe that the view, clearly indicated by the above quoted expressions, that there was something inherently "unclean" in the practice of contraception, was formerly very widely held. This has been one of the great obstacles raised by prejudice to the impartial consideration of the subject which the earlier advocates had to combat. It was no doubt a survival of the old ecclesiastical doctrine that any thing connected with sex—even sex itself—was "unclean" and only tolerated by the Deity for the necessary and express purpose of procreation.

It is pleasant to reflect on the remarkable change which has taken place in the attitude of thinking men and women to-day. Neo-Malthusianism, rechristened Birth Control, is no longer a tabooed subject as it used to be, not to be mentioned in polite society. On the contrary, it has become distinctly fashionable and is openly discussed round dinner tables and over the tea cups in the most irreproachable circles. Bishops and other dignitaries of the Church, eminent physicians and surgeons, distinguished authors, gallant admirals, leaders of society, politicians, social workers, all find it necessary nowadays to be quite *au fait* with the subject of birth control, and many have given it their cordial blessing. The most reputable papers and magazines, including progressive Church papers, which a few years ago would not have looked at the subject, now publish articles on it and open their columns freely for its discussion: whilst books on the subject, especially by women writers, dealing with the practical side of the question in the most intimate possible way—the authors and vendors of which would almost certainly have been prosecuted a few years ago—are now sold openly at every bookstall.

Of course, it is not suggested that all controversy is at an end. There is still a sharp conflict of opinion, and there are individuals here and there to whom the whole subject is still anathema; but it is possible now to discuss the question freely and openly, without apology, and without necessarily raising hot passions and storms of moral indignation.

For all of which we have much cause to be thankful.

Birth control, as the term is usually understood to-day, implies the voluntary restriction of the size of the family. The term is not strictly scientific, and a better one is "conception control," but as the term birth control has now become firmly rooted in the English language it will not be easy to alter it.

The subject may be approached from many different points of view.

We propose to touch briefly upon the following:—

1. The Cosmopolitan or World-wide Aspect.
2. The National or Imperial Aspect.
3. The Public Health Aspect.
4. The Eugenic Aspect.
5. The Physiological Aspect.

We do not propose to deal here with either the Personal or the Ethical Aspect.

1. THE COSMOPOLITAN OR WORLD-WIDE ASPECT.

Here we are faced with the question: Is it desirable that the human race all over the world should continue to increase and multiply to the utmost extent of which, under the conditions existing, it is capable? The answer to this question involves a consideration of the principle associated with the name of Malthus that population tends to increase faster than the food supply, with the result that population ever tends to press upon the means of subsistence. We have further to consider that more and more of the older countries of the world are finding their native food resources insufficient to feed their ever-growing populations, and consequently are having to draw upon the food resources of distant parts of the world to an ever-increasing extent; and that simultaneously the undeveloped fertile areas of the world are rapidly diminishing. In view of these indisputable facts we have to face the prospect that should the population of the globe continue to increase at the same rate in the future as has been the case during, say, the past century, there would be a real danger, at some not very distant time, of a world-shortage of food. Any such shortage would inevitably lower the standard of life, increase the competition between the different nations, with the resultant increased danger of war, disease and famine. The fact that it may be possible, by improved methods of agriculture, to increase the yield of the land can only postpone the day when the inevitable shortage will occur, for we are up against the inexorable Law of Diminishing Returns.

2. THE NATIONAL OR IMPERIAL ASPECT.

From this point of view we have to consider whether birth control would be beneficial or otherwise to our own country irrespective of its effect upon the rest of the world. There are many people who would be quite content to see the population of other countries stationary provided that the population of our own country and colonies continued to increase. Such people are influenced by so-called patriotic motives which makes them desire that their own country should grow greater relatively to other and rival countries. But if this sentiment is laudable with one country it is laudable also with others. Closely allied to this sentiment is that which regards men as potential soldiers and pins its faith to big battalions. Before the Great War there was a very real fear in the minds of many that any falling off in the rate of increase of the population in this country would be disastrous in the event of a war with Germany. Similar fears were felt in France, and were, of course, reciprocated by Germany, with the result that there was a veritable competition in birth-rates comparable to the competition in armaments. We have to consider whether such a competition is healthy or otherwise, and whether it can be endorsed by those who put the cause of international peace above that of national aggrandisement. Incidentally, it may be observed that even in war quality counts for more than quantity, and that it was the high birth-rate nations, Russia and the Balkans, which first gave out in the Great War.

As regards Britain, the feeling has certainly been growing since the war that this country is over-populated. By this is meant that we should find the conditions of life less difficult for the masses of the people if our population were smaller or at least were increasing less rapidly. Probably the housing shortage, and the obvious impossibility of overtaking it so long as population continues to grow faster than new houses are built, partly accounts for this feeling. Moreover, the large number of unemployed has brought home to us the fact that we are dependant upon the markets of the world for the sale of those manufactured articles by which alone we can obtain the necessary supplies of food and raw materials from abroad to support our teeming millions.

Effect of Emigration.

To meet this over-population, organised and State-aided emigration to our Colonies on a large scale is being warmly advocated in certain quarters. Unfortunately, our Colonies are only willing to receive carefully selected lives; they

have no use for the old, the weakly or the thriftless; so that emigration, however beneficial it may be to the Colonies, is a rather expensive and exhausting process for the old country. Moreover, at the rate of increase of population which has hitherto prevailed it has never been carried out, and is hardly likely ever to be carried out, on any scale at all adequate, if it is to be a real remedy for over-population.

3. THE PUBLIC HEALTH ASPECT.

The aspect of our subject which specially concerns us as medical officers of health is the effect which birth control is likely to have upon the public health. This is bound up with the study of vital statistics, birth-rates, death-rates, illegitimacy, infant mortality, etc. This aspect is no longer of academic interest only, but has become a question of practical administration. It is being urged respectively that information and instruction on the practical side of birth control should, or should not, be given in connection with maternity and child welfare work, e.g., at ante-natal clinics, and the Ministry of Health is being appealed to by the rival protagonists to allow or to prohibit this. Whether they like it or not, therefore, medical officers of health have now no alternative but to be interested in the question.

There are certain facts which are beyond dispute:—

(1) The birth-rate is very much higher amongst the poor than amongst the well-to-do. It is generally believed that this is chiefly, if not entirely, to be accounted for by the practice of birth control amongst the well-to-do. In support of this there is the fact that in Victorian days, prior to the advent of the birth control movement, the well-to-do classes had very much larger families than they have to-day; indeed their birth-rate was but little smaller than what we see amongst the poor to-day. The fall in the birth-rate, which has been so continuous for the past half-century, has been chiefly confined to the higher strata of the community, e.g., the birth-rate of residential districts has fallen enormously, but that of the slums very much less. Moreover the fall in the birth-rate is gradually invading successively lower strata, which is what we should expect if it be due to voluntary influences.

On the other hand, there are those, notably Mr. C. E. Pell,* who believe that the decline in the birth-rate is almost entirely due to natural causes; that there is, in fact, a natural law under which fertility decreases as comfort and

* "The Law of Births and Deaths," by C. E. Pell.

material prosperity increase. Whilst not denying that there may be some truth in this, it seems hard to explain, by Pell's theory, the difference in the size of the middle-class family to-day compared with what it was in the Victorian Era, unless we are expected to believe that this natural law has only recently come into existence. Nor does it explain away the remarkable coincidence between the fall in the birth-rate and the advent of the birth-control movement. The birth-rate in this country has been falling more or less continuously since 1876, the year in which the Bradlaugh-Besant Trial gave such an advertisement to the movement, and set everyone talking and thinking about it.

(2) Another undisputed fact is the high degree of correlation between birth-rates and infant death-rates which, as a general rule, tend to vary directly, though undoubtedly there are some striking exceptions. It is difficult to resist the conclusions that there is a causal relationship at work, and that a high birth-rate tends to produce a high infant mortality. Certainly it is easy to understand why this should be the case. With a high birth-rate infant life is likely to be "held cheap." Unwanted babies will not receive the same amount of care and attention as those whose advent is desired; and apart from this, with a large family and limited means, it cannot be possible for new arrivals to receive so much care and attention. This is specially true, of course, where the births in a family succeed each other too rapidly.

(3) A third fact, which can hardly be gainsaid, is that a given weekly wage, which will just suffice to maintain a small family of, say, two or three children above the poverty line, will fail to satisfactorily maintain a large family of, say, six or seven. It is true that many working men and women, who are thrifty and capable, do often succeed in rearing a large family on an astonishingly small income, but this does not affect the general truth of our statement. Consequently, so long as the amount of wages which a man receives bears no relationship to the size of his family, we are justified in asserting that large families are one cause of poverty.

(4) A fourth fact is that too frequent child-bearing has a detrimental effect upon the health and strength of many women, especially amongst the poor, who have to look after their families single-handed and on inadequate means. Although it is true that some women keep well and strong in spite of a numerous family, this again does not disprove the general truth of our statement.

(5) Fifthly, it is certainly the case that very many women amongst the poorer classes live in positive dread of becoming pregnant again, because they realise that an additional mouth to feed will only intensify the existing struggle for existence.

(6) Whilst we must admit the great advantages to the child of being one of a family rather than an only child, it can hardly be denied that the members of a large family amongst the poor are often seriously prejudiced and handicapped by having to start work early in life, and with little training and education.

A consideration of all these facts justifies us, I submit, in concluding that birth control tends to be beneficial from the point of view of the public health and that an unrestricted birth-rate tends to be prejudicial.

4. THE EUGENIC POINT OF VIEW.

We have also to look at this question from the point of view of Eugenics. This is clearly allied to the point of view of Public Health; indeed, Eugenics may be regarded in one sense as the Public Health of future generations.

No one will deny that the present position, with its differential birth-rate between the upper and lower strata of society, is most unsatisfactory. birth control is being largely practised by the more desirable stocks, whilst it is being neglected by the less desirable, and although this is compensated to some extent by the reduced infant mortality which usually accompanies a lower birth-rate, the fact remains that our population is being unduly recruited from those elements which, humanly speaking, are the least fitted to make good parents.

It must be frankly admitted, therefore, that birth control, as we see it to-day, is distinctly dysgenic in its operation. How can this be remedied? It would appear that there are only two alternatives:—

(1) Induce the more desirable stocks to abandon birth control and have larger families; or

(2) Induce the less desirable stocks to adopt birth control and have smaller families.

Does anyone seriously think that the first alternative is in the least degree practicable? The educated and "thinking" classes have decided that restriction of the size of the family is desirable. The clergy, doctors, schoolmasters, in short the *intelligentsia* of the nation, to-day all have small families. Who shall go forth and persuade them to act differently? Birth control has been on its trial for at least two genera-

tions (in reality very much longer), and I suggest that no civilisation which has once discovered it is at all likely to abandon it. We may as well recognise frankly that birth control has come to stay.

We therefore have to fall back upon the other alternative, viz., to induce the less desirable stocks to follow the example of the more desirable stocks and practise birth control also. This is surely the more natural, the more logical and the more progressive course. How far is it practicable? It may be objected that we shall never succeed in persuading the more reckless, thriftless and thoughtless elements in the population to exercise the considerable measure of forethought, circumspection and self-control which the successful practice of any method of birth control demands. I frankly admit the difficulty, and it is quite possible that we shall never be entirely successful; but this is no reason why we should not set this alternative before us as an ideal to be aimed at. Much, I believe, could be done by sympathetic practical instruction, and by providing adequate facilities. Also we may reasonably hope for improvement in methods now that the subject is being seriously studied not only in this but in almost all civilised countries. What is needed is a method which is at once simple, safe, effective and inexpensive. The experience now being gained in the two birth control clinics which are being carried on in London should help us in deciding how far the lowest strata of the population can be taught birth control. The following is from a description of a visit to Dr. Marie Stopes' Clinic which appeared in the "Daily News" for June 20th, 1921, from the pen of Mr. Herbert Ashley, Sec. London Council of Social Service.

"To social workers who are willing to sweep aside false 'modesty' and to think with courage, one fact is apparent: that the mother of the poorer classes who bears a child unwillingly, rebelliously, bitterly, and with anguish, is not she who best serves our race. Such children are a loss to the State, an anguish to their mothers, and a misery to themselves. . . . With such thoughts in my mind, I called at Dr. Marie Stopes' Clinic in Holloway. In a drab neighbourhood, it is a beautiful place. . . . The whole atmosphere of the place is one of confidence and purity. . . . The founders of the Clinic, who are supported by many thinkers in many different walks of life, have taken upon themselves a work which will save untold expense to the whole community, as well as untellable misery to individuals."

I see no reason why a similar description should not be applicable to all birth control clinics. I would suggest that whatever our views may be on this question of birth control it is up to all of us who are medical officers of health to watch the work of these clinics carefully and sympathetically.

The problem of the most degraded stocks, e.g., the feeble minded, calls for special treatment. No doubt, when public opinion is ripe for it—and it is certainly moving in that direction—measures will be introduced for the permanent sterilisation of those unfortunates as an alternative to segregation. Already, legislation with this end in view has been passed in some countries.

5. THE PHYSIOLOGICAL OR MEDICAL ASPECT.

Lastly, we have to consider the physiological or purely medical point of view. What effects—physiological, pathological, or psychological—have contraceptives on those who habitually use them? This is an aspect which, of course, specially concerns the medical profession. It is much to be regretted, but none the less true, that we are not, as a profession, at present, able to answer this question with any degree of certainty or unanimity. In an anonymous letter which appeared in the July number of "Public Health," over the *nom de plume* of "X and Y," and headed "The Dangers of Birth Control," the opinions of certain practitioners and gynaecologists were cited expressing the belief that the use of contraceptives was injurious to health. Elsewhere * I have collected a number of opinions on the other side, and I have also published † the results of two special inquiries I instituted, by means of questionnaires, amongst medical practitioners, men and women, including gynaecologists. Suffice it to say here that these inquiries satisfied me that the consensus of medical opinion to-day was that no serious ill-effects need be apprehended from the use of some at least of the contraceptives in common use. My own feeling is that amongst those who have been most emphatic in alleging that serious ill-effects follow the use of contraceptives there has been a great deal of unconscious exaggeration and of confusion between *post hoc* and *propter hoc*, due to strong prejudice on supposed ethical and patriotic grounds, and that this to a large extent

discounts their testimony. In this connection the medical evidence against the use of contraceptives, given in a recent *cause célèbre*, and for which large fees were paid, makes interesting reading, especially the answers elicited under cross-examination.

CONCLUSION.

Let me conclude with an expression of my own personal opinion. I regard the ideal of responsible parenthood, accompanied as a necessary corollary by regulation of the size of the family, as a much higher and more worthy ideal than the principle of unrestricted breeding which prevailed prior to the days of birth control. It is all very well for the opponents of birth control to say that responsible parenthood has always been held as an ideal. It is common knowledge that until birth control came into vogue the orthodox teaching used to be that children were "sent" and that it was the duty of married couples to take all that came.

I regard the use of contraceptives as the only practicable or desirable method of effecting regulation of the size of the family in the case of normal individuals, and I regard their use for this purpose as perfectly legitimate and a necessary part of the hygiene of marriage where restriction of the size of the family is indicated. Properly selected and properly used I do not believe that they have, as a general rule, any seriously detrimental effect upon health, though I am quite prepared to believe that their ignorant or improper use may in certain cases have been productive of harm.

I regard the suggestion that the use of contraceptives may cause permanent sterility as a bogie, quite unsupported by adequate evidence; but I recognise that if young married couples begin using contraceptives before they have had a child, and if later on, when they desire a child, they fail to get one, it is very probable that they will reproach themselves and regard it as a "judgment." I recognise also that nowadays many young people are apt to practise birth control where there is no real need for it, and that they do not sufficiently appreciate the immense and permanent value of children in marriage, or the fact that after a certain age in the woman the likelihood of conception diminishes.

For these reasons I think it better, as a general rule and under normal conditions as regards housing, that young couples should always make sure of at least one or two children before adopting birth control and I disagree with those who teach otherwise.

* "Responsible Parenthood and Birth Control": A Memorandum presented to the Bishops attending the Lambeth Conference in 1920.

† Journal of State Medicine. Also Report of Fifth International Birth Control Conference.

A DISCUSSION ON CIRCUMCISION AS THE ONLY TREATMENT IN CASES OF PHIMOSIS IN INFANCY.*

I.

OPENING BY HECTOR CAMERON, M.D., F.R.C.P.

In discussing this subject, I am not going to take up the attitude that all boy babies would have been better if they had been born circumcised. I consider that a condition of true phimosis is very rare in boy babies. There are three local conditions for which circumcision is commonly performed.

i. Physiological Preputial Adhesions.

In the majority of boy babies one finds it impossible to retract the prepuce. During the early months of foetal life the prepuce has been closely connected to the glans penis by fibrous adhesions. At birth one finds a partial separation between the glands and the prepuce and this has taken place gradually during the later months of foetal life.

In the large majority of newly-born babies, one can only withdraw enough of the prepuce to expose the matus. But in many cases it can be retracted to half the amount of full retraction, and in some cases full retraction is possible. None of these three conditions of itself demands circumcision.

ii. A Condition of Redness and Soreness of the Preputial Tissues.

When this condition is present, I find it associated with impairment of the child's nutrition. The skin of the prepuce shares in the general enfeeblement of the tissues and thus the more easily becomes inflamed upon contact with the urine passing over it. The prepuce in a debilitated under-nourished infant becomes inflamed and eczematous just in the same way that the buttocks do. I would as soon think of skin grafting the unhealthy eczematous buttocks often present in these babies, as of circumcising for a reddened prepuce.

If one performs circumcision in these cases, upon tissues so vulnerable to infection, with the child perhaps losing weight, one only reaps disaster. The child's general condition is made worse and the process of healing after the operation is greatly delayed beyond what is usual.

iii. A Condition in which Micturition is Said to be Painful or Difficult.

Micturition, which occurs after a fit of crying, may be merely a subsequent effect of emotional

*Held by the London and Home Counties Sub-Group for Maternity and Child Welfare, at the Society's House, Russell Square.

strain. Every baby after a fit of crying has a tendency to pass water. The mother, in these cases, confuses effect with cause and jumps to the conclusion that the child feels pain on micturition. The question can only be decided by watching the child micturate. Then if one finds that there is ballooning of the prepuce, one may conclude that the orifice of the prepuce is really narrowed and circumcision may then be done. Often, however, there is no evidence that the restlessness or discomfort is due to pain during the act of micturition. The marked restlessness that is usually present in mentally defective infants results in circumcision being performed in these cases, quite unnecessarily.

It is interesting when considering the whole question, to note the relative frequency with which circumcision is performed in first babies, notoriously the most restless. I have found that about 40 per cent. of first babies are circumcised and that a much lower percentage of second and third babies are subjected to the same operation.

Harmful Effects of Circumcision.

i. Delayed Healing.

This may be due to wrong technique and can be avoided.

ii. Matal Ulcer.

Since circumcision involves the cutting across of the lymphatis passing from the glans penis, nutrition of the tissues may be interfered with, healing may be delayed and a matal ulcer is occasionally found. The mother then complains that the child is passing blood, inasmuch as the issuing jet of urine detaches the adherent crust from the ulcer and causes the escape of a few drops of blood.

We will now consider some remote conditions for the relief of which circumcision is commonly performed.

i. Enuresis and Masturbation.

If the edge of the prepuce becomes reddened and irritable, painful micturition may follow, but this has nothing to do with nocturnal incontinence. The treatment both of enuresis and of masturbation is psychical and psychical only.

ii. Inguinal Hernia.

I do not consider that phimosis has much effect on the persistence of this condition. In infancy, hernia commonly complicates gaseous distension of the bowels. One must correct the intestinal symptoms present. Violent crying clearly acts prejudicially. The act of coughing is clearly of less importance than in adults. But I can see no connection between the persistence of

inguinal hernia and phimosis, at least in its usual degrees.

iii. Prolapse of Rectum.

In many text books one reads that this condition is due to phimosis. I can see no evidence of this.

II.

CIRCUMCISION FROM THE SURGICAL ASPECT.

By H. TYRRELL GRAY, F.R.C.S., L.R.C.P.

- "There's a providence that shapes our ends, rough hew them as we may."

I do not take this quotation entirely as a text, but rather as an illustration of the steady persistence with which a prepuce is present in nearly every new-born male child. Such a constancy can, of course, only mean that the prepuce has a very definite function to perform—a function which it is surely an impertinence for surgeons to eliminate in the irresponsible manner not infrequently observed.

This does not mean that this structure is to be held immune from surgical intervention—far from it—but it does mean that circumcision should, as indeed every operation should, only be planned to achieve a desired object with a minimum of necessary mutilation. Though the first mention of circumcision characterises it as a covenant between the Lord and Abraham (Genesis xvii., 10-14) there can be little doubt that circumcision as a routine procedure must have a surgical origin; and it is interesting to reflect that alone it retains the distinction of becoming a religious ceremony, and of maintaining this distinction with the advance of civilisation.

This, I submit, could hardly be the case unless the practical advantages derived from this small operation outweighed any associated religious belief. From the historical standpoint alone then, it would seem that circumcision is a procedure justified by age and experience. On the other hand, it is equally certain that its retention as a religious ceremony by the Jews is largely responsible for its wholesale, haphazard and thoughtless advocacy in medical circles; so that it is apt to become a custom with those who would ordinarily exclude it on religious grounds.

If, therefore, we admit that circumcision is a procedure valuable and justified by long experience, we must also acknowledge that its wholesale and haphazard advocacy must be condemned as unnecessary mutilation.

That familiarity breeds contempt is nowhere better illustrated than in the operations of wholesale circumcision and appendectomy—compara-

tive immunity from danger has in both nearly transformed valuable surgical procedures into undesirable and even dangerous customs. If we could not look on many of these operations as a blind adherence to established custom, we should reluctantly be compelled to view with scant respect opinions of those who see in every stomach-ache an indication for appendectomy, or in every surviving prepuce a demand for circumcision.

In medicine and surgery extreme views are rarely correct, and experience has shown that the reasoned middle course usually survives the test of time.

Function of the Prepuce.

Now it requires little study to convince us that the function of the prepuce is largely protective, and the most superficial acquaintance with the animal kingdom teaches that *free retraction* of this protective sheath is one of its normal features. Indeed, in some animals a special muscle (the retractor penis) is provided for this purpose. The only really sensitive parts of the glans are the frenulum and corona glandis (the glans itself being sensitive to cold only), and it would appear that these regions should normally be covered by their protective sheath.

Now one marked feature of the human prepuce is its variability. Thus it may be of excessive length, with phimosis marked or absent; it may be short but phimosis may be marked; phimosis may be absent but the prepuce adherent, etc.

Since variation in type is to be considered an indication of transition, it is probable that the anatomical variability of the prepuce is part of a gradual evolution towards a fixed type. Such transitional variation carries with it, as in other regions of the human body, a liability to pathological consequences; and these it is our business as doctors to consider and, if possible, avoid.

It is perhaps to be regretted that the scope of the present discussion is limited to phimosis in relation to circumcision; the accepted definition of phimosis being a tightly contracted prepuce. Since, however, I believe that this condition forms but a portion of the subject, I venture to ask you to accept as my definition of phimosis: prepuce which cannot be easily retracted. This together with the redundant prepuce, forms the main indication for considering the advisability of circumcision.

The Operation.

Bearing in mind that the function of the prepuce is largely protective, before discussing indications for circumcision, we should have

clear cut idea of what the operation should achieve—i.e. "An easily retracted prepuce which yet provides ample protection to the corona glandis and frenulum.

It appears to be so widespread a belief that circumcision is synonymous with a wholesale removal of the whole of the skin and mucous membrane constituting the prepuce, that one feels compelled to enter a protest against so wanton an act of vandalism, which can serve no conceivably useful purpose. (Indeed, some of the circumcisions I have seen seem to have been performed with the idea of stripping the penis of all the mucosa and as much skin as could possibly be removed, without leaving a raw surface!)

Circumcision ought to be defined as an operation for ensuring an easily retracted prepuce, while adequately preserving its protective function.—If I trespass on your time by describing it as I consider it should be performed, it is from the knowledge that the procedure has been prostituted by a carelessness arising from its simplicity, and from a failure to realise what the operation is intended to achieve. I would first impress on my hearers that there is no precedent whatever for removing the foreskin; for the first reference to the covenant states that "*Ye shall be circumcised in the flesh of your foreskin.*" May we not assume that if removal was not commanded, the mucosa might at least be left? I have never yet seen a circumcision as practised by the Jews which could be described as a sound scientific procedure; and I venture to suggest that the religious ceremony is a degenerate scion of the original procedure. *What wonder that some protest against its performance.*

The Operation.

The prepuce being pulled up, a pair of sinus forceps are applied slanting in a direction parallel with the line of the corona. The forceps are closed sufficiently to mark the prepuce, and the whole is allowed to drop back. The mark of the forceps should be at a point leaving ample covering for the corona and most of the glans—the size of the opening to be left being varied with the slant of the forceps. The forceps are then re-applied at the correct level and the skin is removed. The three or four small vessels are then caught and twisted and the mucosa separated from the glans when adherent. The mucosa is then slit down a short distance on its dorsal aspect till free retraction is ensured, and the corners are then "rounded off." It is unnecessary and wrong to remove the quantities of mucous membrane so often seen. The edge of

the mucous membrane is then sutured *accurately* to the skin edge so that healing by first intention is ensured. This is done with a few interrupted sutures of fine catgut, so that subsequent removal of stitches is unnecessary. In this way a freely retracted prepuce is ensured which normally covers most of the glans. The frenulum is untouched and practically redundant skin only is removed; while the sebaceous glands continue to perform their appropriate functions. The glans should be smeared with lanoline and a piece of gauze ribbon should be wound round the suture line for 48 hours. After this it can be soaked off and warm compresses applied.

Indications for Circumcision.

i. Recurrent Phimosis.

This is placed first because it is so commonly encountered as a result of a previous imperfectly performed operation. Because the operation is a small one, accuracy would seem to be waived, a raw surface frequently becomes attached to the glans, and when healing takes place the resulting contraction causes phimosis, often with adhesion to the glans. Retained smegma leads to irritation and inflammation, and the condition is clearly only amenable to properly performed circumcision.

ii. Congenital Phimosis.

Three courses are open to be followed:—

- A. The condition may be left untreated.
- B. The prepuce may be stretched.
- C. Circumcision may be practised.

A. Some of the results of untreated phimosis are worthy of consideration:—

(1) *Difficulty of Micturition.*—This, in my experience, is most unusual, and though commonly believed to be important, is rare. I have only seen one case where on micturition urine trickled out after ballooning the prepuce to a considerable size. Phimosis in itself rarely causes straining in passing water, but it often conceals a pin point meatus which, with a little inflammation, may become oedematous or sore and lead to a degree of retention because of the pain during the act. In this way untreated phimosis may conceal a very real source of abdominal pain from chronic distention of the bladder. How rarely this condition is looked for and remedied even when circumcision is practised!

(2) *Retained Smegma.*—This may ensue from phimosis or from an adherent prepuce when no true phimosis exists.

To dispose of the second condition first: When no phimosis exists, a gentle freeing of the prepuce and removal of the adherent smegma is sufficient.

The treatment should be of the gentlest or bleeding will lead to subsequent adhesions; this must be repeated for a few days until normal conditions are established.

When phimosis exists untreated, stretching is sometimes practised. I shall refer to this later, but for the moment it is sufficient to condemn it as quite unsuitable, except as a temporary measure.

Results of retained smegma:—

Immediate.—(a) *Balanitis* of varying degree from slight local irritation to acute inflammation with swelling, discharge, small preputial fissures, massive ulceration, etc.

The harm resulting from these grosser lesions, and the urgent demand for interference hardly require comment. But the far-reaching results of such irritative lesions, which are not so obvious on inspection, are seldom appreciated and indeed not generally admitted. They are:—

(b) Less Obvious Results.

i. Difficulty in Micturition.

This is not a true mechanical difficulty, but arises from a mild inflammation rendering the passage of urine on an irritable prepuce a sufficient discomfort to prevent it being passed freely.

ii. Fretfulness and Irritability.

The immediate result of circumcision in a quiet contented infant is a frequent testimony to the correctness of the procedure.

iii. Straining.

Irritation under the prepuce, even if mild, when long continued leads to constant discomfort and straining.

In this connection I would emphasise the importance of eliminating any such source of irritation in the treatment of hernia, both inguinal and umbilical—particularly the latter. Inguinal hernia can never be cured except by radical means, but it can often be controlled until the suitable time arises for operation. Perpetual straining and urging mitigate against the success of such palliative treatment, and may entirely nullify it. Umbilical hernia in infants, on the other hand, practically always gets well without operative interference, under appropriate treatment, of which, for the reasons given, circumcision often forms an integral part.

iv. Gastrointestinal tract.—Reflex action on.

The penis is richly supplied with nerve fibres from the internal pudic nerves, and the hypogastric plexus, and trauma evolves a very widespread sympathetic response. I need hardly remind you of the striking evidence of this seen

under light anæsthesia in the inspiratory stridor dilation of pupils, pallor, sweating, etc., which accompanies circumcision. (This is analogous to the stridor occurring on drawing the uterus out of the pelvis during a laparotomy.) Further, the sex stimulus is the most important sympathetic excitant in the animal kingdom; and this is only to be expected when the necessity for ensuring the propagation of the species rests upon it.

Artificial and pathological stimulation, even if mild, when long continued, must be associated with a corresponding mild, but constant sympathetic response, and it is only common-sense to inquire into the remoter effects of such a pathological process.

In this connection the gastro-intestinal tract takes a prominent place in infancy. Without labouring the point, it may be briefly stated that the sympathetic is inhibitory to intestinal movement, while its effect is reversed at the sphincters, certainly the ileocolic and most probably the pyloric.

Such a continued stimulus would be expected to lead to a varying degree of constipation, by reason of the resulting intestinal inhibition, while the prolonged closure (or failure of normal relaxation) of the pyloric sphincter, should contribute to flatulence and distention or even vomiting. That there is such a definite association of these symptoms with phimosis is within the capacity of any well-intentioned observer to prove for himself. I have satisfied myself by repeated observations in the out-patient room that gastro-intestinal derangements of this type will frequently give way to circumcision when this is called for; and this is only what we have a right to expect on practical physiological grounds. Further, the feeding of infant boys is admittedly less smooth as a general rule than in the case of girls—a fact which monthly nurses freely experience.

Finally, my views as to the influence of preputial irritation in establishing pyloric obstruction, both in cases of spasm and also in true hypertrophic stenosis, are known to you, and I need not do more than refer to them as somewhat rare and extreme examples of a condition often encountered in milder degree.

That there is a very definite connection between phimosis and the pyloric sphincter, I regard as proved clinically by the case which I have quoted on previous occasions. Forgive me for referring to it again.

A male infant, of 14 days old, one of a twin. Both children born healthy. The girl did well

from the start and never developed untoward symptoms. The boy started projectile vomiting soon after birth and rapidly lost weight. The boy was brought to me at 14 days and presented a most classical example of congenital hypertrophic pyloric stenosis, the tumour being really large and easily demonstrable to the out-patient class present.

In view of the opinions I hold as to the aetiology of the condition, the inference was that both infants were subject to similar aetiological antecedents, while the phimosis in the boy was the determining factor in the onset of the final gastric obstruction, from which the girl was consequently immune.

I therefore kept both children on the same diet and no other treatment beyond circumcision was adopted in the case of the boy. Symptoms immediately yielded and both are alive and perfectly well to-day, five to six years later.

Remote Results of Retained Smegma.—Recurrent attacks of balanitis are not infrequently a source of discomfort and annoyance in later life, and sometimes demand circumcision at an age when it is not only a far more unpleasant procedure for the patient, but is altogether an operation of greater magnitude.

(1) *Infection.*—There is no doubt that chance infection is more likely and local hygiene more difficult.

(2) *Masturbation.*—Though circumcision cannot be regarded as a cure for this habit (indeed it is believed to do harm in some instances), there is nevertheless no doubt that it is much commoner in the uncircumcised.

(3) *Cancer of the Penis.*—Though this is a comparatively rare disease, it is infinitely less common in the circumcised. Indeed, I cannot recollect seeing a case after circumcision.

I have endeavoured to place before you some of the main reasons why phimosis with its consequences should not be left untreated.

The two forms of treatment are stretching and circumcision.

A. Stretching.

As a temporary measure only, is this to be advocated, when immediate treatment is called for in an infant unfit for circumcision; as an alternative it is to be rejected for several reasons.

(1) Stretching is followed by recurrence. In order to maintain the improvement it must be repeated and the prepuce frequently retracted to facilitate local cleanliness. The disadvantages of such continued manipulation are almost as detrimental as the irritation arising from the phimosis.

(2) The mucosa cracks in places and the prepuce becomes a little swollen and sore—the very result it is desirable to avoid.

(3) Stretching in infancy is not followed by free retraction in boyhood.

(4) The necessary constant attention to local hygiene is an exciting cause of masturbation, even in quite young children.

(5) This line of treatment is one of the causes of paraphimosis.

B. Circumcision is for these reasons, in my view, the correct procedure, and correctly performed, is unattended by any disadvantages of which I am aware.

Other conditions calling for circumcision are:

(1) *Paraphimosis.*—Here circumcision is usually called for as a remedy for previous faulty treatment, *i.e.* stretching.

(2) *Redundant prepuce.*—When redundant, attacks of inflammation, swelling, small cracks and sores are commonly seen in boyhood. The irritation leads to manipulation, rubbing and pulling, and may well be the starting point of bad habits.

In conclusion, I submit that circumcision is an operation capable of producing great benefit when properly performed in suitable cases. That it is established, both by the experience of past ages and also scientific surgical opinion. It is not to be advocated in blind obedience to custom or tradition, nor should the details of the operation conform with those of established tradition.

Finally, when treatment is called for, there is no other routine so rapid, harmless or effectual, or so free from undesirable after results.

III.

DISCUSSION.

Dr. Cameron, in replying to Mr. Tyrrell Gray, said that he finds that retraction of an adherent prepuce, present at birth, becomes possible during the end of the first year of life, because the adhesions between the two gradually give way. Thus the separation of the adherent prepuce is gradually accomplished in most of his cases without operation. He said that he thought that this question of the retraction of the penis was really the only one upon which he and Mr. Tyrrell Gray differed materially, in this discussion.

As regards the intestinal and abdominal conditions attributed by Mr. Gray to phimosis, he did not agree that there is any connection between them. He also said that he could not regard phimosis as a factor in the increased difficulty of rearing the boy baby. What is the

important factor in these cases is the nervousness and over anxiety of the mothers which act indirectly and inimically. A mother may be calm, confident and efficient with her girl baby, but apprehensive, over-anxious and inefficient with her boy baby. The performance of the operation in such cases only acts as a mental prop to the mother and the seeming benefit that the child derives from it is largely due to the fact that the mother herself is more assured and at rest.

The Chairman, Dr. Harold Waller, said that he considered that the prepuce was hardly ever retractile in the first few weeks of life. If one accepted Mr. Tyrrell Gray's view that circumcision should be performed for a prepuce that cannot be retracted, then one would have to send 50 per cent. of boy babies to hospital for operation, at this early age.

He and his colleague Dr. Allan Hamilton, have now adopted at their Welfare Centre an expectant method of treatment to begin with, in most cases of phimosis in infancy. He endeavours in the first instance, to gently press back the adherent prepuce and washes it with a mild disinfectant and applies mercury and vaseline ointment. At the same time he shows the mothers how to do this and instructs her to do it two or three times a week when the baby is having his bath. After this treatment has been persisted in for a time, retraction of the prepuce becomes possible in many cases.

If, however, these expectant measures fail to relieve the condition, circumcision may be done.

A discussion then followed in which Dr. Maitland Radford, Dr. Stella Churchill and others took part.

Mr. Tyrrell Gray, in replying, said that he quite agreed with Dr. Harold Waller's method of expectant treatment, in the class of case indicated by him, as he thought that a condition of true phimosis was not really present in such cases but merely an adherent prepuce. This could be gently and gradually separated from the glans penis by the method described by Dr. Waller.

A NOTE ON CANCER OCCURRENCE IN HAMPSTEAD AND SHOREDITCH.

BY

SIDNEY DAVIES, M.A., M.D., Oxon.

The comparative absence of cancer in uncivilised countries is reported by several creditable witnesses, and there is no doubt that cancer has increased along with a higher standard of living. But as to what is the factor in civilisation—if any

—which causes cancer, we are in the dark. In order to see if any light can be thrown on this question by comparing rich and poor districts, a comparison has been made between the cancer statistics of Hampstead and Shoreditch Boroughs, which the late Sir Shirley Murphy shewed were the best examples in London of rich and poor districts. The Registrar-General has kindly supplied me with the numbers of deaths from cancer at different age periods for each sex during the eight years, 1913-1920. The deaths are classified under seven regions of the body. For simplicity in calculating death rates deaths under 45 have been disregarded.

The population taken for each Borough is the average between the census populations of the two censuses, 1911 and 1921.

Table A gives the No. of deaths and table B the populations.

TABLE A.
1913-20. Number of Deaths each Region.

	HAMPSTEAD.			SHOREDITCH.		
	M.	F.	Total	M.	F.	Total
Buccal cavity						
45—65	25	5	30	41	1	42
Over 65	9	6	15	19	2	21
Stomach, Liver, etc.						
45—65	52	42	94	97	58	155
Over 65	68	62	130	60	27	87
Peritoneum, intestines, rectum						
45—65	40	62	102	48	22	70
Over 65	47	62	109	34	23	57
Female genital organs						
45—65	—	70	70	—	61	61
Over 65	—	30	30	—	21	21
Breast						
45—65	—	61	61	1	28	29
Over 65	—	35	35	—	15	15
Skin						
45—65	2	1	3	3	—	3
Over 65	4	4	8	4	—	4
Other organs						
45—65	45	33	78	49	19	68
Over 65	29	29	58	41	15	56
Total, all regions	321	502	823	397	292	689

TABLE B.
Mean Population over 45 of Censuses 1911 and 1921.

	Male.	Female.
Hampstead ...	8,845	14,093
Shoreditch ...	10,869	11,296

Table C shews that the death-rates for males are almost the same in the two Boroughs, but for females whereas the Hampstead death-rate is 4.45, in Shoreditch the rate is only 3.25. For ages from 45 to 65 males have an excess in Shoreditch and females in Hampstead. But over the age of 65 the Hampstead death-rate is much higher in both males and females, viz., 10.17, compared with 8.43 in males and 8.44 compared with 4.68 in females. This phenomenon is capable of more than one explanation, but an

obvious way to account for it is to assume that persons living in Hampstead seek medical attendance and have recourse to operation sooner than those living in Shoreditch, and this we may safely do. But in spite of the presumed earlier and better medical and surgical treatment the statistics for ten years shew that in women there is much more cancer among the comparatively rich people of Hampstead, than among the poor in Shoreditch.

TABLE C. CANCER.

Death-rate per 1,000 living at each age-period. All regions

	Total over 45	45-65	Over 65
MALES.			
Hampstead { Avge. Pop. x 8	70,760	55,320	15,440
Deaths 1913-20	321	164	157
Rate per 1,000	4.54	2.96	10.17
Shoreditch { Avge. pop. x 8	86,952	68,216	18,736
Deaths 1913-20	397	239	158
Rate per 1,000	4.57	3.50	8.43
FEMALES.			
Hampstead { Avge. pop. x 8	112,744	85,720	27,024
Deaths 1913-20	502	274	228
Rate per 1,000	4.45	3.20	8.44
Shoreditch { Avge. pop. x 8	90,368	68,360	22,008
Deaths 1913-20	292	189	103
Rate per 1,000	3.23	2.76	4.68

Let us now compare the parts affected in each Borough. Table D gives the death rates over 45 for different regions of the body. We see that cancer of the buccal cavity is much more frequent, and cancer of the stomach, liver, etc., somewhat more frequent in Shoreditch than in Hampstead, both sexes being included. But buccal cancer is almost confined to men, and cancer of the stomach is commoner in men. When the buccal cancer death-rate is calculated for males only and the stomach and liver death-rate for males and females separately, we see that the excess of buccal cancer in Shoreditch, males, is even more marked, and that females are affected with cancer of the stomach and liver, etc., almost equally in the two Boroughs.

The death-rate from cancer of all other parts is much higher in Hampstead than in Shoreditch. That from cancer of the breast is twice as high, cancer of the peritoneum, intestines and rectum, considerably higher in males, and more than twice as high in females.

Part of the excess of cancer of the breast in Hampstead may be accounted for by there being proportionately fewer married women in that Borough. But Hampstead has also an excess of cancer of the uterus, whereas the larger proportion of married women in Shoreditch would lead

TABLE D. CANCER.

Death-rates for each region per 1,000 living.
Total over 45.

	BOTH SEXES.	
	Hampstead. Av. pop. x 8 = 183,504	Shoreditch. Av. pop. x 8 = 177,320
Buccal cavity Deaths 1913-20 Rate per 1,000	45 0.25	63 0.36
Stomach, liver, etc. Deaths 1913-20 Rate per 1,000	224 1.22	242 1.36
Peritoneum, intestines, rectum Deaths 1913-20 Rate per 1,000	211 1.15	127 0.72
Female genital organs Deaths 1913-20 Rate per 1,000	100 0.54	82 0.46
Breast Deaths 1913-20 Rate per 1,000	96 0.52	44 0.25
All other regions Deaths 1913-20 Rate per 1,000	147 0.80	131 0.74

	Hampstead.		Shoreditch.	
	Males. Av. p. x 8 = 70,760	Females. Av. p. x 8 = 112,744	Males. Av. p. x 8 = 86,952	Females. Av. p. x 8 = 90,368
Buccal cavity Deaths 1913-20 Rate per 1,000	34 0.48	—	60 0.69	—
Stomach, liver, etc. Deaths 1913-20 Rate per 1,000	120 1.70	104 0.92	157 1.81	85 0.94
Peritoneum, intestines, rectum. Deaths 1913-20 Rate per 1,000	87 1.23	124 1.10	82 0.94	45 0.50

us to expect more cancer of the uterus in the latter.

Of the total number of cases of cancer occurring, 51.2 per cent. were of internal digestive

TABLE E.

Deaths from Cancer of each region per cent. of Deaths from Cancer of all regions.

ALL AGES.

	Hampstead.		Shoreditch.	
	Deaths.	Per cent. of Total.	Deaths.	Per cent. of Total.
Buccal cavity ...	48	5.3	70	8.8
Stomach, liver, etc.	237	20.0	274	34.3
Peritoneum, intestines and rectum	230	25.2	143	17.9
Female genital organs	114	12.5	103	12.9
Breast ...	115	12.6	56	7.0
All other regions ...	169	18.4*	153	19.1
Total Deaths from Cancer ...	913	100.0	799	100.0

* Adjustment.

organs in Hampstead and 52.2 in Shoreditch (see Table E); it can hardly be said then that the excess of cancer in Hampstead at all ages is due to better diagnosis, though its age distribution may be.

The figures are not sufficiently numerous to justify one in basing conclusions on them, but I suggest as an hypothesis that comparative excess of nutrition in Hampstead women accounts for them having more cancer.

The men are usually the best fed members of working class families and consequently there would not be so much difference in nutrition between men in Hampstead and Shoreditch. But smoking is recognised to be the chief cause of cancer of the mouth and alcoholism is an important cause of cancer of the mouth, throat and stomach.* Table F shews that there is considerably more alcoholism in Shoreditch than in Hampstead and there is probably at least as much

TABLE F.

Alcoholism and Cirrhosis of Liver over 45.
1915-20.

	Hampstead.		Shoreditch.	
	Males. Av. p. x 6 = 53,070	Females. Av. p. x 6 = 84,558	Males. Av. p. x 6 = 65,214	Females. Av. p. x 6 = 67,776
Deaths over 45	21	13	35	28
Rate per 1,000	0.40	0.15	0.54	0.41

smoking. This perhaps accounts for the nearly equal occurrence of cancer among men in the two Boroughs.

It is to be hoped that others may be induced to compare the occurrence of cancer among rich and poor with a view to answering the question, what part, if any, does the over-nutrition of civilisation—compared with savage life—have in causing cancer.

I have to acknowledge with thanks much kind help given by Dr. Stevenson, Superintendent of Statistics, in preparing the statistical basis of this note.

DR. C. E. GODDARD, O.B.E., medical officer of health for the Wembley and Harrow urban districts, has been appointed medical officer for the British Empire Exhibition.

* Gen. Sir A. Pearce Gould's Bradshaw Lecture, 1910, quoting a paper by Sir Arthur Newsholme, and Annual Reports on the Health of Woolwich, 1913-18.

THE LEAGUE OF NATIONS INTER-CHANGE OF HEALTH PERSONNEL IN AMERICA.

BY

CHARLES PORTER, M.D., B.Sc., Medical Officer of Health, St. Marylebone.

IV.

The programme prepared for the group that had Virginia allotted to it as its Southern State was a most representative one and made provision for a complete survey of the many activities of the health department throughout the State. The itinerary commenced on September 23rd, and included visits to Richmond, to Charlottesville in Albemarle County, and famous as the seat of the University of Virginia, established by Jefferson Roanoke, chief city of Roanoke county; Pulaski, a small town in Pulaski county, South West Virginia; in the east and near the southern boundary, Newport News and Norfolk and Suffolk, which is in Nansemonde county, and famous in history because within its boundaries the earliest English settlers found their first home; and Emporia in Greensville county.

In each area one or more features or activities were investigated and by the end of the tour on October 21st, which on account of the acceptance of an invitation to visit the Johns Hopkins University School of Hygiene and Public Health in Baltimore, was earlier than originally proposed, we had seen sufficient to convince us that good work was being done and in many places great progress had been and was being made.

Richmond, the capital city of the State and the headquarters of the State Board of Health, was the first stopping place. Here we remained ten days, spending the greater part of each day with Dr. E. G. Williams, the Commissioner of Health, and his staff, hearing from him and the heads of the various divisions something of the working of each branch, of the results obtained and hoped for. Apart from Dr. Williams, who it may be noted, was the first Commissioner to be appointed and has held office continuously since 1908, and is the maker of Virginia so far as Public Health is concerned, and one of the best loved men in the State, we came very intimately into contact with Dr. Roy K. Flannagan, the Assistant Commissioner, Dr. L. L. Williams, junr., of the United States Public Health Service, and Dr. Clinton A. Kane, of the International Health Board, both authorities on Malaria and both attached to the State Board for the purpose of supervising antimalarial work. From each of these officers we received a description of the branch of work for which they are

responsible and by them we were conducted round the State for the purpose of investigating the situation generally.

Others with whom we worked and from whom we heard were Dr. Plecker, the Director of the State Bureau of Vital Statistics, a very learned and very enthusiastic statistician and health worker; Mr. Straus, who is in charge of the State Laboratory; Dr. G. C. Payne, the recently appointed State Epidemiologist; Dr. Robertson, of the United States Public Health Service, who is supervising sanitary works in rural areas in the State; Dr. Bryden, Director of the Child Welfare Bureau, who gave us a whole day and brought with her to address us, Dr. Ballou, the Director of Mouth Hygiene (who is doing most excellent work amongst the school children); and a number of school and maternity and public health nurses collected from all over the State. Also we met the officer in charge of the graphoscope and portable electric light power plant, and had from him a showing of the State Board of Health moving pictures for Public Health Education.

In a note such as this it is impossible to set out at length the information that we were given and that we obtained as a result of direct observation. All that is proposed is to say something with regard to organisation generally, and to indicate as briefly as possible, the kind of impression received.

So far as organisation is concerned, our chief sources of information were the Commissioner and a gentleman of the name of Col. Keily, who in the course of a quite short address, gave us a beautifully clear description of the relations between the Federal and the State Governments, and an outline of the powers and duties of the various authorities and officers in the State. Col. Keily impressed all of us as a man of remarkable ability and of great influence in the State. Deeply interested in public health work he is exerting his influence in order to get things done. A Col. Keily would be a very useful addition to the Public Health Service in England.

From him and from Dr. Williams we learned that the problem of the State Board of Health in Virginia is in the main a rural health problem. The State has an area of 40,262 square miles, is divided into 100 counties, and has a total population of about two millions. Of this number only about one-third reside in communities of over 2,000, the combined urban population being about 670,000. The rural population numbers about one million, six hundred thousand, and in some places the density is in the neighbourhood of 45 to the square mile. The chief citizen of the State is the Governor. He holds office for a period of four years, and amongst other

things, he has the power and duty of appointing the State Board of Health and the Commissioner of Health. The State Board consists of 14 members, one from each congressional district, two from the City of Richmond, one a dentist, and five of the 14 must be doctors of medicine. This is the constitution as required by law in Virginia; the law in regard to this matter, and the constitution of the Board, vary in different States. The Board meets once a year. The Governor holding office for four years, the Commissioner of Health holds office also for this same period. He may, however, be appointed for further periods, and Dr. Williams has held office continuously since 1908.

The powers of the Board and the Commissioner are very considerable. During periods when the legislature is not in session the Board may issue rules and regulations that have all the force of law. They appoint the Board of Health—consisting of three physicians with the Chairman of the Board of Supervisors as ex-officio Chairman—of the counties and through the Commissioner endeavour to induce and assist these bodies to set up health units and carry out health work. Getting health work done, however, has been very uphill work, and up to the present, something under half of the counties have an organisation.

The character of the organisation varies very much, from the complete health unit which includes a medical health officer with or without a special health qualification, one or more sanitary inspectors and one or more public health nurses, to the unit consisting only of a sanitary officer or inspector or a public health nurse. What is provided depends entirely upon the amount of "appropriation" the local board is prepared to make, and in order to induce the boards to make any at all the State Board of Health offers to share the cost and uses all the powers of persuasion at its disposal. If the county is not prepared to do more than appoint a sanitary officer to help the inhabitants to protect the wells and dispose of human filth in a decent and safe manner, it must put up 1,500 dollars, and to this the State will add 1,000 dollars, 700 derived from State funds, and 300 from Federal Government grants. Out of this the officer receives his salary, 1,500-1,800 dollars, and is provided with a Ford car to take him about his district which may extend to 800, 400, 500 or more square miles, with a population of anything up to 20,000. Of units of this type there are eleven in the State.

If the State Board succeeds in inducing the county authorities to instal a public health or school nurse they contribute 500 dollars out of the monies received under the Sheppard-Towner Act to the amount

necessary to pay her salary of round about 100 dollars per month, and provide the inevitable Ford. The counties in which there are public health nurses number 34.

The assistance rendered to the county in which there is the complete health officer unit is, of course, greater, amounting in all to from 8,000 to 10,000 dollars per annum. Of this sum half must be appropriated locally, the remainder coming from the State Board and the International Health Board, which operates with funds derived from the Rockefeller Trust. In general, it may be noted the two bodies named do not contemplate contributing indefinitely to the support of the unit, making it clear to the local board that in the course of four or five years, the total expenditure must be met out of a local appropriation.

A full time organisation of this type for every county is the aim of Dr. Williams. At the moment, however, they are by no means numerous in the State, and in counties in which they have been set up the health officer usually acts not only for the county but for the principal town therein.

During the period of our stay in Virginia we had opportunities of meeting the officers making up units of the types described, of observing their work, and of seeing some of the results of their activities. In the bulk of instances the personnel has been found by the State Board for the local boards. This is absolutely essential, mainly because the number of men and women willing to take up the work is limited, the reason for this being, of course, that there are easier and pleasanter ways of earning a living and the salaries offered are much lower than can be obtained outside public appointments. Since the men and women in the work are in it because of its call, and are picked people, they are of a fine type. It was a pleasure to meet and talk with them, and one felt with them very much as one feels in meeting and talking with colleagues and co-workers at home. The atmosphere was much the same, and it was the same shop. In Enrico county, the county in which Richmond lies; in Albemarle county, of which, as already mentioned, Charlottesville is the chief city; and in Nansemonde county, Suffolk being the most important town, we had experience of a health officer unit. In the first-named we had our first opportunity of seeing a school dentist at work. In Virginia the school dentists, of whom there are ten, are in charge of a state director of mouth hygiene and go to various schools throughout the State, examining the children and afterwards treating such cases as the parents agree to have treated. Children requiring treatment carry home a report as to the exact number of teeth calling for attention, and a slip showing the payments to be

made. The fee charged is about one-third the ordinary cost, the State and the County contributing the remainder. In this connection it may be noted that the State Department in Virginia does not believe in free treatment for anything, none of the clinics, for venereal diseases and so on, being quite free. Further with regard to school dentists it should be mentioned that here as in other connections, the colour line is not forgotten, the dentists visiting the schools for white children being white, and those dealing with coloured children in their respective schools being coloured also. The school we visited in Enrico was a coloured school, and in addition to seeing the dentist at work and examining his portable outfit, and inspecting certain improvements in progress in connection with privy arrangements, we had the added pleasure of listening to some delightful singing by the school children.

SUNDAY PROPAGANDA.

A remarkable experience provided for us by the health officer of Enrico county, Dr. Bagby, came on our first Sunday in Virginia, when in a body we attended a service in a coloured church. Space does not permit of the giving of anything like a full description of the happenings here; it may be mentioned, however, that the service commenced at or about 7 in the evening, and did not close till 10.30, to the great regret of the congregation who were prepared to remain listening and singing till long past midnight; that Dr. Bagby gave an admirable address on sanitation; that Col. Keily told funny stories; and that the English and the Italian representatives gave short talks in their native tongues. Also we all sang hymns and prayed with the utmost enthusiasm and at great length.

In Albemarle county the organisation is rather more extensive than in the majority of the counties visited, there being in addition to the Health Officer (Dr. Keisler, a graduate of Johns Hopkins School of Public Health) two sanitary officers and three nurses. For the reason that the coloured population of the city and county is considerable, and there are a number of coloured schools and coloured midwives one of the nurses is coloured.

In Nansemonde county, the health officer, Dr. Riffin, acts also for the City of Suffolk. One of the outstanding problems is malaria and though the unit has been in existence—as in the case of Albemarle—only a year or two, a great deal has been done by means of drainage, etc. The roads in this county are dreadful.

THE SANITARY OFFICER UNIT.

Examples of the sanitary officer unit we met in Roanoke and Pulaski. The former, the chief city of Roanoke county, less than 40 years ago, was

small village and now is a most thriving and progressive city, a great railroad centre, and likely to become one of the most important places in the South of Virginia. Pulaski is a pleasant little town, and the capital of Pulaski county. It contains an important chemical and iron works, and also a plant that turns out vast quantities of men's socks. Particularly in this and the chemical works very great attention appeared to be given to the welfare of the workers: in the former the lighting and ventilation of the workrooms are particularly well provided for. Pulaski county is mainly agricultural and is interesting because of the fact that many of the cattle for the English market are raised here on the "blue grass." Alfalfa, is largely grown, the fact that once planted, this grass, which is, I believe a form of clover, continues to grow year after year for some years, yielding regularly three or four crops per annum I discovered here. In the course of our visit to this county we were conducted over certain coal mines—the Parrott mines—and the village occupied by the Morgans and Evanses, Joneses and Williams' who get the coal. The houses, mainly of wood, occupy a narrow strip of land between a steep bluff and a wide stream. The conditions so far as housing is concerned, appeared to be deplorable, but as a result of the substitution of pit-prives for closets of the open back type that formerly lined the bank of the stream, typhoid fever has practically disappeared.

SOME RESULTS OF HEALTH WORK.

It is in connection with efforts to get improvements of this kind carried out, to induce the occupiers of the better type of dwelling where there is no sewerage system to introduce a septic tank privy, and to get wells and water supplies generally protected, that the Sanitary Officer has proved most useful. Throughout the State there has been and still is plenty of room for officers of this kind. Probably just as I was, many of my colleagues may be inclined to criticise a health scheme that puts a layman in charge of health activities and leaves him without proper medical direction. In this regard, however, there are several points to be borne in mind: first, that though in the State of Virginia many of the problems which we consider modern, and have only recently tackled—Venereal Disease, Tuberculosis, Maternity and Child Welfare, are being worked at; at the same time she is dealing also with problems in sanitation in her country areas that we have largely solved, and have very definite powers of dealing with; secondly, as already explained, that qualified medical people are scarce, and shy of public health work, and certainly not prepared, as an officer must be to show how the

pit-privy must be constructed, and the ingress and egress of filth bearing flies prevented and how the double chamber of the septic-tank must be formed, and the overflow pipe laid from the outer chamber to its termination at least 100 feet from the premises. Above all it must not be forgotten that it was only in 1908 that Dr. Williams began his work and that in order to get anything done, he had to fight poverty, penury, prejudice, ignorance and apathy amongst a people prepared to accept typhoid fever, hook-worm disease and malaria as natural conditions, and to regard the surface of the ground anywhere around the home as the only proper place for the deposit of excreta. Stories innumerable we heard of the struggles to awaken not only a sanitary conscience, but a sense of decency. These I need not repeat. Only at the end we came to understand why Dr. Williams had broken down, and to marvel at the wonderful results obtained in regard to typhoid fever particularly, the case rate of which has fallen from 697 in 1909, to 109 in 1920, and the death record from 709 in 1913 to 260 in 1923.

THE GROWTH OF THE SCHEME.

Almost as extraordinary as the progress made in the direction of improving sanitation has been that in connection with the building up of the public health scheme.

In 1908 the active force of the Board consisted of the Commissioner, an Assistant Commissioner, a Bacteriologist and one clerk. To-day, including the staffs at the three State Sanatoria, one for coloured patients, several hundreds are engaged in the work of the State Board. One of the first departments to be organised was the laboratory.

THE STATE LABORATORY.

In 1908 the examinations made numbered 3,480; in 1922 the total was 21,000. The work done is exclusively diagnostic for, amongst other diseases, malaria, syphilis and gonorrhoea and hook-worm disease. Chemical examinations are also made, and specimens are examined free upon request of any physician in the State and in order to facilitate matters it is proposed to set up branch laboratories in various towns throughout the State, a beginning having been made at Norfolk down in the south-eastern portion of the State. At the headquarters laboratory the work for the City of Richmond is also carried out, and for the convenience of practitioners outfits may be obtained and specimens left at selected drug stores. The bacteriologist in charge of the laboratory, as appears to be commonly the case in State laboratories, is not medically qualified.

MATERNITY AND CHILD WELFARE WORK has made a very good start in Virginia. The Sheppard-Towner Act which, as already explained, ensures a

grant from the Federal Treasury immediately on its adoption, has been in operation for only a short time, but in that time a special division has been set up, and in a considerable number of counties nurses are at work, and clinics are held at intervals at which, amongst other things, infant consultations are conducted. Of pure infant consultations we saw nothing during our visit, the clinics seen being more or less of the nature of general out-patients' clinics, though held in a school and intended primarily for children. In one place near Charlottesville many of the persons attending for medical advice were adults and appeared to be quite prosperous if one might judge from the automobiles (not Fords) parked outside the building. At this clinic a number of children were vaccinated by the health officer and some came forward to receive a dose of toxin-antitoxin mixture. At this school I was interested to find young men of 19 and 20 in attendance, and submitting themselves for weighing and measuring. One of these pupils, on account of the necessity for working, had been prevented from finishing the High School Course earlier and as he proposed to study for the Church at the University of Virginia, was now getting ready to graduate from the High School prior to seeking admission to the University. Apropos of work, it may be noted that quite a considerable proportion of University students, women as well as men, work during the time they are at college or during vacation. One young fellow I met had managed a Cabaret the whole of the preceeding summer; another runs an eating-house, or "lunch" as such places are called, for students; and another for a small charge sees that the luggage of his fellow students is attended to on arrival and departure. Many of the women students take posts as waitresses in restaurants during the summer.

MIDWIFERY.

Work among midwives in the State is being very actively taken up by the State Board of Health. From all that we were told the midwife problem is a very pressing and a very difficult one. In the State nearly one-third of the births are reported by midwives which means that nearly one-third of the mothers in the State are attended in childbirth by a midwife only, since in the State, as in the States generally, the onus of making known the occurrence of a birth is on the person in attendance, and not the parents. Practically none of the women have had any training; a large proportion are coloured, are unable to read or write, and are steeped in superstitions in which they indulge for the benefit of the women upon whom they attend. By law all midwives are required to register with the State Regis-

trar of Vital Statistics, and as a result, some thousands of women and possibly men also (I heard of at least one non-medical man-midwife) have been reached. A supervisor of midwives recently appointed is busily engaged with the assistance of the nurses in the counties in trying to give instruction to the women individually and by means of leaflets, and all are being induced to obtain a properly fitted bag through the department, which supplies it at a reduced rate. In the work amongst midwives, Dr. Plecker, the Director of the Bureau of Vital Statistics, takes a deep interest and is assisting tremendously by keeping in touch with all those who make reports of births. Speaking generally, I imagine midwifery work, so far as midwives are concerned, to be in a worse condition than with us before the passing of the Midwives Act. That they will ever, in Virginia at any rate, and possibly also the other States in the South, make such provision as we have, appears to be doubtful. In the cities the question is, of course, much less difficult than in the rural areas where as Dr. Williams himself admitted, the midwives "constitute a serious menace as a result of their ignorance." In cities hospitals have been, or will be provided, and possibly in time also, in the rural areas the provision of hospital accommodation conveniently situated will lead to a solution of the problem. This, I take to be the opinion of the medical profession in general.

SCHOOL HYGIENE AND SCHOOL MEDICAL WORK

are receiving close attention. Virginia is one of several States that make school attendance compulsory although, as a matter of fact, and mainly on account of the large numbers of coloured children in the State, the law is not very actively enforced. Probably indeed, quite as large a number of children as can be accommodated do attend school. In connection with these institutions I should like to say that all the members of the group were most favourably impressed by the type of modern school now springing up all over the State. Whoever is responsible for the design appears to have studied the question most fully, and has ensured that practically every detail, even the most minute, shall receive attention. As rapidly as possible all the old-fashioned school houses are being got rid of, and are being replaced by larger buildings conveniently placed for the service of as large an area as possible, generally a radius of about ten miles, and in order to get the children from outlying districts to and from school fleets of trolleys (motor charabancs) are provided. In Suffolk county we inspected two such schools and fleets, and were quite convinced of the wisdom of those who decided that it was cheaper and better

to provide a large central school and means of conveyance, than to construct a number of smaller schools. Another reason that, no doubt, led to a decision in favour of large schools, is the difficulty encountered in obtaining teachers for county schools. The tendency to desert the country for the city is as marked amongst teachers as others in this and other States, and this, by the way, is another of the many problems that face the United States.

The question of school medical inspection is one I did not discuss very much with my friends in Virginia, and of which I do not propose to say very much here as I never properly understood the method adopted in connection with it. Under a law known as the West law, every child in school is required to undergo a physical examination once every year. The physical examinations are, in the main, carried out by the school teachers, with some assistance from nurses acting as school and public health nurses, the latter of whom, by the way, not uncommonly carry out vaccinations in the schools, the Public Vaccinator being apparently unknown. The examination is entirely an external examination, and directed to determine roughly the condition of the teeth, hearing and vision. The parents of any children the teachers think require medical attention are advised to take them to a doctor. The school or public health nurse is given the name and address of each child thus referred and follows up to find out what is being done. We met no school doctors in Virginia, and saw no school clinics as understood in England. Women training for teaching in normal schools and institutions receive instruction in hygiene, physical exercises, and the methods to be employed in carrying out the physical examinations. Teachers already holding posts are instructed by correspondence.

PUBLIC HEALTH NURSING.

The public health nurses are all fully trained women, and have had in addition in most instances, some instruction in hygiene and public health work. The nurses themselves have organized a system of registration and endeavour to ensure that none but such as have been registered shall be appointed public health nurses. By some of the nurses it is claimed that of all the officers forming health units, not excepting the health officers, they alone are properly qualified by training to hold a position. Up to the present I have had no opportunity of visiting any institution in which special courses are provided for public health nurses, though it is well known that, in New York State for example, district nurses are transformed into public health nurses by means of correspondence courses. Despite the

claims referred to, the relations between the nurses and the other officers appeared to be, in general, friendly. The pay of the public health nurse is somewhat lower than that of the sanitary officer, who receives to begin with, about 125 dollars per month, and a Ford car.

Of actual nursing, public health nurses in Virginia do nothing, the home visits they make being for other purposes, *e.g.*, follow up work. Their part in the clinics of the type already mentioned, appears to be supervising of the general conduct of the clinic and of the voluntary workers who keep records, collect any fees, and so on. The nurses do not appear to attend the dental clinics.

Of clinics for expectant mothers (ante-natal clinics) there are none in the rural areas. Occasional visits are paid by the nurses to women about to become mothers and, as already noted, correspondence courses have been prepared for them.

TUBERCULOSIS

has a division to itself at headquarters in charge of a lady, Miss Randolph, a descendant of Jefferson and an able organiser. According to Miss Randolph nothing much was done until 1916, after an investigation which revealed that the death-rate from tuberculosis in 1915 was 1.17 for whites, and for coloured, 2.70 per 1,000. The Bureau of Tuberculosis was established in 1919; before this, however, three sanatoria, one for coloured of 100 beds, and two for whites, containing between them about 450 beds, had been opened. Tuberculosis like other communicable diseases, is reportable without fee by practitioners, and at the moment there are approximately 80,000 consumptives in the State. In the cities organisations more or less on the lines followed by us are in existence, but in the rural and thinly populated areas the problem is naturally more difficult. Some attempt is made to find cases by holding clinics from time to time in various areas, and apparently a considerable number of individuals have been examined. In all cases in which sputum is submitted for examination, an attempt is made to obtain from the medical practitioner the name and address of the patient, and permission to send literature. The information, and the permission, are invariably given, and a considerable number of leaflets are distributed annually, both to persons found to be positive and to those giving a negative result. Another piece of preventive work done is in connection with children found to be ill-nourished on inspection in the schools. For the benefit of these an expert in nutrition and dietetics has been appointed to arrange demonstrations and lectures for the mothers. In this connection it may be noted, that

the nutrition expert is becoming quite definitely to be regarded as suitable for inclusion in the health department and appointments have been, and are being made in a number of States for work amongst school children, in Sanatoria, etc. If it has not been already noted, it may be mentioned here, that work in relation to housing is practically unknown in the State. There are no Housing Committees in the Counties; no Housing Acts, and no organised house-to-house inspections. The Sanitary Officers at the moment are too busily engaged in having privies and water supplies "sanitised" to do anything else. Probably when work in this direction has been well advanced, the sanitary officer will become more like our sanitary inspector, and will perform duties in relation to housing, etc., similar to those now allotted to him.

In the Sanatoria one thing that interested me very greatly was the method adopted in connection with the feeding arrangements in the patients' dining rooms, the "cafeteria" system, which involves, as explained in an earlier note, self service, being in vogue; the individual taking a tray to the serving counter, and obtaining portions of various articles. Having been served, he or she, child or adult, carries the loaded tray to a table and consumes the meal. Myself I could not have imagined any place in which such a system should have been less appropriate than a sanatorium. Nevertheless, it works quite satisfactorily, and after having been in operation for some time, is approved not only by the staff, but by the patients as well. Curiously enough, as we were to learn later, the system is not found to lead to any reduction in labour, its main advantages being that the patient's food is hotter and fresher, and there is a very great reduction in the amount of food wasted by being left on plates.

VENEREAL DISEASE

in Virginia is combated on lines very similar to those adopted in Great Britain. Like the Tuberculosis Division, that dealing with Venereal Diseases, the Social Hygiene Division so called, is in charge of a lay-woman, Mrs. Fox, well known as an organiser and teacher. The venereal diseases are reportable in Virginia. Wide publicity is given to facts regarding the dangers of these conditions by means of posters, leaflets, lectures and films, though activities have been greatly curtailed by a reduction in the amount of grant. We had the opportunity of visiting a clinic at the hospital in Richmond, and were greatly interested to learn that treatment is not given free, and that every patient attending any department is examined for the Wassermann reaction, and if found positive, is referred to the venereal disease

clinic for appropriate treatment.

ANTI-MALARIA WORK.

In connection with the work done in relation to Malaria most useful and informative addresses were given to us by Dr. L. L. Williams and Dr. Kane, who, as already explained, represent the United States Public Health Service and the International Health Board at the State Health Department. Stimulated by these two men, who are experts in this subject, Boards of Health in malarious districts are being worked up in the most splendid way. In several counties health officers have been appointed and excellent results have been obtained by draining, ditching, oiling, etc., and by recommending screening and quinine where these seemed to be the only suitable preventives.

BUREAU OF EPIDEMIOLOGY.

During our stay a very interesting morning was spent with the recently appointed State Epidemiologist, Dr. Payne, who discussed with us certain plans already put into effect and many others which he was then engaged in working out. I was interested to learn something of another new disease—new to me at any rate—variously described as Dabney's or Devil's Grip or Epidemic Transient Diaphragmatic Spasm. Of this condition some 2,000 cases occurred at the beginning of July, 1923, and gave rise to very widespread alarm. Having regard to the fact that the attack comes on without warning, and is characterised by intense epigastric pain, shooting through to the back, and there is so much difficulty in breathing that the patient appears like to die, this is not to be wondered at. The attack generally lasts only a short time, and there are only occasionally any sequelae. The cause is unknown, though Rosenau has, I believe, suggested that it may be due to a streptococcus, and may be related to influenza or encephalitis. Talking of diphtheria, Dr. Payne expressed himself as a firm believer in the efficacy of the toxin-antitoxin mixture. Most of the people I have talked to, indeed, do believe in it. If it ever is definitely accepted in England it occurs to me that as a beginning at any rate, the administration might be put into the hands of the public vaccinators, who could offer to carry it out on any individual willing to accept it. In Virginia the cost of the mixture for a course of three injections is 15 cents. Amongst the functions of the Bureau of Epidemiology are the dealing with vital statistics and the handling of biologic products.

VITAL STATISTICS.

In this matter the epidemiologist keeps in close touch with the Bureau of Vital Statistics, a department that is doing splendid service under Dr. Plecker, who, having been for many years a health

officer, appreciates what is wanted, and has developed a wonderful scheme of getting it, and also of recording it. The information upon which the epidemiologist acts is derived largely from the Bureau, but comes also from the State Bacteriologist who reports regularly as to the number of specimens received and their origin. Information as to the number of notifications received is obtained from County health officers, sanitary officers, etc. Reports of disease are unfortunately very irregular, varying somewhat with the type of organisation. In large cities it is, of course, the duty of the health officer to deal with the reports, and investigations are made at once by the inspectors who, in Richmond at least, are medical men. In counties with a full time health officer the situation is also very satisfactory. In 86 out of the 100 counties, however, there is no health officer and reports are only asked for once a month, though generally six weeks elapse before they are received. The obvious solution is to require that cases shall be reported direct to the State Board, but there appear to be so many difficulties in the way that this course cannot be adopted. No notification fee is paid in this State though in others, particularly in the north, we were informed there is provision for this. Biologic products, *e.g.*, antitoxin, are supplied by the Board, and a great deal can be learned as to the number of cases in any particular locality by watching the sales of these to the practitioners. No provision is made by the State Board for manufacturing and testing biologic products.

This note, already too long, might very easily be extended by references to very many other interesting things heard and seen, not only at headquarters in Richmond, but in the course of the tour of the State. The temptation to tell of the many kindnesses and the great hospitality we received everywhere; of the numberless items of general information we picked up—with regard to the cultivation of peanuts, for example, the price of land, taxation, prohibition, fried chicken, ice cream, and speech-making, must, however, be resisted.

MILK HYGIENE IN RICHMOND.

One thing only I must add, and that is that amongst other advantages we enjoyed was that of meeting Dr. Levy, the Director of Public Welfare in Richmond, and President this year of the American Public Health Association. One of the pioneers in the attempt to obtain clean milk, we had from him a most interesting address on the scheme in operation in Richmond, and with him an interesting tour round the dairy farms from which the city obtains its supply. It is almost inevitable, like every medical officer of health who has been in the United States,

that I shall feel at some time compelled to speak of the methods employed in this connection. In the meantime, therefore, all that I propose to say is that the inhabitants of Richmond, thanks to Dr. Levy, appear to have as clean and safe a milk supply as anyone could possibly expect. In my view, the main reason for this is that Dr. Levy possesses practically unlimited power. No one, even in the county area, may produce milk without the permit of Dr. Levy; no one has been or is given a permit till everything is to his satisfaction: regular and frequent inspections are made of all dairies, all of them outside the city limits, and the permit may be withdrawn temporarily or permanently, if unsatisfactory conditions are found, and not righted. Further, Richmond is particularly fortunately situated in that it is possible to obtain all milk from farms not far distant, and to find farmers willing to become purely producers of milk, and not general farmers producing milk as a side-line. Also, Richmond having a population of just over 170,000 is of a manageable size, genuine problems in connection with milk supply being in the really small towns or the really large ones—the former providing too little trade to make it worth the farmers while to go in for milk producing only, and the latter too large to allow of the supply being drawn from an area that can be controlled and patrolled by the city health department and staff. The system of grading in Richmond is comparatively simple, and pasteurisation is not compulsory except in the case of milks (Grade "B.") not derived from tested cows. Milk from cows proved by test to be tubercle free, and from farms that comply with a high standard may be sold unpasteurised. This is Grade "A" milk, and constitutes only about 2 per cent. of the total. All milk delivered to houses and sold in restaurants, drug stores and such like, must be bottled. The price of Grade "B" milk at the time of our visit was 14 cents per quart, roughly 10d. per quart to us, as the American quart is less than the English. Grade "A" milk is about 2 cents dearer. These prices are, of course, much more than the poor can afford, and I noted in my walks abroad that the general shops in the poorer quarters carried a suspiciously large stock of tinned milks. Dr. Levy, who went into every detail with us, explained that his aim, so far as milk supply was concerned, had been to obtain one dairy farm for every 1,000 of the population, and with his present population the number now on the list—200—was more than adequate. The day spent in the Richmond Health Department was full of interest, and the opportunity of meeting and talking to Dr. Levy was one very greatly appreciated.

NOTES FROM BRANCHES.

WEST OF ENGLAND BRANCH.

THE CARE OF CRIPPLE CHILDREN.

A small but very interesting and stimulating guide to the present position of Orthopædic work in this country has been prepared by Mr. Girdlestone of Oxford and Mrs. Hey Groves of Bristol. (*The Care and Cure of Cripple Children.* Bristol, John Wright and Co., 2s. 6d.) The former describes the national welfare scheme advocated by the Central Committee for the Care of Cripples, while the latter, in Part II, gives a list of those institutions already in existence for such patients.

One notes with regret that in the spot map of England and Wales showing Hospital Schools approved by the Ministry of Health or the Board of Education or both, the counties of Somerset, Devon, Cornwall, Wilts and Dorset are shewn as complete blanks. There is one institution at Bristol, the Redland Orthopædic Hospital, with 35 beds. This does no mean, of course, that nothing is being done for cripples in these areas, although there is reason to fear that much is being left undone if the example set by the Hospitals and associated Clinics at Oswestry, Wingfield, Windermere, Stoke-on-Trent and a few other places is to be adopted as a standard. It is probable, however, that in the next edition another group covering parts of Somerset and Wilts may be indicated since an open air ward for 30 patients, and capable of extension, will be opened in a few weeks in connection with the Bath Royal United Hospital.

Mr. Girdlestone suggests that about 5,500 beds are already available out of the 10,000 which are probably needed to cover the whole country.

THE CENSUS IN SOMERSET.

In No. 25 of the excellent series of "Somerset Health Notes" which Dr. Savage is contributing at intervals to the various newspapers in the county, some of the results of the 1921 Census are discussed.

Although there was an aggregate increase of 8,158 persons since 1911, the districts concerned with agriculture showed a very definite decrease. The indication is that in Somerset as elsewhere people are tending more and more to live in the towns or in villages adjacent to them.

Dr. Savage makes some pertinent remarks with regard to Housing. The average number of families per house has only increased from 1.03 to 1.06, though even this is equivalent to a deficiency of 2,700 dwellings. The average size

of the families has gone down from 4.13 to 3.91. A summary of the figures bearing on the housing question, however, as given in the Census is misleading, and the true facts as to overcrowding are masked, since the many cases where, for example, 3 or 4 persons occupy a ten-roomed house make the average number of persons per room seem quite reasonable. What is really needed in order to obtain a true idea of the distribution of overcrowding is a census of the number of persons per bedroom for houses below a certain average rental. Unfortunately neither this, nor any information as to the actual condition of the houses, is given, so that little fresh light is thrown on a question of great urgency.

A PEACEFUL INVASION.

We have had to thank certain members of the Welsh Branch on several occasions recently for broadcasting an army of Hertzian Waves through that part of the ether which permeates the West of England. They have brought with them what have proved to be messages of great interest from a Public Health point of view, sent out from Cardiff, and have doubtless been listened to by many thousands of people within and beyond a hundred mile radius. The County Medical Officer for Glamorgan and the Professor of Tuberculosis at the University of Wales have been chiefly responsible for these talks, which have covered a variety of subjects, including milk supply, disinfection, tuberculosis and so forth. The idea is an excellent one and will doubtless be carried much further in due course. With judicious handling, such as "5WA" is giving it, this method of propaganda has great possibilities. It must not be pressed too hard until public taste has been induced to welcome and demand a reasonable admixture of instruction with its amusement. About once a week, and at a time when the programme of the next station is not too attractive by contrast, are points which strike one at the moment.

RESIGNATIONS.

Dr. Pedley who came as Senior Resident Medical Officer to the Winsley Sanatorium some three years ago has asked the Committee to relieve him of his duties in April.

Dr. J. P. Grieves, the Medical Officer of Health for Portishead has resigned his appointment on leaving the district.

THE Medical Branch of the Board of Education has been transferred from Nos. 5 and 6, Clement's Inn, Strand, W.C.2, to 54, Victoria Street, S.W.1. Telegraphic address, "Meducation Sowest, London."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ORDINARY MEETING.

An ordinary meeting was held at the House of the Society on Friday, 15th February, 1924, the President (Dr. T. W. Naylor Barlow) in the chair.

The minutes of the last meeting having been approved and signed the following candidates were elected to the Society:—

As Fellows:

Coulthard, Harold, Livingstone, M.D., Ch.B., Glasg., D.P.H.; Cunningham, Robert, M.B., Ch.B., Glasg., D.P.H.; Gilhespy, Frank Brayshaw, M.R.C.S., L.R.C.P.; Lough, Muriel Jessie, M.B., B.S., B.Sc., Lond., M.R.C.S., L.R.C.P., D.P.H.; Morton, Eva, M.R.C.S., L.R.C.P.; Plimsoll, Ruth Wade, M.R.C.S., L.R.C.P.; Raeburn, Jas. Alexander, M.D., Ch.B., Edin., D.P.H.; Rennie, John, M.D., Ch.B., Aberd., D.P.H.; Tolmie, Peter Morrison, F.R.C.P., L.R.C.S., Ed., D.P.H.

As Associates:

Adderley, William, L.D.S., Eng.; Allin, John Freeman, M.C., L.D.S., Eng.

A number of candidates were nominated for election at the next meeting.

Owing to a misunderstanding Prof. Georges Dreyer was unable to attend, but the President promised that a date should be fixed for his paper later in the session. Dr. Charles Porter gallantly filled the breach at a moment's notice and spoke of his experiences in America as a British representative in the recent Health Officers' Interchange. Dr. Porter prefaced his remarks with a reference to the work of Prof. Dreyer and its influence in American research, and then proceeded to discuss a number of points dealt with in his series of articles appearing in "Public Health," brief mention being made of conditions obtaining in the public health services of Virginia and Massachusetts, the States visited by the group placed in his charge; of the excellent and well-equipped general and special hospitals and sanatoria; of the progress made in connection with Schick testing and toxin-anti-toxin immunisation in diphtheria; of the general excellence of the milk supply, to which largely was attributed the reduction of surgical tuberculosis and epidemic diarrhoea; and of the great amount of scientific work going on in the United States, which he regarded as the great experimental laboratory of the world. A keen discussion followed in which many members and several visitors from America and Norway took part, numerous questions being put to the speaker, who replied at some length.

The President expressed the great indebtedness of the meeting for Dr. Porter's exceedingly interesting impromptu talk, and a cordial vote of thanks moved from the Chair was carried with acclamation.

PROCEEDINGS.

HOME COUNTIES BRANCH.

The fourth meeting of the Session 1923-1924, of the Home Counties Branch of the Society of Medical Officers of Health was held at the House of the Society on Thursday, 3rd January, 1924, at 3.30 p.m.

The minutes of the previous meeting were read and approved.

The Secretary reported that he had received a communication from the Kent Branch of the British Medical Association in which it was suggested that the Home Counties Branch of the Society should nominate two of its members to their Branch Council. It was agreed that Drs. Greenwood and McMaster be the Branch representatives.

The Secretary submitted circulars Nos. 286 and 465 of the Ministry of Health dealing with the care of tuberculous persons, and circular No. 462 in reference to the administration of the Sale of Food and Drugs Act.

Dr. W. A. Muir then read his paper on "Some Remarks on the Control of Diphtheria." He pointed out the increased prevalence of diphtheria throughout the country during the past few years. He mentioned the varying explanations of this increase, varying susceptibility, varying virulence, seasonal effects, etc., but emphasised that our knowledge of the true causes were obviously incomplete. He discussed the varying strains of B. Diphtheriae and their different virulence and toxigenic qualities.

Our methods of control apart from toxin anti-toxin inoculation he described as empirical and advised that anti-toxin treatment should be given on the clinical evidences and without waiting for a bacteriological report. He questioned the necessity for the wholesale swabbing of contacts which he thought might be limited to home contacts in towns where prevalence was great and to special circumstances, e.g., a class where more than one case occurred. The isolation of contacts should be confined to carriers of proved virulent strains.

The value of a prophylactic injection of anti-toxin in contacts of a severe case and of the toxin

anti-toxin immunisation of infectious hospital staffs and of the children in residential schools was also discussed. He dismissed the older view that drain defects seriously contributed to the incidence of diphtheria.

An interesting discussion followed in which Drs. Nash, Cates, Warren, Forbes, Laird, and McIntosh took part.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

THE CENTRAL MIDWIVES' BOARD.

Sir,—Few central departments are subject to such continuous criticism as that which is directed towards the work of the Central Midwives' Board, and I venture to suggest that a regular perusal of the cases brought before it, together with the Board's decisions thereon will make anyone wonder what guiding principle is followed in judging them. At a recent meeting, for instance, there were two midwives, each charged with serious offences, and the essential evidence in each case was supplied by relatives of the patient. In the first case the midwife was charged with ignoring obvious hæmorrhages without sending for a doctor. In the second case a similar charge was made with the exception that the evidence of unavailing suggestions on the part of the relatives that a doctor should be sent for was much more definite. In the second case also there was definite evidence of other signs and symptoms which should have created alarm in the mind of any experienced midwife. The charges against the second midwife were more serious and at least as well substantiated as those made against the first. On the other hand, the second midwife was very ably defended and attended the Board with a large accompaniment of friends who were said to belong to the local County Nursing Association which was interested in the case—obviously intended as a demonstration of force in order to impress the Board, which it evidently did. The first midwife was not defended and came alone: her name was removed from the register. The second midwife received a caution!

One of the cases at a recent meeting also illustrated the urgent necessity for an entire revision of the rules with regard to the avoidance of all responsibility by midwives who claim to be monthly nurses. This particular midwife was

engaged for the case, attended when called, and on more than one occasion advised the relatives that no doctor was necessary. The case was prolonged and eventually the actual delivery took place in a nursing home. Because the midwife did not actually deliver the case no record of this case was put in her register, although she was actually in attendance on the case for one week.

Another of the cases illustrated the futility of endeavouring to supervise midwifery practice satisfactorily in any area without early visits by health visitors. This was a typical "eye" case where there was abundant lay evidence that the child was suffering from inflamed and discharging eyes for some days without a doctor being called in. The contention of the midwife was as usual, to the effect that the eyes were quite normal during the ten days of attendance. No possible solution of this continual difficulty appears to be available unless visits by the health visitor are made before the tenth day.

Such occurrences, continually taking place without any obvious action by the M.O.H. Society are very disquieting in view of the great importance of a carefully supervised midwifery service. Many other things might be mentioned, such as the unfortunate tendency of certain members of the Board to correspond with obstreperous practising midwives, but it is hoped that enough has been said to justify the creation of a permanent and active committee of the M.O.H. Society to maintain a continuous watch on the doings of the Board and to keep in touch with the Medical Officers of all Local Supervising Authorities.

I am,

Yours, etc.,

Inspector of Midwives.

THE SOAP AND WATER SCHOOL OF "DISINFECTION."

From Dr. K. Simpson, M.O.H., Barking.

Sir,—Without any pretension to being regarded as more than a humble adherent to the above School of "most progressive Health Officers," referred to by Professor Kenwood in his address published on the above subject in January's issue of "Public Health," I nevertheless feel that there are several important points that deserve some passing notice.

In an article by myself—"Home Disinfection in Scarlet Fever"—published in the "Lancet" of last September, I attempted to show that zealous though the practice of disinfection in Croydon was during the year 1900 disinfectant houses were f-

immunity from secondary infections which Professor Kenwood argues under the circumstances should have been the case. To refer to one series of my cases only, I found that out of 972 notified cases of scarlet fever removed to Hospital and their respective homes disinfected within 48 hours, no less than 85 secondary cases occurred during the first 7 days thereafter, or a percentage of 7.49 cases to susceptibles, whilst 50 additional cases occurred after that period, and prior to the return of the primary case from isolation, or a percentage in this latter instance to susceptibles of 4.35.

Diagrammatically, I further represented in the same article that the incidence of scarlet fever throughout the period bore a striking relation to whether the public elementary schools of the Borough were opened or closed. In other words, Professor Kenwood agrees—every one agrees—"the majority of such cases originate from a more or less personal transference of the disease," that is, from mild and unrecognised cases and carriers, which are mainly responsible for the spread of infection, apart, of course, from, and in addition to, instances where infection can be directly traced to contact with definite cases of the disease. Professor Kenwood goes on to say that "no one has the slightest warranty for saying that a residuum in such cases does not arise from infection left undestroyed on room surfaces." If such be the case, then disinfection gains little support indeed from the results as already detailed with regard to Croydon, were it not for the fact that I am convinced that the causes not only of the primary, but also of the secondary cases in practically every instance were very mild or undetected cases or carriers either at home or in close touch with susceptibles at school or elsewhere.

Furthermore, in those places which have ceased disinfecting room surfaces one ought to find more secondary cases occurring, in the houses since giving up disinfection than occurred while disinfection of rooms was carried out. Dr. Naylor Barlow, of Wallasey, tells me that he has not disinfected room surfaces for the best part of a year, and is getting now fewer rather than more secondary cases, and this in spite of much more than normal overcrowding, and Dr. Forbes gave me very similar details some nine months ago of his experience in Brighton.

I do not deny—no one denies—the power of disinfectants over the germs of disease, but laboratory findings carried out under laboratory conditions cannot be used as a safe criterion in judging of the efficacy of disinfectants used under entirely opposite conditions, as in the usually overcrowded artisan home.

It always seems to be forgotten that, in order to kill the germs of disease, two things are necessary, (1) a definite strength of the disinfectants, and (2) a definite time exposure of the germs to the disinfectant. These two conditions are never fulfilled in actual practice, and indeed it would be very difficult and very expensive to fulfil them.

Strange to say Professor Kenwood makes no reference to the necessity of disinfecting the personal fomites of home contacts who have been in close attendance on infectious patients, and which fomites would therefore naturally be expected to play a much more significant rôle in the spread of infection than room surfaces are alleged to do; but as a matter of fact there is no evidence that either is a factor in the spread of the disease worth considering; indeed what evidence there is all points in the opposite direction.

Although disagreeing with most of the article, I would only in closing observe that in seeking to destroy the germicidal powers of the sun Professor Kenwood has carried out his tests in October and December. It would be, I venture to suggest, much better if he would carry out the same experiments in April, May and June, as it is well known that the actinic powers of the sun in autumn and winter are very slight.

I am, Sir,
Your obedient Servant,
K. SIMPSON.

DR. ANDREW BALFOUR, until recently director of the Wellcome Bureau of Scientific Research, has been appointed to be the Director of the School of Hygiene which will be established in London as the result of the Rockefeller Foundation gift of £450,000.

THE retirement of Dr. Charles Porter as medical officer of health for Johannesburg, due on account of the age limit, has been postponed by the Johannesburg municipality for two years.

CONSTABLE

PUBLIC HEALTH CHEMICAL ANALYSIS.—By Robert C. FREDERICK and Aquila FORSTER, Ph.D., M.Sc., A.I.C.

Demy 8vo. Illustrated. 21s. net.

Medical Times.—"The book which is suitably illustrated, will be invaluable to all Public Health Chemists and Sanitary Authorities at Home, in the Dominions and in Foreign Countries. It should therefore make a wide appeal."

Guy's Hospital Gazette.—"The book is decidedly one to recommend to all who want to take their laboratory work seriously."

London Hospital Gazette.—"This book should prove of value to all engaged as public analysts and to medical men holding municipal appointments."

The Analyst.—"The Authors have produced a volume which is essentially practical and extremely clearly written."

LONDON: CONSTABLE & COMPANY, LTD.,
10-12, Orange Street, W.C.2. Bombay and Sydney.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 7.

APRIL, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free
in advance. Single copies, 2s. 6d., post free.

CONTENTS.

	PAGE
EDITORIAL—	
The Salaries Scale and the Profession ...	153
Junior Officers and the Salaries Scale ...	154
Appointment of Unqualified Medical Officers of Health ...	155
Housing and Tuberculosis ...	155
Treatment of Tuberculosis ...	156
Women in Medicine ...	156
As Others See Us ...	157
Nourishment Allowances to Tuberculosis Patients ...	157
Salaries and the Ministry ...	157
Determination of Sex ...	158
Birth Control ...	158
The Proper Spirit ...	158
Gastric Influenza ...	158
SPECIAL ARTICLES—	
"Progress and Problems in Tuberculosis" (By G. Lissant Cox, M.D. (Camb.), Central Tuberculosis Officer, Lancashire County Council) ...	159
Panel Medicines and Prosecutions (By Charles S. Thomson, M.D., D.P.H., B.Hy., Medical Officer of Health, Metropolitan Borough of Deptford) ...	162
The Etiology of Cancer ...	167
The Salaries Scale and the Medical Schools ...	170
NOTES FROM BRANCHES—	
West of England Branch ...	171
North-Western Branch ...	172
SOCIETY OF MEDICAL OFFICERS OF HEALTH—	
Council Meeting ...	173
Ordinary Meeting ...	175
North-Western Branch ...	176
Midland Branch ...	176
Metropolitan Branch ...	177
Home Counties' Branch ...	177
Yorkshire Branch ...	177
Northern Branch ...	178
Maternity and Child Welfare Group ...	178
Tuberculosis Group ...	179
Midland Tuberculosis Sub-Group ...	180
CORRESPONDENCE—	
"Central Midwives' Board" ...	182
Women in Medicine ...	183
"The Soap and Water School of Disinfection" ...	183
The Central Midwives' Board ...	184
School Dentistry ...	184
NOTES—	
Consumption Amongst Clerks ...	181

Editorial.

THE SALARIES SCALE AND THE PROFESSION.

There never was a more prompt and providential vindication of the wisdom of any action of the British Medical Association than that which was recently provided by the Court of Enquiry into the panel capitation fee. At that enquiry the low salaries of the public health service were quoted as proving that insurance practitioners are being overpaid. The disgraceful underpayment of hundreds of highly qualified men holding important public health appointments was openly dragged into the court of enquiry as an argument against the proper payment of private practitioners. In the Memorandum submitted as evidence by the Ministry of Health the following statement occurs (*Par. 33*):—

"... It is not irrelevant to consider what scales of salary have been sufficient to attract medical practitioners into whole-time employment. Appointments of medical officers of health in England and Wales in most cases require the sanction of the Minister, and statistics in regard to the emoluments of whole-time officers are available, with the exception of most county borough appointments. An examination of the appointments sanctioned during the last three years gives the following result:—

	Number of appointments.	Average age on appointment.	Average salary on appointment.
1920	46	38.8	£738.1
1921	33	40.9	£771.8
1922	18	39.2	£792

These figures relate to whole-time appointments, and in the case of recent appointments it has been a condition that the candidate should possess the D.P.H. in addition to the ordinary qualifications required for admission to the *Medical Register*. The average salaries of tuberculosis officers range from £500 to £600, and those of chief tuberculosis officers from £700 to £850. There are a few exceptional posts carrying a salary of £1,000 or over, but they are too few to affect the average appreciably. These figures indicate that for public health appointments men of superior qualifications, and in the case of M.O.H. appointments, men approaching middle life, can be secured for salaries in the neighbourhood of £800. It is, of course, admitted that public health appointments offer other

attractions, such as security of tenure, more regular hours of work and freedom from night calls, and a less arduous life than that of a busy general practitioner; and it must also be admitted that attempts are being made to improve these terms, but these are the actual facts of recent experience and the figures are significant. But these figures would seem to negative the suggestion that a capitation rate, whether of 8s. 6d. or 7s. 9d., which means a gross income of £850 or £775 from a list of 2,000 insured persons, without counting private practice, would be insufficient to maintain the recruitment of the profession."

The irony of the statement contained in the above quotation to the effect that, "It must be admitted that attempts are being made to improve these terms," is evident when it is known that these attempts are not only receiving no support from the Ministry, but are actually receiving opposition. If the whole facts of the case had been put forward there is no doubt that the court of enquiry would have realised that the present rate of remuneration paid to the public health service constitutes a serious scandal. This, however, is by the way. The moral of this statement by the Ministry of Health is that if experts in preventive medicine can, in middle life, be secured for salaries of less than £800 a year, why pay any higher rate to an insurance practitioner, or, if it comes to that, to any other kind of practitioner.

Here we have clear proof that the profession is one and indivisible from the economic point of view as well as that of practice, and those who have been showing a lack of enthusiasm in pressing the new scale should now be convinced that the Association was not a moment too soon in making a move in this matter. Specialists in other kinds of medical practice will see it before long.

Fortunately, the seriousness of the position is fully realised at the headquarters of the British Medical Association, and the monthly circular, issued by Dr. Cox, the Medical Secretary of the B. M. A., contains some very straight talk to the Divisions and Branches on this important subject. In his circular he makes the definite statement that, "Many of our Divisions evidently still do not understand how serious the question is, not only in the interests of an important section of the profession, but for the prestige of the B. M. A."

I wonder how many general practitioners, not to speak of consultants, would like to think that with an income of well under £1,000 a year, they had reached the summit of a successful career in their profession! Yet this is the position of many medical officers of health who are first-class men in their own line, and have great responsibilities. The circular also contains some very straight talk to those doctors who are members of town

councils and education committees, and who take up an attitude which undoubtedly leads other members of these authorities to think that the only question for public authorities to consider is for how little they can get public work done, although the same people have no hesitation in paying good fees to the private practitioners of their choice.

The circular also goes on to urge all those Divisions and Branches that have not yet had a thorough discussion of the scale, and have not yet decided how best to secure its adoption in their own area, to arrange for immediate consideration of the same. Unless some action is taken promptly and pretty generally by Divisions and Branches all over the country to press the scale upon all local authorities within their area, the struggle is likely to be indefinitely prolonged. By bringing the scale immediately before every local authority and using the whole influence of the local profession to secure its adoption, the existence of the scale would be definitely and conclusively put before the local bodies all over the country. It would not be possible in future for them to pretend that they had not heard of the scale, and when a vacancy arose, if the scale had not already been adopted, the whole strength of the profession could be organised in the conflict. To wait for a vacancy before pressing the scale on every local authority is to create disaster in a large number of cases, and such a course will encourage the present dangerous tendency of many local authorities to evade all publicity, and to avoid advertisement of a vacancy by promoting some assistant who may find it difficult to resist the temptation held out to him. Every danger to the scale is accentuated by neglecting the present opportunity to press the scale upon local authorities, and we hope that this omission will be rectified at the earliest possible moment. The time is undoubtedly ripe, as many authorities have adopted the scale for their advertisements of vacant positions, and a little pressure would induce a considerable number to adopt it wholly for their existing staffs. As soon as these successes had been secured, the majority of the remaining authorities would undoubtedly follow suit, and success would be achieved.

JUNIOR OFFICERS AND THE SALARIES SCALE.

Excellent illustrations of the effect upon the salaries of junior officials, resulting from the acceptance of underpaid senior appointments by junior officers, are afforded by recent happenings in the County of East Suffolk and in the Metropolitan Borough of Southwark. In East Suffolk a young

assistant in the County Health Department was induced to combine the duties of medical officer of health and district tuberculosis officer at a salary below that of the scale figure for the post of medical officer of health alone. By this action a severe injury was inflicted upon the whole of the public health service, but the particular way in which it injured the junior officers is now becoming obvious: the County Council is attempting to obtain a tuberculosis officer at a salary of £500 per annum as against the minimum scale salary of £700.

Similar developments have occurred in Southwark. The Borough Council were successful in securing a medical officer of health at an inadequate salary, and are now pursuing their advantage by appointing a cheap tuberculosis officer. Formerly, the tuberculosis officer was paid at the rate of £750 per annum, but the success of the Borough Council in securing an underpaid medical officer of health has encouraged them to attempt to fill the vacancy at £600. Doubtless, in both these districts, the evil effects of the filling of the senior appointments at inadequate salaries will revert throughout the whole of each department, resulting in underpayment for everyone. A curious fact bearing upon the position of affairs in Southwark is the attitude of the Council with regard to employing non-union labour for their printing work. They have recently preferred to pay an extra £300 on a printing tender rather than employ a firm using non-union labour.

APPOINTMENT OF UNQUALIFIED MEDICAL OFFICERS OF HEALTH.

After years of hard work and continual pressure, and in the face of the most strenuous opposition on the part of every reactionary force in the country, the Sanitary Officers Order of 1922 was issued. This Order makes it compulsory for every appointment of medical officer of health to be subject to the approval of the Ministry of Health, and it forbids the appointment, or reappointment of any person as medical officer of health of any district unless, in addition to the qualification prescribed by statute (i.e., the ordinary medical qualifications), he also possesses a special qualification in public health. The only exception possible is when the man not so qualified has had not less than three years experience as a medical officer of health. Unfortunately, the Minister of Health is given power under Article 21 of the Sanitary Officers Order, 1922, to dispense with any of the requirements of the Order in any case in which it appears to him desirable so to do, provided that the Ministry is satisfied that the interests of any person will not be prejudiced thereby.

Recently the Medical Officer of Health for the

Alton Urban District resigned and the post was advertised, and at least one application was received from a fully qualified and well experienced candidate. In spite of the fact that a fully qualified applicant was in the field, the local Council decided to appoint the partner of the resigning Medical Officer of Health, a practitioner without any public health qualifications. The Council sent deputations and numerous letters to the Ministry of Health, and practically defied the Ministry, with the extraordinary result that the Ministry have now sent a letter which amounts to an entire climb down, and a half sanction (presumably to be followed later on by a full sanction, if the matter is allowed to rest in that position) of the appointment of the man without public health qualification.

Public health progress in these small districts will be impossible if district councils are encouraged in this way to defy the Ministry of Health and public opinion, and to appoint as medical officers of health men who have had no training in, and are not particularly interested in, public health matters, and whose pecuniary interests, moreover, are directly opposed to public health progressive work.

HOUSING AND TUBERCULOSIS.

Medical officers of health are fully justified in calling public attention to the deplorable housing conditions which exist in most parts of the country. The case for an improvement in housing conditions is so overwhelming that it is unfortunate to find it associated with arguments which, on investigation, appear to be without substantial foundation. One of the common arguments used is the alleged association between housing and tuberculosis. This argument should always be used with considerable diffidence as there is very little in support of it except a general impression and a general association between poverty and tuberculosis. The fact that tuberculosis is more frequent amongst males than females certainly does not point to a preponderating influence of housing circumstances upon that disease, and this fact receives substantial support in a very significant article in the *Economist Trade Supplement*, on the German population, in which the figures given in the statistical year book of the Reich (1921) are analysed. These figures show that during the war, "owing to the employment of female labour, the female mortality from consumption rose above the male mortality, whereas in general the reverse is the case." The tuberculosis problem is far too complicated to be solved by the removal of one possible factor, and the evidence at present available does not support the suggestion that housing is the most important factor.

TREATMENT OF TUBERCULOSIS.

CIRCULAR 479, MINISTRY OF HEALTH.

The following Circular, dated March 3rd, 1924, has been issued by the Ministry of Health:—

"I am directed by the Minister of Health to refer to paragraph 2 (d) of Circular 257, dated the November 3rd, 1921, in which Local Authorities were advised that they should require a contribution towards the cost of the residential treatment of persons suffering from tuberculosis (other than ex-service men whose disease has been held to be attributable to or aggravated by War Service), in cases where the financial circumstances of the patient were such as to justify a charge; but that it was important that nothing should be done which would be likely to deter persons who are in need of residential treatment from accepting such treatment, and that a charge should only be made in cases in which the Authority were satisfied that the patient was in a position to contribute towards the cost of treatment.

"The Minister has received certain representations in regard to this matter, and he desires to impress upon Local Authorities that, in considering whether a patient is in a position to contribute towards the cost of treatment, they should have regard in each case to the question whether a charge could be made without detriment to the patient's ability to provide proper and adequate maintenance for himself and his dependents, and that no charge should be made unless they are satisfied on this point."

The Ministry should be congratulated on the prompt action which has been taken presumably with the intention of relieving the situation in connection with the contributions which have been extorted in the past from poor people towards the cost of their sanatorium treatment. We are quite willing to believe that such is the intention of the foregoing circular, but we are confident that it will almost certainly fail entirely to achieve its object unless an amending circular is issued. Circular 479 will, in practice, have the effect of underlining the objectionable features of its predecessor (Circular 257), and it may even make things worse than before. Local authorities who are at the present time administering the principles of Circular 257 harshly, will very easily convince themselves that they are carrying out entirely, the principles referred to in Circular 479.

The wording of the Circular would suggest that its author was under the impression that sanatorium treatment is only provided for wage earners or other persons with dependants, and the irony of the situa-

tion created by the Circular is that this is the one type of patient which has been in most districts protected from demands for contributions. A person with dependants is the wage earner, and as his wage earnings obviously cease when he goes to an institution, it is usually possible to persuade committees not to require any contributions in such cases. The difficult and, unfortunately, common case, is that of a patient in the family of a man with three or four or more children with a wage of about £1 10s. 0d. per week. If one of these children, predisposed to such disease by lack of nourishment, develops tuberculosis, and is sent to a sanatorium, the local committee, on reading Circular 479, will probably continue to apply the principle that as the father has no longer to maintain the child in his own home, he can afford to pay something towards treatment in the sanatorium. In such cases, therefore, the pitifully small sums will continue to be extorted from parents, and the low standard of living in these families will continue, or even be exaggerated, with the result that another case develops later on.

In many areas there is no revenue from these contributions as the expense of collecting, etc., exceeds the amount collected.

WOMEN IN MEDICINE.

In our February issue we referred to the increasing frequency with which letters have been received from qualified medical women who were finding it impossible to make a decent living in general practice, and who appeared to regard a public appointment, on almost any terms, as their only remaining hope. We suggested that in view of these facts, it appeared undesirable that the speeches and inspired paragraphs holding out alleged wonderful opportunities and careers for women in medicine in general, and in public health in particular, should be discontinued, as they tended undoubtedly to mislead young women and their parents with regard to the opportunities offered to them in medicine.

Our remarks receive striking confirmation when the list of applicants for recently offered underpaid appointments are considered. We have before us the list of candidates for three recent vacancies where the salary offered was £500, *i.e.*, below the minimum of the scale. For the first vacancy two women practitioners applied, and one male practitioner who was qualified 40 years ago. For the second vacancy the applicants included seven women and a (presumably) pensioned officer. For the third vacancy the same ex-officer was the only male candidate, together with six female applicants.

The absence of men candidates for these underpaid appointments and the presence of numerous female applicants, can only be explained in one of two ways. Either the sense of professional loyalty is lacking in female practitioners, or the stress of their present circumstances is such that the temptation to apply even for underpaid appointments is much greater than it is to men. We prefer to accept the second solution, as we have no reason to believe that the loyalty of women is less than that of men.

AS OTHERS SEE US.

We have had the pleasure of reading a joint report made by Dr. de Boissezon, Departmental Inspector of Hygiene in the Ardennes, and Dr. Cavaillon, Director of Hygiene of the Aisne, on the Public Health Service of Great Britain. These gentlemen were two of the foreign doctors who recently visited this country with a view of becoming acquainted with English Health Administration. A perusal of the report shows that, not only have they been well instructed, but that they have grasped in a very complete manner the principles underlying public health activities, and also the details of administration. Nothing is omitted, and to show how really up to date is the information contained in the report we will give two examples: (1) the fact is mentioned that after January 1st, 1924, the Public Health course will occupy two years; and (2), it is stated that, in general, Medical Officers of Health desire that the work in connection with the medical inspection of school children should be removed from the direction of the Board of Education. Their conclusions are very flattering to the Service, for they describe themselves as having the double sentiment of admiration and emulation, and of having had the impression that a grand attack is being made against sickness and death by an army of combatants well trained and well disciplined. While they realise that France is a long way behind England in its sanitary organisation, and they have a good deal of leeway to make up, they hope that, at any rate, a commencement will be made on English lines. They are loud in their praises, too, of all those who made their visits so successful, and especially do they mention the Society of Medical Officers of Health and the Executive Secretary, Mr. Elliston. Incidentally, the fact is also mentioned that the Medical Officers of Health are banded together in a "powerful professional organisation."

These French gentlemen have described the numerous activities of the Public Health Service

in a way which could not be surpassed even by an Englishman intimately associated with the Service, and if any layman wishes a real bird's eye view of the situation we cannot do better than recommend to him a perusal of this report.

NOURISHMENT ALLOWANCES TO TUBERCULOSIS PATIENTS.

Local Authorities have power to grant additional nourishment to tuberculous patients, but the scope of these allowances was very strictly limited by a circular from the Ministry. Under the limit which has been imposed it is not possible in many areas to grant an allowance of more than one-and-a-half pints of milk a day to any particular patient, and even with this strict cutting down of the allowances a very great amount of selection of cases has to be exercised.

Circular 474, issued by the Ministry of Health on February 8th, 1924, relaxed the restrictions on public health expenditure upon maternity and child welfare, tuberculosis, venereal diseases, welfare of the blind, and port sanitation, so that matters revert generally to the position which previously existed. It was hoped that the new Circular included a relaxation in the restriction of nourishment allowances to tuberculous persons, but inquiry at the Ministry has elicited the reply that the relaxation does not refer thereto.

Administratively, this restriction is uneconomical. Many cases would do quite well at home if there could be made a fairly generous allowance of nourishment, but the fact that a proper allowance is impossible under the present restrictions makes it essential that many cases should be removed to a sanatorium at a considerably greater cost to the public.

SALARIES AND THE MINISTRY.

At the commencement of the salaries campaign there were members of the public health service who cherished the idea that in the Ministry of Health there was a substantial and influential body ready at any time to help the public health service, and to insist that such service ought to be staffed by first-class men likely to commend the confidence both of the public and of the profession. We doubt whether any of those members still cherish such beliefs. There has been a series of incidents which illustrate clearly the views of the Ministry. Local authorities showing a disposition to adopt the scale have been told that the proposed salary was "rather high," or that competent medical officers could be secured "for a lower amount." The intention of the Ministry evidently is to force local authorities

to hire in the cheapest possible market. The high ideals written and said concerning the advancement of preventive medicine, and the vast value of efficient health administration, do not reach so far as the payment of adequate salaries. Recent illustrations of this extraordinary attitude on the part of the Ministry of Health have occurred at West Hartlepool and St. Helens. In both these cases the appointment of a whole-time assistant medical officer at the scale minimum salary of £600 was proposed. This minimum is being paid at the present time by a large number of local authorities, who have thereby succeeded in securing efficient medical officers. The Ministry of Health are suggesting that local authorities should be content with cheaper men. "It has been found possible," say the Ministry, "to secure the services of an assistant medical officer at a lower amount than £600 per annum," and West Hartlepool and St. Helens have been asked to explain why they propose to pay more.

DETERMINATION OF SEX.

The Academy of Medicine has appointed a special commission to investigate a method of ascertaining the sex of a child four months before its birth. This method is the discovery of a Czechoslovakian scientist, Isaac Fried. Starting with the Bordet-Wassermann reaction as the basis of his investigations, Dr. Fried has devised a process of diagnosis by means of which the examination of one drop of blood from the expectant mother enables him to tell whether her child will be a male or a female. On his discovery being communicated to the Academy of Medicine this body decided that it was so important as to warrant close study by a picked body of savants. Dr. Fried's theories have already been tested with remarkable results, first at the Serological Institute of his own country and more recently in the maternity service of the Lariboisière Hospital in Paris, where they proved successful.

BIRTH CONTROL.

The motion before the Cambridge University Debating Society recently was: "That, in the opinion of this House, the wider application of Birth Control would constitute a major remedy for the social evils of to-day." The house was packed.

Proposing the motion, Mr. J. Busse (Corpus Christi College) said that the State should deliberately give encouragement to birth control. It

might be held that this would encourage immorality, but in his opinion it would decrease illegitimacy, which was a far better object to accomplish.

The opposer of the motion, Mr. G. W. Lloyd (Trinity College), contended that birth control was not a method to maintain the quality of the race.

Lord Dawson, of Penn, speaking in support, said in his opinion choice was better than chance, because it was more humane and effective. There was no doubt that birth-control was extending to the better class of artisans. It could be used for unworthy purposes, but the abuse of the thing was no argument against its use. Early marriages were an advantage to a community.

The Bishop of Exeter opposed the motion, but it was carried by 479 votes to 236.

THE PROPER SPIRIT.

At a recent public meeting Miss Margaret Bondfield, Parliamentary Secretary to the Ministry of Labour, referring to the Ministry of Health, said, "We have got a Ministry of Health in form, but not yet in spirit. I shall not be satisfied that we have got a real Ministry of Health until it is doing real preventive work, and not waiting, and then clearing up the mess." This is exactly what medical officers of health have been saying for a long time. We badly need a real lead from the Ministry of Health, and we hope to see evidence of the new spirit in the near future.

GASTRIC INFLUENZA.

Alarming accounts of the sudden nature of the attack of gastric influenza are being received from all parts of the country. The sudden vomiting, diarrhoea, and prostration which occurs is very likely to suggest an attack of food poisoning. An outbreak occurred recently at Bradford, where all kinds of fantastic explanations were made as to the origin of the alarming and sudden symptoms, including the suggestion that the cases were due to poison from the fumes emitted from a local destructor. Dr. J. J. Buchan, M. O. H. for Bradford, explained, however, that throughout the town there had been similar cases of sickness and illness. Dr. Buchan described the cases as belonging to an outbreak of influenza of the gastric type, accompanied by considerable vomiting and weakness. In the present outbreak the proportion of gastric cases appear to be much larger than usual.

"PROGRESS AND PROBLEMS IN TUBERCULOSIS."*

BY

G. LISSANT COX, M.D. (Camb.), Central Tuberculosis Officer, Lancashire County Council.

I have had much difficulty in deciding what subject to take and how to treat it for my Presidential Address. It has seemed best to deal with tuberculosis rather than any other set of subjects or survey of public health matters, and in doing so to discuss some of the difficult and more or less intangible aspects of the tuberculosis problem, illustrated where possible by concrete results of our own ten years' work in Lancashire. I shall not attempt a general survey, partly because it would be dull, and partly because I have no summary of the enormous volume of work continually poured out on tuberculosis to put before you. If an administrator wishes to keep fresh and unbiased the less he reads the better. Some may expect that I might deal with such burning questions as the value of Mr. Spahlinger's treatment or the wares of Mr. Stevens, but here again such topics are best entirely left out.

As everyone knows, within the last few years there has arisen within the public health service a large body of men—tuberculosis officers—who total in England and Wales not less than 340. It is common knowledge that tuberculosis work is not everywhere proceeding entirely smoothly since the appointment of this great number of tuberculosis officers. It is not easy to account for this, but the point is worth while discussing, because it will force us to define our standpoint with regard to certain fundamental aspects and measures required in dealing with this particular disease.

Is it yet settled what a tuberculosis officer ought to be? Is there a clear conception of what his work should consist, or the standard his work should attempt to reach, or its relation to other public health work? It is the different conceptions of these points that have led to the unrest in the tuberculosis service. Perhaps the issue can be narrowed down: should a tuberculosis officer be a clinical expert pure and simple, or, on the other hand, one who is merely an aid in the supervision of official tuberculosis public health requirements? All are not agreed that

* Being a Presidential Address read on October 13th, 1926, at a meeting of the N.W. Branch, held in Manchester.

the results in the treatment of persons suffering from tuberculosis are commensurate with the expenditure. If one believes that there is nothing to be gained on the part of the individual patient by various forms of treatment it is clear that to develop a clinical side to tuberculosis work is a waste of money and effort. If such is the view of a medical officer of health or tuberculosis officer, you cannot expect him to regard work which may be attempted by a first-rate clinical officer with any sympathy or enthusiasm. What does one mean by a first-rate clinical officer? I mean one who is responsible for a population of sufficient magnitude, who has facilities so provided and the work so organised that he can, if he has any natural ability, be a real specialist in tuberculosis, and not merely one in name. How many of the 340 tuberculosis officers throughout England and Wales can, themselves, take and interpret X-ray photographs, a method which, as regards tuberculosis, gives much more valuable results than if sporadic cases are sent to a general X-ray expert? Again, how many authorities still have no provision for sending children with non-pulmonary tuberculosis to institutions like Leasowe or the Lord Mayor Treloar Hospital at Alton?

It is possible to approach this from another angle. We are all familiar with the lamentations which are frequently made concerning the number of non-notified cases of tuberculosis. If, however, one begins with the fundamental proposition that nothing can be done as regards treatment for the individual consumptive found in an early stage or late, surely a public health department taking that view cannot expect anything except large numbers of non-notified cases, or a very large number of late notifications. It is no use isolating the advanced cases if all the time early cases are allowed to develop into late cases before coming under the public health authority.

For persons with pulmonary tuberculosis we are, doubtless, agreed that treatment as regards drugs is of no avail at present. As most of you know, the latest reports of treatment by the vaccine prepared by Professor Dreyer are not nearly so favourable as the earliest reports, which received an astonishing boom in the newspapers. Professor Dreyer in his animal experiments, which were, however, few in number, had produced more successful immunity than any other worker. It is strange why active immunity cannot be produced in animal or human subject to tubercillus, but such is the fact up to the

day. But what a consumptive wants is education in a new mode of living in order that, with increased resistance, he may fight successfully this disease. In this wide sense, treatment, surely, is of real value. To get this treatment accomplished two points are of vital importance: the education of the patient in his new mode of living must be begun as early as possible in the disease, and for this to be done the tuberculosis officer requires every conceivable aid as a help in diagnosis; and secondly, the majority of early cases require a period in a sanatorium.

Now there is no aspect of the tuberculosis problem about which more controversy rages than the value to be derived by a patient from treatment in a sanatorium. The way to settle the controversy would be to compare sanatorium treatment with home treatment in two groups of patients, similar in age, sex, environment, and severity of the disease. To compel persons to undergo certain treatment for experimental purposes has not been done—probably it is impossible. During the last ten years, however, records have been kept of all cases in Lancashire that have been treated either at a sanatorium or at home. No advanced cases are taken into account in this survey, only early or intermediate ones. Indeed, much of the present-day pessimism with regard to sanatorium treatment is due to the taking of advanced cases into institutions and calling this sanatorium treatment, and to the quite unwarranted hopes which were held out at the commencement of sanatorium benefit, some ten years ago. Of 3,950 *early* and *intermediate* cases in Lancashire, of whom 2,270 went to a sanatorium, and 1,680 did not, the deaths among those who entered upon treatment during the five years 1914-1918 were as follows:—

(a) Patients with *negative* or *absent* sputum—

16 % of the sanatorium cases had died at the end of 1922.

42.6 % of the non-sanatorium cases had died at the end of 1922.

(b) Patients with *positive* sputum—

66.2 % of the sanatorium cases had died at the end of 1922.

84.8 % of the non-sanatorium cases had died at the end of 1922.

As regards the prolongation of life, these results are in favour of sanatorium treatment. Even if they were less favourable, it must never be forgotten that, from the more important side of prevention of the disease a stay in a sanatorium in the main, a definite educational result on patient, his family, and his friends.

I referred earlier to notification and to the many complaints appearing from time to time that persons are either not notified at all when suffering from tuberculosis, or are notified when in an advanced stage of the disease, so that they are unable to obtain full benefit from a tuberculosis scheme. As regards cases which are not notified at all, the published figures from different areas vary very considerably, and Glasgow with 5 per cent., and Lancashire with 8 per cent. only of persons dying without notification of the case may, at the other end, be compared with such figures as Derbyshire, 41 per cent., in 1921, and Bolton, 39 per cent.

Why are there these considerable differences? There is a very good tuberculosis scheme in operation in Glasgow, and we flatter ourselves in Lancashire that we are not at the bottom of the list, but the efficiency of the tuberculosis scheme including the standing of the tuberculosis officers with the doctors, while perhaps a considerable factor, can hardly be the entire explanation of the very big difference in these figures. At any rate the Lancashire figures have moved in a very satisfactory way during the last five or six years as shown below:—

Proportion of non-notified fatal cases of pulmonary tuberculosis to total pulmonary deaths.

1918	...	18 %	1921	...	10 %
1919	...	16 %	1922	...	8 %
1920	...	13 %			

They are helped by the very cordial relations which exist between the staff and the family doctors throughout the County, for practitioners send about 76 per cent. of all new cases for an opinion as to diagnosis before the official particulars of notification reach the tuberculosis officer or are put into operation. This sounds a very satisfactory figure, and it is undoubtedly so, and in any area is a measure of the value of the consultant tuberculosis officers assessed by the general practitioners.

But the figures for late notification, that is to say, persons who are first seen by the Tuberculosis Officer in an advanced state of the disease, which are shown below are high and practically stationary.

Deaths of persons from pulmonary tuberculosis within three months of notification.

1915	...	26 %	1919	...	27 %
1916	...	28 %	1920	...	26 %
1917	...	27 %	1921	...	28 %
1918	...	25 %	1922	...	27.8 %

From the point of view of the clinical officer, and also the administrative officer they are unsatisfactory, because it is evident that few, if any, of these would be likely to have the disease

arrested, and that the cases have been uncontrolled, and have been spreading infection in their houses, and at places of work, and elsewhere.

Doctors cannot wholly be blamed for these high figures of late notification, for we have found in Lancashire after several years of very careful investigation that only some 12 per cent. of these cases can be put down to real negligence or incompetence on the part of the practitioner. Why is it we have this unsatisfactory state of affairs? Why do so many cases come first to us in an advanced state of the disease? The reasons are many, and, apart from economic causes, perhaps the most fundamental is a widespread belief amongst the general public that no treatment is of any use for consumption, or, at any rate, any official treatment such as is given in the tuberculosis scheme of a County Council or County Borough Council.

To return once more to the different conceptions as to a tuberculosis officer's work. A tuberculosis officer should be neither a clinician pure and simple, nor merely a supervisor of public health requirements. He ought to be a first-rate clinician, and be looked upon as a consultant by the doctors in general practice, and everything ought to be arranged to enable him to be this, but also he must have administrative ability and a public health outlook, for the more he combines these two the sooner will the tuberculosis death-rate (now half what it was 30 years ago, and still falling) become steadily lower and lower, which is the real goal and aim of all our work. A perfect scheme would include satisfactory salaries—they would have to be much higher than the present average—all modern aids to diagnosis, such as X-rays, a laboratory, a hospital to which the tuberculosis officer could send and attend his own cases, and so on. It is all quite simple on paper, and why is it not carried out? Putting on one side the argument that clinical tuberculosis work is valueless—an argument I have dealt with—we are met with the fundamental difficulty of the size of administrative areas in this country. What may be easily financed by a large authority cannot be done by a very small authority, unless the small authorities as regards tuberculosis were to combine. Equal sanitary areas like equal electoral districts may come in the future—I should not be surprised if a Labour Government tried to establish them. But at the present time this great variation in the size of local administrative areas plays the largest part in the incompleteness of tuberculosis schemes, and the meagre and unsatisfactory conditions under which so many

tuberculosis officers have to work. These conditions in addition help to lower the standard in

Comparative Pulmonary Tuberculosis Death-rates according to Percentage of Female Textile Workers.

Percentage of Textile Workers to Occupied Females.	Districts included.	Census Population 1921.	Average Textile Workers per 1,000 Occupied Females.		Pul. Tub. 1921 Death-rate per 1,000 of Sex. Population.		Average No. of Rooms per Person.†
			No.	Of whom are Weavers	M.	F.	
50%	Blackrod Rawtenstall Blackburn (R.)	M. 19,620 F. 22,756	583	402	0.50	0.61	1.06
60%	Adlington Longridge Norden Preston (C.B.) Radcliffe Tottington Bury (R.) Chorley (R.)	M. 89,297 F. 103,691	654	443	0.68	0.60	1.05
70%	Croston Accrington Chorley (B.) Clitheroe (B.) Colne Little Lever Ramsbottom Withnell Burnley (C.B.) Blackburn (C.B.) Kirkham	M. 171,173 F. 198,979	750	567	0.76	0.55	1.08
80%	Barrowford Brierfield Burnley (R.) Clayton-le-Moors Darwen Nelson Oswaldtwistle Walton-le-Dale Church Great Harwood Haslingden Padiham Rishton	M. 94,851 F. 109,225	826	648	0.60	0.49	1.08
.....	Administrative County	M. 829,702 F. 916,716	...	...	0.82	0.67	1.08

*The male death-rate is given as a guide and for comparison with the female death-rate, with which the table deals.

†The housing particulars, taken from Census (Lancashire edition), 1921, relate to the average number of rooms per person in families living in 1-9 rooms.

large authorities, especially where the authority is a reactionary one.

There are in Lancashire, as elsewhere, interesting problems connected with the uneven distribution of the disease. If we take East Lancashire as a whole we find that the County Borough of Blackburn and the County area around it have a much lower death-rate from pulmonary tuberculosis and fewer cases per 1,000 of the population than, say, Oldham and district. This is largely due, I think (as was suggested long ago by Dr. Greenwood) to the difference in the main industries of the two areas—cotton weaving in Blackburn and district, cotton spinning in Oldham and district. But Blackburn and district has a lower death-rate than Burnley and district—both of which are weaving areas—and the only factors we have yet discovered in favour of the lower rate in Blackburn are a slightly higher number of rooms per person in Blackburn, and far fewer persons there engaged in mining and quarrying work than is the case with Burnley and district.

The table on previous page is an illustration of the very low death-rate in County districts where both the percentage of textile workers to occupied females and the number of weavers per 1,000 occupied females is greatest.

I have dealt so far with what may be termed problems in tuberculosis, and before concluding I would like to mention some aspects of the disease which illustrate our progress with it. First, we have in Lancashire, in common with other places, had a decline in the death-rate from pulmonary tuberculosis since the end of the war, and in actual fact our figures for 1920-21 were each of them successively the lowest on record. Last year the death-rate went up slightly, due probably to the uncontrollable factor of unemployment, but this year again, I think, there will almost certainly be a further decline. Second, as regards our new cases we have had since the war each year a steady fall for the last four years, and our average notifications for the last three years 1920, 1921, and 1922 has been only 85 per cent. of the three years 1917, 1918, and 1919. If this fall were to continue the tuberculosis staff will have to be pensioned off in a few years' time. Third, with regard to the case mortality this remained stationary for 1919, 1920, and 1921, but last year rose slightly, probably also due to economic conditions. As all these results are based on a population of over 1½ millions the general outlook may be considered very hopeful.

PANEL MEDICINES AND PROSECUTIONS.

BY

CHARLES S. THOMSON, M.D., D.P.H., B.Hy.,
Medical Officer of Health, Metropolitan Borough
of Deptford.

The London Insurance Committee wrote asking the Deptford Borough Council to co-operate in obtaining panel medicines for analyses. Their letter was to be regarded as an authorisation for obtaining the said prescriptions from panel doctors.

I wrote out two prescriptions, a Bromide one and a Potassium Iodide one and sent them to the panel doctor with the names and addresses of six ladies (acting as patients) asking him to write out six of each prescription on panel forms. The prescriptions were:—

- (1) B. Potassium Iodide 3 i.
Syr. Aurantii 3 vi.
Aqua ad 3 xii.
Misc. Fiat. Mistura.
3 ss. ex aqua tds p cibos.
- (2) Potassium Bromide.
Sod. Bromide aa 3 iv.
Syr. Aurantii 3 vi.
Aqua ad 3 xii.
Misc. Fiat. Mistura.
3 ss. ex aqua tds p cibos.

Some weeks before, I had sent to the Public Analyst similar prescriptions, asking whether these would be suitable from his point of view and he answered in the affirmative. Twelve-ounce bottles were procured and two were given with two prescriptions to each of the six "patients" who were requested to go to two chemists each. Six Food and Drug Inspectors saw the six patients and arranged to meet them and go back to the chemists for the medicines. The Inspectors entered the shops as the bottles were handed over to the "patients" and they offered to pay for the same, stating that the medicine was for analysis, making the usual declaration; divided into three parts, etc. The Inspector asked for the return of the prescription. He also asked for the name of the proprietor of the business—a point referred to below. Two of the prescriptions were returned by the chemists and ten were retained. Copies of the prescriptions were kept by me with the necessary facts, and copies were sent to the Public Analyst before he commenced his analysis.

The Public Analyst reported that seven of the twelve samples were genuine. His report showed that he had calculated the results on the Imperial

Scale whereas I had prescribed on the Apothecaries Scale.

One sample was 73 % deficient in Potassium Iodide; one was 9 % and one 8.5 % deficient in Bromides. One had 16.8 % excess of Bromides and one 10.8 % excess of Iodide. I advised prosecutions.

The Council's solicitor, Town Clerk and I consulted and felt it desirable to suggest Counsel's opinion, as the defendants would be represented by a barrister acting for the Chemists' Defence Union. Counsel agreed that the prosecutions should go on, and that section 7 of the Sale of Food and Drugs Act, 1875, was the more appropriate section, though summonses could quite properly be issued under section 6 instead, or under both sections alternatively; that the question of "purchaser" was important and that the Food and Drugs Inspectors should be regarded as such. He said that the language of section 14 of the 1875 Act and of other sections would create difficulties if the Insurance Committee were alleged as the purchasers. The doctor (panel) who wrote out the prescriptions would not necessarily be called, but the Public Analyst and Medical Officer of Health would need to be called to explain the meaning of the prescriptions. The defence should be asked whether they required the Public Analyst to be present in Court (section 21 of the 1875 Act). The identification of the prescriptions was important; the Medical Officer of Health would need to identify the copies.

Five summonses were issued. The chemist summoned for having 10.8 % excess of Potassium Iodide wrote stating that he had construed 3 i to be 480 grains, that he was correct in so doing and that therefore his excess was only 1 % and not 10.8 %. I had intended that the prescriptions should be read as Apothecaries weights but the Analyst had analysed on the Imperial (Avoirdupois) weights according to the existing 1914 British Pharmacopoeia. On the Imperial scale, he found that seven chemists were right; seven had construed the prescriptions on the Imperial and not the Apothecaries scale. I foresaw that there would be a discussion in Court as to the meaning of the symbol 3 i.

On receiving the Public Analyst's report, I had written out a full statement for the Council's solicitor explaining the different tables of weights and measures and quoting (*re* the drachm) the B.P., 1914, Whitla, 1923, The Extra Pharmacopoeia, 1922, Hale White's *Materia Medica*, etc., 1920, and The Art of Dispensing, 1921, and explained that if the Court ruled that the drachm was 60 grains (Apoth.) and not 54½ grains

Imperial), this would mean that:—

- Case 1 would be 75.4 % deficient in Iodide and not 73 % as alleged by the Public Analyst.
- Case 2 would be 17.1 % deficient in Bromides, not 9 %.
- Case 3 would be 16.7 % deficient in Bromides, not 8.5 %.
- Case 4 would be 6.4 % excess in Bromides, not 16.8 %.
- Case 5 would be 1 % excess in Iodide, not 10.8.

I advised that cases 4 and 5 should be withdrawn, but it was decided to go on, as seven chemists out of twelve had been found to be correct and so had used the Imperial scale and not the Apothecaries weights.

To cheer us up it was then found that in case 5 the summons had been drawn up in the name of the chemist who had sold the shop a month or two before the sample had been taken from his successor. The dispenser, by mistake, gave the name of a former owner to the Inspector, which name was still on the labels and over the shop door.

The cases were heard before Mr. Ratcliffe Cousins on December 14th and January 17th. Case 5 was allowed to be withdrawn owing to the wrong name appearing on the summons. Case 1 pleaded guilty and explained that his assistant, since discharged, had had his attention distracted whilst dispensing and so made the mistake. In this case, the Magistrate's decision was deferred until the other cases were heard. Case 2, the 9 % deficiency, was then taken. The "patient" and Inspector gave their evidence, the latter, on cross-examination, stating that he could not read a prescription and had measured nothing. The Public Analyst then entered the box and was handed his certificate by Mr. Roland Oliver, Counsel for the Prosecution. He had been told what the prescription was. He analysed the sample, which contained 216 grains of Potassium Bromide and 182 of Sodium Bromide, 398 grains of Pot. and Sod. Bromides instead of 437½ (1 oz. Imperial) in 12 fluid ounces, and said it was a deficiency of 9 % in Bromides.

Cross-examined by Mr. E. Glynn Jones, Counsel for the Chemists Defence Union, he said he had been provided with a copy of the prescription. The sign shown (3 iv aa) meant ½ an ounce twice, (not 1 ounce). He had heard of the Apothecaries table of weights and measures but was not aware what tables were still in use. He referred to the British Pharmacopoeia and said he found in that the Metric system and the Imperial system. He used no other. If there had been 437½ grains

(Imperial) of Bromides, he would have been satisfied. His balance weighed to half a milligramme. He could not say how sensitive a chemist's (pharmacist's) balance was and did not know what type of apparatus was used in dispensing. A five per cent. error was getting into deep water. His apparatus had to be capable of giving accurate enough results. It depended on the purpose in view. To half a cwt. of sugar, two or three lumps would not matter. He had seen the analysis of the other Public Analyst (for the defence) who had found 392 grains of Bromides against his 398, 224 of Pot. Brom. against his own 216. In Sod. Brom. he found 182 grains against the other analyst's 168. The mean difference in total Bromides was $1\frac{1}{2}$ to 2 per cent. That was evidence of substantial agreement. We (the two analysts) had received two different portions of the same solution. The salts may not have been fully dissolved. The receptacles may not have been in the same hygroscopic condition. A third difference may have been due to the human element in the analysis.

Counsel for the defence said that the results of the defendant's analysis referred to the chemically pure salt and were equivalent to 231 grains of Pot. Brom. and 179 of Sod. Brom. of the B.P. He asked witness whether his figures referred to the chemically pure salts or to the B.P. salts. Witness said he meant the Pot Brom. such as might be reasonably expected. The B.P. makes an allowance of $4\frac{1}{2}$ per cent. for difference from the pure Pot. Bromide. He had made an allowance for that. The defendant's analyst had given two sets of figures, one giving the strict chemistry and the other making the maximum allowances due under the B.P. for slight impurities and a slight degree of moisture. It would average $4\frac{1}{2}$ per cent.; in the one case 3 and in the other 6. The other analyst makes 410 grains (the equivalent of his 392) against my 398 grains. As a matter of fact I found it worse than after allowing $4\frac{1}{2}$ per cent.

(At this stage the Magistrate allowed Case No. 3 to be taken.)

The Public Analyst's certificate stated that the sample was 8.5 per cent. deficient in Bromides and the Analyst for the prosecution continued his evidence.

He found 181 grains of Pot. Brom. and the defendant's analyst found 195 grains pure Pot. Brom. or 201 B.P. His 181 compared with the other Analyst's 201. He analysed them separately. There was always a margin of error in

analytical operations which he allowed in favour of the defendants. He had allowed 6 per cent. to cover all possibilities (that covers far more than would be the allowance in many operations). He had not had an opportunity of measuring the total quantity of the mixture supplied. His result was based on the percentage composition of the mixture. An extra teaspoonful of water would have increased the deficiency by about one per cent. He had seen a circular of the Ministry of Health, dated the 28th December (paragraph 3 of the circular was read at this stage). The question of the total volume of the medicine was important. He had been consulted before the prescription was issued; it was a suitable prescription.

Re-Examined: He said it was much easier to say how much in Bromides there was than how much Pot. Brom. and Sod. Brom. separately. His totals substantially agreed with the defendants' analyst's figures.

In the twelve samples he had analysed from the two prescriptions, seven out of twelve were correct within 3 per cent.

It would be very much easier to make an accurate mixture than to analyse accurately. Apothecaries measure was 480 grains; his was 437 $\frac{1}{2}$. If the former were the proper one, the deficiency would be 17 per cent.

Mr. Glynn Jones addressed the Magistrate. Within limits, there must be inaccuracies in dispensing beyond the control of the dispenser. He suggested that the Analyst had not specifically provided for the deficiency allowed in the Pharmacopoeia, and stated that a deficiency of a teaspoonful of water would make a deficiency of 1% in the analyst's figures. The measure used by the dispenser was hardly capable of detecting a teaspoonful.

The Magistrate said he was not prepared to say that an error of 10 per cent. was reasonable. Small variations in the quantity of drugs given to a patient might have important results.

For the Defence Dr. Philip Hamill, M.D., F.R.C.P., Consulting Physician, 74, Harley Street, Lecturer on Pharmacology at St. Bart's Hospital, etc., looked at the Bromide prescription and said that the accepted meaning of the symbols for the bromide was 4 drachms each containing 240 grains. It meant Apothecaries Measure, 480 grains in all. The directions were $\frac{1}{2}$ oz. three times a day in water after meals. In routine dispensing in actual practice, the dispenser was not expected to work with the same accuracy as the Analyst. Analytical accuracy in dispensing was not important. There were four potent

tinctures—Aconite, Belladonna, Nux Vomica and Opium; though the exact strength was laid down, the maximum variation allowance was 5%. Compared with these, Potassium and Sodium Bromide were relatively impotent. In the ordinary routine, no one could cavil at a 5% error in measurement, that is putting the substance into the bottle, independent of errors in the composition. Assuming the volume 12 ounces, 5% might be errors of weighing and measuring and 5% of the British Pharmacopoeia. The total volume of mixture supplied should be taken into consideration. In general it is customary to supply a bottle. Graduated bottles varied in sizes, but if the patient took an aliquot part, he would get the dose required. He found two bottles in the laboratory, one 5% too little and the other 11% too much. In the case where 398 grains were shown, it is 17% deficient. A variation in the capacity of the bottle might show a considerable analyst's error. A twenty-fourth part of 480 grains would be 20 grains, however much the water may be.

Cross-examined, He had heard the Analyst say he had allowed 6%. An allowance of $9\frac{1}{2}$ % should be made, including the B.P. allowance and the dispensing allowance, the units of weight being the grain and the ounce avoirdupois. If the Apothecaries measure were used, a deficiency of 17 per cent. is shown, which is a little on the high side. Panel patients medicines should be made up with absolute accuracy.

Re-examined, he had assumed for the sake of argument that the Analyst's figures were absolutely accurate. Any error should be considered.

Sir Nestor Tirard, M.D., F.R.C.P., Consulting Physician, King's College Hospital, Senior Editor of the B.P., Examiner, etc., looked at the prescription and said the same symbol had been used for liquids and solids and justified the B.P. in advising that it should not be used but that in single doses the number of grains of solids should be given. The Imperial measure only was used in the Pharmacopoeia. In accordance with custom when the drachm was used it does represent 60 grains in solids and 60 minims for liquids. He agreed with Dr. Hamill's evidence that there were very large variations to be allowed for the capacity of the bottle.

Cross-examined: In this prescription any Chemist would take it to represent 480 grains. The true error is 17 per cent. In Pot. Brom. it would be a reasonable error, not a legitimate error, and he would not like to set it up as a standard.

Re-examined: Unless the volume was measured, it was impossible to say what the error was.

Mr. Glynn Jones said no satisfactory evidence had been called to prove that the deficiency was due to a fault of the dispenser.

The Magistrate said he had gone carefully into the case. It seemed to be generally accepted that the Apothecaries Scale should be used, in which case, including the allowance of 6% made by the Public Analyst, the deficiency was 23%, or, deducting that allowance, 17%. Then, allowing another 6% for the dispenser, the deficiency was still 11%.

He must disregard the suggestion as to the content of the bottle. There was no evidence as to what had been supplied actually and that was a point which should have been definitely ascertained. The Analyst was not called upon to say whether there would have been any prejudice to the purchaser, for the Statute was definite in saying that compounded drugs not in accordance with the demand of the purchaser, must not be sold.

After making all allowances he found that some error had been made, but he did not think a punitive penalty was called for.

He would therefore impose a small penalty to show that there was no great degree of carelessness.

Costs, however, would be heavy, for much expert litigation had been involved and it was the duty of the public authorities to defend public interests.

In both cases therefore, a fine of twenty shillings would be imposed, together with £5 5s. costs.

After consultation with the Medical Officer of Health, Counsel for the prosecution asked permission to withdraw the summons against case No. 4 (where an excess of bromides, 16.8% was alleged. As the drachm was ruled to be 60 grains, the excess fell to 6.4%).

£2 2s. costs were allowed against the Borough Council.

In the case of No. 1 (73% deficiency in iodide) the Magistrate said the mistake was made through the error of an assistant. He dismissed the summons on payment of £2 2s. costs.

Comments.

Having served an apprenticeship of four years duration as a Chemist and Druggist and having been University Medallist in Pharmacy and Proxime Accessit in Materia Medica and Therapeutics, I may be permitted to make a few respectful comments.

Make sure that the Insurance Committee will pay the costs of any prosecution or at least a

reasonable share, before taking any steps. It is reasonable to expect that the Chemists' Defence Union will engage Mr. Glynn Jones to defend, and this, I take it, may mean that the prosecuting authority will engage a barrister too. Added to this, there is the cost of expert medical evidence for the defence, the appearance of analysts, etc., in short, win or lose, there will be a bill to meet.

Circular 462 is helpful, although one may be permitted courteously to express the opinion that while the circular was sent out after considering the views of the Society of Public Analysts, it does not say whether the Society of Medical Officers had given its views or had been asked so to do. It is clear that close co-operation between the Medical Officer of Health and Public Analyst is necessary and that prescriptions should be written in grains for solids. Better, perhaps, to write one dose, the fluids to be given in minims, so avoiding the unhappy "drachm" symbol.

If the panel doctor writes the prescriptions on panel forms, reassure him that he will not be called upon to give evidence; this is a bogey with some. Keep careful copies of the prescriptions, with the date, name of "patient" with his or her address and the name and address of the pharmacist to whom the prescription has been sent; also jot down the name of the Food and Drugs Inspector and the symbol he marks on each part after making the usual division of the sample. Provide the Public Analyst with copies of the prescription before he commences to analyse. If the prescription is for, say, a twelve fluid ounce mixture, buy several such bottles; take a 20 ounce *verified* graduated measure. There is an impression that a graduated (non verified) measure is accurate, but this is not by any means true. A verified graduated measure has a special stamp on it and is accurate. Take the twelve ounce bottle and fill it up to midway between the neck of the bottle and its shoulder, with water. Pour the contents into the twenty-ounce verified graduated measure and read, observing the meniscus. Pour out, dry the measure and the bottle, run water into the measure up to twelve fluid ounces, then pour same into the bottle. Retain a twelve fluid ounce bottle that is accurate. Stand beside the Inspector (the purchaser) while he does the same test and explain the reason. Take two four-ounce bottles and do the same. Finally place the three bottles upside down in a small box with no lid, not far from a fire, until, after a day or two the bottles are "bone dry." The four-ounce bottles should be marked at the ascertained point, up to which the Inspector is to pour in when dividing into three parts. The remaining

third in the twelve-ounce bottle should go to the Public Analyst, but, before dividing the contents into three, the Inspector should mark the point up to which the fluid reaches in the twelve-ounce bottle, and ask the pharmacist if he agrees that the mark so made is accurate. This latter point is advised in Circular 462.

Notwithstanding these precautions, necessary for Court proceedings, it is the pharmacist's bounden duty to see that the bottle is a twelve ounce one before dispensing.

The careful pharmacist would make the twelve-ounce mixture up in a verified graduated measure and then pour into the bottle, the accuracy of which he has verified. It is not good workmanship to slip in the powders, etc., into the bottle and then pour up to an apparent twelve ounces. Of course, if the pharmacist could be got at in cross-examination, his method could be got at, probably to his undoing.

It was suggested that a 5 % error should be allowed for the dispenser's mistakes. This is too much. Ask any qualified dispenser if he is 5 % wrong as a routine? Two per cent. is ample; three is a grudging compromise.

The ten weeks' course in pharmacy which medical students received in my day was not appraised by the average student at its exact worth. As a houseman, assistant and locum, I have seen doctors dispense in a haphazard manner which cannot compare with the accuracy of a qualified dispenser. A pharmacist's balance is very accurate; it does not weigh to "half a milligramme," so in that sense one cannot object to Dr. Hamill's statement that in routine dispensing, the chemist is not expected to work with the same accuracy as the Analyst.

The Medical Officer of Health should ascertain at the outset from the Analyst whether the latter's results and report is based on the "strict chemistry" or after making the maximum allowance due under the B.P. for impurities and moisture.

On the question of "margin of error allowable in ordinary dispensing operations" referred to in Circular 462, it might be helpful if the Pharmaceutical Society could be approached for their views as to what margin should be allowed. It might dispel doubts in the minds of Medical Officers and their Councils when considering the question of a prosecution, if they had a guiding opinion from the Ministry as to the margin. Looking at the way the cat jumps in Court, it would seem that a total error of 10 % might be allowed for before a Medical Officer of Health can advise a prosecution.

Respecting Sections 3 (2) of the Circular, why should the Analyst be consulted as to the desirability of instituting proceedings? The Public Analyst is not qualified to advise as to the effect on the patient of the deficiency or excess as the case may be.

The Medical Officer of Health knows best in Food and Drugs cases, as to previous decisions in Court. Surely it is his place to advise his Authority.

THE ETIOLOGY OF CANCER.

At the meeting of the Society held on Friday, November 16th, 1923, Dr. Archibald Leitch read a paper on "Considerations on the Etiology of Cancer."

Dr. Leitch said he was much honoured to meet Medical Officers of Health. One question which was exciting the public mind at the present day was the enormous increase in modern times of cancer. They were told by newspapers, the medical press and lecturers, that cancer was increasing yearly by leaps and bounds not only in this country but in other European countries, and they were asked how to account for it. Some had ventured to give a more or less reasoned reply, but without any desire to offend anybody he felt that none of these explanations seemed to lead them much further than they were before. They had been told, for example, that the increase could be correlated to certain other statistical increases, and some had put it down to the stress and wear of modern life—both very hazy explanations. Some, of course, had gone back to the old theory that it had something to do with the food consumed: others that it was due to the increased consumption of tinned foods. Some again told them it was due to the increased importation of frozen meat. The answer which he was forced to give to the frequent enquiry as to the cause of cancer was that we did not know and presumably that was the answer that many of them would be inclined to give also. He had an idea that for the last ten years the statistical evidence did not show any perceptible increase, but it was necessary to remember that those statistics were purely mortality statistics. When it was considered that even under the best circumstances of hospital practice with all modern appliances diagnosis so far as malignant disease was concerned had an error from 20 to 50 % according to the preponderance of internal maladies, how much more must the error be with the various experiences of private practice? It was doubtful if reliance could be placed on any

figures to show that there was a natural as distinct from a statistical increase, more especially in view of the tendency in diseases in which the symptoms did not give any clear indication to return the mortality as being due to one of the incurable diseases. With regard to the prevalence of cancer, from earliest times it had occurred as far as was known in all races to which civilization had penetrated. No race had proved to be free from the disease. Statements had appeared from time to time that certain tribes in Africa had no cancer, but other observers would say that they had seen it there frequently. Again it had been stated that cancer had not appeared in Greenland, but a report compiled from information supplied by the Danish Government had shown that cancer was as common in Greenland as in European countries. It was entirely a question of observation. Another main factor was that cancer was by no means a human disease; it occurred in the lower animals also. There was no factor, therefore, that could be used that did not at the same time explain the identical condition in the lower animals.

Then there was the question of environment. Much had been written about cancer localities and cancer houses, but under the laws of chance there were bound to be aggregations of cancer in certain localities and houses. In Dundee he had watched statistics but could find no instance of two cases occurring in the same house, though it was true that the population there was a shifting one.

The evidence in favour of any hereditary elements in cancer had been very much disputed, and such evidence as there was to go upon was practically worthless. Recognising the difficulties of diagnosis under the best conditions and above all of the impossibility of anyone being able to tell definitely what his relatives died of, the difficulties could well be imagined. They could not hope to solve that question so far as human beings were concerned, but it could be solved by experiment. An American observer working on tumours of mice discovered that he had a large number of cases of spontaneous cancer but that there was a great element of heredity. Another American worker, Miss Maud Sly, of Chicago, had for over twelve years been concerned with the breeding of mice, who were carefully examined by pathologists. Some 40,000 post-mortems on mice had been made, and it was found that they had examined 5,000 tumours. Most of the tumours found in the human being were parallel in the mice, which appeared to be influenced by heredity, no case of spontaneous cancer occurring

though thirty generations had been gone through. By manipulating the breeding Miss Sly had been able to produce certain strains where the incidence was as high as 100 %, and other strains which were cancer free and which would show no cancer in succeeding generations. She had gone further than that and produced strains of mice which showed, for example, a preponderance of sarcoma and others which would not show it. These conclusions were of very great importance, but unfortunately if it were possible to arrive at the same conclusions in the human species it would require a period of about a thousand years.

Dr. Leitch passed on to considerations with which he had a more personal concern, and stated that the idea previously held that cancer was a general systematic disease could be put out of court altogether. He did not think that anyone connected with it could doubt that cancer was quite a local disease. There was no special tendency in a cancer patient to develop cancer, and that patient did not show any disposition to run a secondary cancer. That point had recently been borne out experimentally in animals, and it would doubtless be agreed that cancer was a fixed tissue reaction. The work with which he had been associated within the last two or three years was an attempt to isolate and to increase the number of known agents that had produced cancer, and in that connection investigations upon cancer in rats had opened up a new field of enquiry altogether. Dealing with the association of cancer with particular irritants, Dr. Leitch referred to the first case of cancer (chimney sweep's) brought to notice in this country 150 years ago, and instanced also, for example, tar workers' cancer, in which there was a more or less definite chemical irritant; paraffin cancer amongst the shale oil workers and refiners in Scotland; petroleum cancer, arsenic workers' cancer; X-ray cancer, where the incidence was extremely high; and cancer caused by heat, for example, in Kashmir and in Italy, where charcoal vessels were carried under the clothes. Dr. Leitch proceeded to describe a number of experiments he had carried out on animals with a view to discovering the causative agent or irritant in cancer. He had found, for instance, that the application of a spot of tar every second day to the back of a mouse produced after the lapse of months a little tumour which afterwards became malignant. Cancer had been produced in the scrotum of rabbits after experimenting for two years, but experiments on animals in connection with cancer of the intestine had been unsuccessful. Some fifty experiments had been carried out with guinea

pigs, which had been shown to be quite free from cancer. Human gall stones had been inserted into the gall bladder of the guinea pig and after the lapse of 5, 6 and 7 months cancer of the gall bladder had been produced. Dr. Leitch concluded by expressing the hope that knowing the causes of cancer formation much could be done in the future to prevent its irritants.

Discussion.

The President desired to stress two points which he had made in that room a short time previously. He thought medical officers of health might be made use of with regard to enquiries, and if the experts would lay down the lines upon which they wanted information on the spot, they who kept records might get into touch with the medical men attending the cases and get the facts. In that way they might be of some service to people such as Dr. Leitch, engaged in research. The other point was that the propaganda with regard to cancer had been given to the British Red Cross Society, and that the British Red Cross Society had turned to the medical officers of health to assist them by distributing the memorandum on cancer prepared by the Ministry of Health. The President expressed the great indebtedness of the Society to Dr. Leitch for his paper.

Col. F. E. Fremantle, O.B.E., M.P., said it was necessary that one should keep an open mind on the subject of cancer, and if it were true that there was no definite evidence of real increase of cancer steps should be taken to allay the alarmist reports which constantly suggested such increase. All efforts to find out the cause of the disease and to secure early observation and treatment should be supported. Though errors of observation in cancer as a whole took place, cancer of certain organs could very seldom escape notice, and over a period of some years it might be possible to get some definite information with regard to, for instance, cancer of the breast or of the tongue. He had suggested to the Ministry of Health the other day that the fashions of diagnosis was a point to be remembered. If a big man produced a dictum of that sort the general practitioners were liable unconsciously to include that idea in their diagnosis. With regard to what might be done in their public health investigation of cancer he hoped the British Empire Campaign would help on the work in the laboratories.

Dr. James Wheatley (County M.O.H., Shropshire) considered the outstanding feature of the paper to be the fact that Dr. Leitch had been able to produce cancer in the gall bladder by the introduction of a foreign body. On the other hand he was not quite sure that a wide enough view of the

subject had been taken. The same remarks that had been applied to the lack of convincing effect of statistics could be adduced to almost every other form of disease. In the memorandum of the Ministry of Health there was the conclusion that there had been an enormous increase of cancer but that this had been reduced very considerably by the fact that we had a later population to begin with; that diagnosis was more correct, and so forth. The amount of actual increase was another matter. Dr. Wheatley was pleased to see that there was a gradual elimination of those ideas to which the public had paid so much heed—the question of infection and the question of cancer houses, and that there was more concentration upon what was known—that irritation of all descriptions was the exciting cause.

Dr. T. H. C. Stevenson, C.B.E. (General Registrar Office, Somerset House), referred to certain statistics which appeared to show that the increase which had occurred during a period of thirty years was confined to cancer of inaccessible sites, and that of course appeared to indicate that the increase was merely due to increasing efficiency of diagnosis bringing to light more of these inaccessible cancers than had been reported at an earlier date. Five or six years ago he considered there was sufficient material in the statistics of England and Wales to do a similar work, and in 1917 took out the figures for the previous 22 years. Greatly to his surprise it was found that cancer in accessible sites in males had increased to a greater extent than cancer in inaccessible sites. In the case of females the balance was very greatly the other way. That was rather a shock to one's preconceived ideas. When the different sites were considered and it was found that cancer of the tongue mortality was three or four times as great now as it was 50 and 60 years ago he for one could not see how that could be due to increased efficiency of diagnosis. Thirty years ago their predecessors must have been just as well able to distinguish a cancer of the tongue, and in cancers like that the enormous increase pointed to nothing but increase of prevalence. The same work was repeated in the United States and would be found in their mortality statistics for 1920. They arrived at precisely the same result—a greater increase of cancer of accessible sites than of inaccessible. Anyone who read the memorandum of the Ministry of Health would find that the view was there clearly expressed that there was definite evidence in favour of increase of cancer, and it might be taken that the Committee did not commit itself to that opinion before considering the pros. and cons. With regard to the question

of the savage races, medical men who had lived for many years amongst native populations told them they had never seen a cancer, or very few, amongst the natives living under those conditions, but they had seen cases of the same blood living at the ports under conditions more similar to those under which they themselves lived. He would like to have the views of Dr. Leitch on the suggestion that the same thing applied to animals. It had been stated that the same animals which under domestic conditions produced considerable numbers of cases of cancer had been very seldom known to furnish cases when living under their wild conditions.

Dr. Sidney Davies (late M.O.H., Woolwich), stated it was recognised that they were absolutely dependent upon the pathologists for the investigations they made, but surely medical officers of health could help them. He had enquired as to the habits of people who were certified to have died from cancer in Woolwich for about 10 years, and felt justified in the use of such statistics. There was a very strong correlation of smoking of any kind and cancer of the mouth and of the throat, and a close correlation between all kinds of cancer but especially of the throat, mouth and stomach. Alcohol and smoking were preponderating causes in males. Recently by means of statistics supplied by the Registrar-General through the kindness of Dr. Stevenson he had been endeavouring to compare the cancer mortality in Shoreditch and Hampstead, which Sir Shirley Murphy had said many years ago was the best instance of a rich and a poor district. The results were interesting. Dr. Davies went into the figures in great detail, and came to the conclusion that there was a very marked preponderance of cancer amongst the well-to-do at Hampstead as compared with the poorer people of Shoreditch.

Dr. W. A. Bond (late M.O.H., Holborn), thought that from their own experiences the outstanding factor in connection with the causation of cancer was chronic irritation, and it was significant to note that Dr. Leitch had produced chronic irritation in an unsusceptible animal. Statistics for the last 11 years showed that cancer of the digestive organs was the cause of more than half the deaths from cancer, and that this was more marked in the year 1911 than in the last year (1921). A great deal could be done in the prevention of cancer by preventing all sorts of chronic irritation. Attention ought to be paid to careful feeding and proper mastication, and all children should be taught to avoid constipation.

Dr. R. H. Wilshaw (M.O.H., Worthing), referred to the need of early diagnosis, and in this connection asked if Dr. Leitch possessed any information with regard to the use of Dr. Shaw Mackenzie's blood test.

A vote of thanks to Dr. Leitch was moved from the Chair and carried unanimously.

Dr. Leitch assured the members it had been a most instructive evening for him to get away from laboratory work and view the subject from different angles, and referred to some recent experiments to show that not only the crude oils but the refined oils used in Scotland produced cancer. A large series of experiments with petroleum from all parts of the world had also been made to see if the blame rested upon crude petroleum, and cases of cancer were beginning to appear in mice. Dr. Wheatley had suggested that there were many ways of tackling cancer, and while he (Dr. Leitch) would be the last to say that laboratory work was the only way of dealing with the problem he could not help feeling that statistics at the best were rather inconclusive and unreliable material as a whole. One observer had said that he had seen hundreds of cases of betel chewers cancer, but had seen no case amongst Bramins who mostly belonged to a higher class. On the other hand he had heard evidence to the very opposite. He did not deny that there might be an absence of cancer in certain races. Naturally with animals there was more opportunity for post-mortem work than when in their wild state. Blood diagnostic tests had been used for many years, but he had never used Shaw Mackenzie's. All were perfectly useless. Referring to Dr. Davies' allusion to smoking and alcoholism as causative agents of cancer he had tried to produce the conditions experimentally but without success.

THE SALARIES SCALE AND THE MEDICAL SCHOOLS.

The following circular has been sent by the B.M.A. to the Medical Schools:—

"DEAR SIR,

"Your sympathetic attention, as one who frequently has to advise medical students as to their future career, is requested to the following statement.

"During the past three years this Association, in conjunction with the Society of Medical Officers of Health, has been enquiring into the status and prospects of those engaged in the Public Health Service of the country, and came deliberately to the opinion that, compared with almost any other section of the profession, these members are underpaid, and that consequently, the Public Health

Service is losing its attraction for keen and ambitious members of the profession.

"I need not trouble you with the evidence which led to this conviction, except to state briefly, first, that a careful comparison was made of the earnings of persons engaged in the Public Health Service with those of consultants, general practitioners, and members of the Army, Navy and Indian Medical Services. The Public Health Service came very badly out of the comparison. Secondly, quite a number of men in responsible and senior posts in the Public Health Service have recently gone into general practice in despair of ever securing a salary which would enable them to live and bring up their families in a way comparable with that of other professional men. Thirdly, the Society of Medical Officers of Health was able to adduce ample evidence that there is throughout the Service an intense and growing feeling of discontent.

The two bodies accordingly set to work to devise some means of placing this Service upon a proper footing, and the result of long deliberation was a Scale of Commencing Salaries which is now the policy of both bodies. I enclose a copy for your information.

"The point which we wish to bring to your special attention is the position of junior officers in the Service, namely, those who are employed in departments as Assistant School Medical Officers, Assistant Tuberculosis Officers, Assistant Maternity and Child Welfare Officers. You will see from the Scale that it is proposed that these Officers shall receive a commencing salary of £600 per annum. This at first blush, looks a handsome salary, and it would be so if it were intended to apply to a newly qualified man, or woman, with fair prospects of increase. But you will notice from the Scale that it is the intention that such Officers shall have had at least three years' experience in the practice of their profession, subsequent to obtaining a registrable qualification before they are appointed to these responsible posts. Some Local Authorities do not care whether they have properly trained people or not, so long as they fulfil their legal obligations as cheaply as possible. But the more progressive Authorities believe, as we do, that these posts should not be filled by newly qualified and inexperienced persons. To detect the earliest signs of disease in school children about whose health no complaint has been made, is no task for a novice. An Assistant Tuberculosis Officer frequently has to revise the opinion of general practitioners, and he is obviously in no position to be regarded as a consultant if his qualifications are no higher than those of the recently qualified man or woman.

This Association, and the Society of Medical Officers of Health, believe that at least three years after qualification should be spent in hospital, general practice, or other clinical work, before a practitioner is appointed to one of these junior posts. No professional man or woman needs to be convinced that £600 a year is not an overpayment for a person who, besides being a qualified practitioner, has taken a D.P.H., and has had at least three years practical experience of his profession, particularly when it is remembered that the prospects of promotion are not at all good. Many instances are recorded in this office of men and women who have been holding these junior posts at practically the commencing salary for seven, eight, and even ten years.

"We earnestly appeal to you to assist us in guiding your senior students into the right path. If they intend to go in for Public Health work they should be told that the Public Health Service will never be satisfactory either to the profession or the public until it is placed on a higher footing than it is at present; that the efforts of the British Medical Association, and the Society of Medical Officers of Health to this end ought to be supported by every member of the profession; and that therefore, those who are going into the Public Health Service should understand that it will be at least three years after they are qualified before they will be competent to apply for one of the junior posts, that during that time they will have to devote themselves to clinical work, and that when the time arrives when they are eligible for one of these posts, they should on no account take less than the minimum commencing salary laid down in the B.M.A. Scale.

"We ask for your assistance in this matter, believing that such action is not only necessary in the interest of the students who are taking up a public health career, but in the interests of the whole profession. This last-named point is strongly emphasised by a paragraph in the case submitted by the Ministry of Health to the Court of Enquiry into the remuneration of insurance practitioners in January, 1924. In support of the case for reduction of the remuneration of insurance practitioners the Minister gives the following figures relating to Medical Officer of Health appointments:—

	No. of	Average	Average
	Appointments.	age on Appointment.	Salary on Appointment.
1920 ...	46 ...	88.8 ...	£788.1
1921 ...	38 ...	40.9 ...	£771.8
1922 ...	18 ...	39.2 ...	£792

and points out that they relate to whole-time appointments; that it is a condition that the candidate

should possess the D.P.H. qualification; and that these figures indicate 'that for public health appointments men of superior qualifications, and, in the case of M. O. H. appointments, men approaching middle life, can be secured for salaries in the neighbourhood of £800.' This is an emphatic endorsement of our contention that the inadequate salaries paid to Medical Officers of Health and their Assistants, is a standing menace to the interests of the profession as a whole. If an experienced practitioner in middle life, who is the chief representative in his district of preventive medicine, can be got for less than £800 a year, why pay more for any kind of medical practitioner?

"We therefore confidently ask for your assistance in advising your students, and I shall be glad to give you any further information you may desire on this subject. A leaflet embodying most of the facts and statements in this letter suitable for presentation to students, is at your disposal, and copies will be sent on request.

Yours faithfully,

ALFRED COX,

Medical Secretary.

"To Professors and Lecturers on Public Health and Hygiene; and to Deans of Medical Schools."

NOTES FROM BRANCHES.

WEST OF ENGLAND BRANCH.

THE CLOSING OF A HOSTEL.

The necessity for closing the Medical Home at Charlton Kings, near Cheltenham, on March 31st, is a matter for considerable regret. The Home has been carried on for some years as a Hostel for Women and Girls suffering from V.D., and there is every reason to think that the work has been done in a thoroughly efficient manner both from a medical and a social point of view. Sufficient patients to make it a reasonable financial proposition, however, have never been forthcoming. It can hardly be that they do not exist, so that the difficulty must lie in getting them to come in and in inducing public bodies to undertake their maintenance.

The Home has had a somewhat chequered career. It appears to have been started on a Diocesan basis. Then it was taken over by the Gloucester County Council. Finally other authorities were invited to support a stated number of beds and the Home became an integral part of the Cheltenham General Hospital. It has been one of those pioneer efforts of the type which justify themselves even though they fail, since they provide valuable information and experience,

and so bear the seeds of future profit for other explorers in the same field.

BRANCH MEETING AT SALISBURY.

Those members and friends who could get to the Salisbury meeting on February 22nd had an unusually interesting time. The spacious drawing room of the old Red Lion provided an atmosphere of comfort and stability which was very pleasant. This hotel is in the midst of an ancient city which maintains the even tenour of its way after the storm and stress of twenty generations of human life. In such a setting one is better able to appreciate in true perspective the difficulties of our own troublous times.

The programme was divided into four parts; the ordinary meeting, an instructive visit by char-a-banc to the Salisbury Infirmary and to the Harnwood Hospital for cases of advanced tuberculosis, a delightful tea at the invitation of Dr. and Mrs. Tangye, and lastly a meeting of the Tuberculosis Sub-Group.

Members were much impressed with the Maternity Ward at the Infirmary, which they saw under the guidance of Dr. Gordon. The ward exists primarily for complicated cases, but a considerable number of normal ones are also dealt with. The average cost works out at about £3 10s. per patient per week. Dr. Gordon also shewed the very complete and up-to-date Clinic for the treatment of V.D., both for in-patients and out-patients.

Dr. Tangye was heartily thanked for his kindness and hospitality in connection with the meeting.

A COUNTY MIDWIFERY SERVICE.

Those who heard Dr. Tangye's paper on this subject at Salisbury, on February 22nd, much appreciated it on the score both of its originality and of its literary qualities. Many points of interest were raised. It was stated, for example, that one-third of the births in Wilts are still attended by the untrained midwives. Whatever the explanation, it appears to be a fact that the incidence of Puerperal Fever is greater among the patients of trained midwives than those of the untrained, and greater still among cases attended by doctors.

County Medical Officers seem to be sharply divided on the question of the relative merits of health-visiting, as done on the one hand by partially trained district nurses in the employment of County Associations, and on the other by specially trained whole-time Council nurses. Dr. Tangye did not hesitate to express the definite

opinion that where possible the latter were to be preferred. But under circumstances which exist in many rural areas the former often did surprisingly good work and were indeed not nearly so black as they are sometimes painted. District nurses frequently had wide practical experience, while in the case of certain highly trained individuals the phrase "knowledge comes but wisdom lingers" is not wholly inappropriate. Dr. Tangye agreed, however, that the attitude of the Nursing Association to the Council was a material factor in the success or otherwise of any joint scheme, and in Wiltshire they were particularly fortunate.

APPOINTMENTS.

The following have been appointed as Assistant Medical Officers by the Somerset County Council:—

Walter Herbert Butcher, M.A., M.D., D.P.H. (Oxford).

Nicholas D. Dunscombe, M.A., M.B., D.P.H. (Camb.).

The post of Deputy Medical Officer of Health at Torquay, vacated by Dr. P. A. McCallum, has been filled by the appointment of Dr. J. V. A. Simpson, M.D. (Lond.), D.P.H. Dr. Simpson was previously Assistant School Medical Officer at Leicester.

Mr. A. C. Redman, M.A., B.Ch., has accepted the appointment of Senior Resident Medical Officer at the Winsley Sanatorium, near Bath, rendered vacant by the resignation of Dr. C. F. Pedley. Dr. Redman was previously an Assistant Resident Medical Officer at the Brompton Sanatorium, Frimley.

NORTH-WESTERN BRANCH.

REMOVAL OF REFUSE.

At the Eccles Police Court, on January 28th, the occupiers of three vans were summoned under the Borough bye-laws, for failing to provide a sufficient receptacle for refuse whilst in occupancy of a vacant piece of land at the rear of Barlow Street, Palecroft, Mr. Hardman, Assistant Sanitary Inspector, stated that he found accumulations of refuse at the rear of certain houses in Barlow Street. Preliminary notices were served on the residents requiring the removal of the refuse, but on the 22nd four of them visited the Health Department and complained that they were not responsible for the nuisance. Two of them said they had removed the refuse but more had been deposited. Mr. C. W. Laskey, Chief Sanitary Inspector, stated that he found three vans occupying the vacant land and interviewed

the occupiers, but on informing them that proceedings would be taken, he received abuse. He stated that there were eight horses tethered on the land and the ground about the vans was littered with dirt and refuse. He had received bitter complaints from the tenants of adjoining houses of the demands made upon them by van dwellers for the use of water and conveniences and if they refused, they were subjected to abuse. He stated that the defendants had committed a breach of the Corporation Bye-laws by not having a sufficient receptacle for refuse, and the Magistrates imposed a fine of £3 on each of the defendants, who had failed to put in an appearance.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the House of the Society, on Friday, 14th March, 1924. Until the arrival of the President (Dr. T. W. Naylor Barlow), who was detained at another meeting, the chair was occupied by Dr. James Wheatley. There were also present: Professors H. R. Kenwood and H. Kerr, Lt.-Col. Herbert Jones, Drs. Porter, Cates, Banks, Wear, Lissant Cox, Eustace Hill, Flemming, Gibbons Ward, Frederic Thomson, Ward, Lyster, McMaster, Pearce, Jolly, Fenton, Clements, Benton, Denison Pedley, Stirk, Snell and G. F. Buchan.

The minutes of the last meeting were approved and signed.

Letters of apology for absence were received from Dr. W. J. Howarth, Lt.-Col. F. E. Fremantle, M.P., Dr. J. T. C. Nash, Dr. G. W. N. Joseph, Dr. R. W. Stocks, Dr. E. W. Rees Jones and Dr. T. Ridley Bailey.

Correspondence.—(1) From the British Medical Association nominating Dr. T. Ridley Bailey and Dr. C. E. S. Flemming as direct representatives of the B.M.A. on the Council of the Society. Dr. Flemming was present and was cordially welcomed by Dr. Wheatley on behalf of the President and Council.

(2) From the College of Nursing asking the Society to support the scale of salaries recommended by the College for Health Visitors and School Nurses. The letter was referred to the Salaries Committee for consideration and report.

(3) From the Incorporated Midwives' Institute forwarding resolutions recommending amendments of the Midwives' Act, 1902. Referred to Midwives' Act Committee.

(4) From Dr. A. K. Chalmers in the same connection. Referred to Committee.

(5) From the British Medical Association in the same connection. Referred to Committee.

(6) From the British Medical Association in reference to fees paid to doctors called in to assist midwives. Referred to Committee.

(7) From the British Medical Association regarding the report adopted by the Society on the organisation of M. and C.W. Centres. Referred to M. and C.W. Group for consideration and report.

(8) From the Ministry of Health stating that the Minister did not see his way to take any action in reference to the terms of appointment of the Town Clerk of Cambridge, to which exception had been taken by the Society in a letter to the Ministry dated 19th December, 1923. It was reported that the objectionable features in the appointment have since been corrected by the Mayor and Corporation of Cambridge as a result of direct representation from the professions concerned.

(9) From Dr. E. W. Goodall asking to be allowed to retire from the Salaries Committee in favour of Dr. A. F. Cameron, Hon. Sec. of the Fever Hospital Medical Service Group. Agreed.

(10) From the Hon. Sec. Bread and Food Reform League in reference to the formation of a National Food Council. Referred to Committee on Foods.

(11) From a Medical Officer of Health in reference to Ministry of Health Circular 381. This also was referred to the Committee on Foods.

(12) From the Metropolitan Branch in reference to Ministry of Health Circular 462. It was agreed that Drs. Porter and Fenton should watch this matter and report developments.

The London School of Hygiene.—A letter was read from the Ministry of Health inviting the Society to nominate a representative on the Board of Governors of the School of Hygiene to be established in association with London University by the generosity of the trustees of the Rockefeller Foundation. A discussion followed in which it was claimed that as the representative body of the Public Health Service the Society was probably more intimately concerned in the future of the School than any other section of the community. Several members expressed the fear that the opinions of the Society in this connection could be very inadequately presented by a single representative on a 'Court of Governors, consisting of thirty-four persons, which will probably meet only once a year. It was pointed out, also, that the actual management and supervision of the School is to be vested in a Board of Management on which the Society would have

In view of these facts it was agreed that the presence of a representative of the Society on the Court of Governors could serve no useful purpose, and might be misunderstood. It was further agreed that the Ministry should be asked to excuse the Society from making a nomination.

Representation of the Society.—(1) Dr. James Wheatley was re-elected as representative of the Society on the National Milk Publicity Council; (2) Drs. Porter and Fenton were nominated to attend the Imperial Social Hygiene Congress organised by the N.C.C.V.D., to be held at Wembley, May 12th-16th; (3) Dr. R. A. Lyster was re-elected to represent the Society on the Central Midwives' Board during the year ending March 31st, 1925. Dr. Lyster submitted a full report on the working of the Board during the past year for which he was thanked and which was ordered to be published in "Public Health"; (4) Professor H. R. Kenwood consented to serve on a conference convened by the Tuberculosis Group, in reference to the co-ordination of annual reports and collective research by Tuberculosis Officers.

Amendment of the Public Health Acts.—The Committee appointed to make recommendations in this connection reported that in reply to inquiries they found the Branches of the Society agreed that the consolidation and co-ordination of existing Public Health legislation is a matter of urgent importance, more especially in order that all local medical services (*e.g.*, Education, Poor Law, Vaccination, Factory Inspection) may be brought under the Local Sanitary Authority. The Branches have indicated a number of details which should be dealt with when the Public Health Acts are codified, but the compilation of complete recommendations would occupy the Committee for some months. They suggested, therefore, that the Council should reply to a recent enquiry that the Society will welcome any opportunity for submitting suggestions for a P.H. Acts Amendment Bill, based on the experience of all branches of the Public Health Service.

Flueless Gas Heaters.—The Council considered the report of the Joint Committee formed by the Society and the Royal Sanitary Institute to consider the use of gas-stoves for domestic and workshop heating, where no provision is made for the escape of flue gases to the outer air. The Committee was constituted as follows: Dr. L. C. Parkes (Chairman), Representing the Society of Medical Officers of Health: Prof. H. R. Kenwood, C.M.G., Dr. D. C. Kirkhope, Dr. F. N. Kay Menzies, Dr. E. H. Snell. Representing

the Royal Sanitary Institute: Prof. A. Bostock Hill, Dr. J. S. Owens, Mr. J. Osborne Smith, F.R.I.B.A., Dr. H. D. Searles Wood, F.R.I.B.A.

The report arrives at the following conclusion: "So convinced are the Committee of the absolute necessity of a very free ventilation existing where flueless gas stoves are in use that—bearing in mind the usual absence of this free and effective ventilation in living rooms, bedrooms, workrooms, etc.—they think it desirable to discourage the introduction of these stoves, and to express the opinion that their use can only be justified in such places as entrance halls, passages, landings, etc., where ventilation is free and where occupants do not remain for any considerable length of time."

The Committee reported that a full summary of their findings would appear in the *Journal of the Royal Sanitary Institute*, but it was agreed that subject to the approval of the Institute, copies should also be sent to the appropriate medical and technical periodicals. It was further agreed that cordial thanks were due to the Committee for their report, to the Medical Officers of Health who collected evidence, and to Dr. J. S. Owens for the valuable monograph, embodied in the report, on "Flueless Gas Fires from the Hygienic Aspect."

Financial Position of Branches and Groups.—Dr. G. F. Buchan (Hon. Treas.) submitted a report from the Special Committee appointed to consider the financial position of Branches and Groups of the Society. It showed that Branches at the present time receive 2s. 6d. per head in respect of every subscription paid during the year. The expenses of Groups are paid on the actual disbursements of the Groups. Subscriptions to Branches during 1922-23 amounted to £231 5s. while Group expenses amounted to £32 13s. 11d., but the latter sum does not include certain expenditure in connection with Group meetings, *e.g.*, hire of lantern, circulation of notices, agenda papers, etc. It was stated that some Branches possessed considerable reserve funds while other Branches had only a small credit balance and others again, as in the case of the North Western Branch, an adverse balance. It was reported that some Branches sometimes undertook special work of value to the Society as, for example, the compilation of a Register by the West of England Branch shewing the persons in the area eligible for election to the Society so that they might be secured as members, while other Branches did little if any work of such a nature. The position with regard to the finances of the North Western Branch was considered and the adverse balance of £23 7s. 1d. noted.

On the recommendation of the Committee it was agreed:—

(1) That an advance be made to the North Western Branch of £23 7s. 1d., being equivalent to the adverse balance of the Branch at the end of the year 1922-23, and that the Branch be asked to refund this advance as soon as their funds permit.

(2) That no alteration be made in the present capitation fee of 2s. 6d. to Branches.

(3) That the Dental Group be asked to accept a revision of the special grant now received by them.

(4) That the subject of Group Expenses be reserved for further consideration.

The Scale of Salaries.—The Chairman of the Special Committee on Salaries (Dr. G. F. Buchan) made a statement in reference to a recent conference at the Ministry of Health with representatives of County, Borough, and District Councils, which it was hoped would pave the way to further negotiations. He also submitted a circular letter forwarded by the B.M.A. to teachers of Public Health and Deans of Medical Schools in reference to the precarious prospects in the Public Health Service which should be brought to the notice of students. By permission, Dr. Buchan also read extracts in the same connection from Dr. Cox's monthly circular to Divisional and Branch Secretaries of the B.M.A.

It was agreed that the B.M.A. should be thanked for the valuable propaganda work represented by these documents. Some discussion followed on the organisation of local salary campaigns by B.M.A. Divisions which appeared to be discouraged by Headquarters, and the Exec. Secretary was directed to obtain information on this point from Dr. Cox. It was also agreed to report complaints, especially from the Northern Branch of the Society, regarding the acceptance of undesirable appointments by candidates from Scotland, the hope being expressed that the Scottish Committee of the B.M.A. would take strong action in this matter.

The Executive Secretary was directed to keep a complete record of all applicants for appointments when the conditions were not approved by the B.M.A. and the Society M.O.H., such records to be consulted before ballots for the election of new members to the Society.

Annual Election of Officers.—Proposals for altering the procedure at the annual election of officers were discussed, but it was agreed that no change should be made during the current session.

Disciplinary.—It was agreed that two Fellows who failed to support the policy of the Society in connection with a recent appointment, should be asked to resign their membership. Failing such resignation it was resolved that the Council would adopt the alternative procedure provided in

Article 11 of the Articles of the Association at their meeting on 16th May next.

The Council then adjourned.

ORDINARY MEETING.

An Ordinary Meeting was held at the House of the Society on Friday, 14th March, 1924, the President (Dr. T. W. Naylor Barlow) in the chair.

The minutes of the last meeting having been approved and signed the following candidates were elected to the Society.

As Fellows:

Black, Edward Hamilton, M.B., Ch.B., Ed., D.P.H.; Brand, Ethel Mary, L.M.S., S.A., Lond.; Gamlin, Raymond, M.A., M.B., B.Ch., Cantab., M. Hyg., Liv., M.R.C.S., L.R.C.P., D.P.H.; Lorraine, Norman Stanley Rees, M.D., Ch.B., Ed., D.P.H.; Maule, Caroline, M.D., D.P.H.; Platt, Kate Anne, M.D., B.S., Lond.; Young, John, M.B., Ch.B., D.P.H.; Young, Thomas, Capt. R.A.M.C., M.B., Ch.B., Glasg.

As Associates:

Bates, William, L.D.S., Ireland; Loretz, Margherita Maria, L.D.S., Eng.

A number of candidates were nominated for election at the next meeting of the Society.

Prof. Harold Kerr, O.B.E., on behalf of the Northern Branch then asked the acceptance by the Society of a portrait of Dr. T. Eustace Hill, in commemoration of his services as President during the Session 1922-23. Dr. Kerr said that Dr. Hill deserved to be honoured by the Society if only for his long and unfailing support of the Northern Branch. He had since established a further claim on the gratitude of the Public Health Service by his efforts on their behalf while President of the whole Society. He (Dr. Kerr) believed that Dr. Hill's greatest achievement during his year of office was his success in consolidating the closer relationship between the Society and the British Medical Association.

The President in accepting the portrait said that they were one and all agreed that Dr. Eustace Hill richly deserved the honour of seeing his portrait hung in that room with those of his father and brother who had previously received the greatest compliment the Society could bestow. The Society was proud of the Hills and he hoped the Hills were proud of the Society. The gallery of portraits of Past-Presidents, men who had done much for the advancement of Public Health, would always serve as a valuable encouragement to those who carried on the work and traditions of the Society.

Dr. Eustace Hill, who was received with loud applause, briefly acknowledged the honours that

had been conferred upon him by the Northern Branch, and by the Society as a whole. He hoped that it might be his privilege to serve the Society for many years to come.

Dr. W. Allen Daley read a paper on "The Organisation of Propaganda for the Advancement of Public Health," which with a report of the subsequent discussion will be published in an early issue of "Public Health."

The proceedings closed with a cordial vote of thanks to Dr. Daley for his valuable paper.

NORTH-WESTERN BRANCH.

Meeting held in Manchester, on Friday, February 8th, 1924.

In the absence of the President (Dr. Lissant Cox), Dr. T. W. N. Barlow was voted to the chair.

Minutes of last meeting read and confirmed.

The Branch considered "The Report of a Conference between Representatives of the B.M.A. and Society of Medical Officers of Health on the policy of these bodies as to Public Health Medical Services," and it was resolved on the proposition of Dr. Paget Moffatt, seconded by Dr. Rees Jones that the report be approved.

The Chairman (Dr. T. W. N. Barlow) reported on the present position of the salaries campaign.

Dr. J. E. Spence (Eccles) read a very interesting paper on "The need for closer co-operation between School Medical Inspection and Public Health Work."

He dealt with the difficulties in co-ordinating medical inspection with other branches of Public Health Work which arises as a result of several Committees being responsible for different branches of the work. The outlook of each Committee is circumscribed and they are jealous lest another Committee should deprive them of a part of their function. As a first step towards co-ordination of the work the formation of a single Health Committee was suggested.

This Committee should be responsible for all matters relating to health and welfare and under it the work could be organised as a homogeneous whole with the M.O.H. as Administrative Officer. The advantages of combining Infant Welfare, Infectious Diseases, Tuberculosis, Care of Mentally defectives, Care of the Blind, and the duties of Medical Officer under the Factory and Workshops Acts, so that the duties could be carried out by a single staff ensuring continuity of the work and the prevention of overlapping, were dealt with. At the present time one of the principal criticisms of welfare work was that it produced a multitude of officials, each dealing with a separate

section of the work who visited the homes in quest of information, much of which was already in possession of another official. The multiplication of visitors harassed the mothers and produced a feeling of irritation against the Health Department, whereas unification of the work would enable a single visitor to carry out all the duties in a small compact area. Repetition of inquiries would be obviated and the visitor would soon be well known by the people in her district and looked upon as a friend whose advice would be valued and whose assistance would be sought in trouble.

Dr. Brindley proposed a vote of thanks and emphasised the futility of water-tight compartments. Dr. Brown Ritchie seconded. Dr. Veitch Clark supported and instanced the saving that would ensue if unification of services and institutions were fully adopted.

Dr. Barlow conveyed the vote of thanks to Dr. Spence who suitably replied.

MIDLAND BRANCH.

Meeting held at the Council House, Birmingham, on Thursday, February 7th, at 3.30 p.m.

Present: The President (Dr. A. Hamilton Wood), and 18 members.

The minutes of the previous meeting having been already published in "Public Health" were taken as read, and signed.

Recommendation of Branch Council.—The Council recommended that Dr. Ridley Bailey be nominated by the Branch for the Presidency of the Society for 1924-5. This was carried unanimously.

A discussion was then held on the paper by Dr. C. Killick Millard—"Birth Control from the Public Health point of View"—which had been delivered at the previous meeting. The debate which ensued was a very interesting one, in which various points of view were advanced or criticisms made by the majority of those present at the meeting. In his reply Dr. Millard made it clear that in his opinion Birth Control was a matter for married people only and that information on the subject is being sought for by a large number of women. He considered that the advice should preferably be given at an Ante Natal Clinic by a woman doctor, and should be personal and individual.

A hearty vote of thanks was passed to Dr. Millard for his interesting paper.

The Report of the Conference on the "Policy of the B.M.A. and the Society of M.O.H. as to Public Health Medical Services" was introduced

by Dr. Snell, and after some discussion was approved by the Branch.

METROPOLITAN BRANCH.

A meeting of this Branch took place at the Society's house in London, on Friday, 8th February, 1924, the President (Dr. Frederic Thomson) occupying the chair. Eleven members were present.

A warm welcome was accorded to the Hon. Secretary (Dr. Charles Porter) on his return from America; and a vote of thanks to Dr. James Fenton for carrying out the secretarial duties during Dr. Porter's absence was carried with acclamation.

A general discussion took place on Ministry of Health Memo. 286, December, 1923, dealing with the co-ordination of the work of Tuberculosis Officers and Insurance Practitioners in relation to the Public Treatment of Tuberculosis: consideration of communications concerning (a) probationary appointments of tuberculosis officers, and (b) post graduate study for tuberculosis officers, was postponed.

The Branch resolved that Dr. R. A. Lyster be nominated for the Presidency of the Society for the ensuing session.

Ministry of Health Circular 462, and the question of the laying down of definite standards as to the permissible margin of error which should be allowed in regard to prescriptions compounded by pharmacists, received consideration, and it was resolved that the Council of the Society be asked to consider the circular, and more particularly the part relating to margins of error in dispensing, with a view to deciding as to the action that might be taken in connection therewith.

Discussion of Dr. Kenwood's paper on "The Surface Disinfection of Infected Rooms," which appeared in the February issue of "Public Health" under the title of "The Soap and Water School of 'Disinfection,'" and was also recently broadcast in "popular" form from the London wireless station, was again postponed.

HOME COUNTIES' BRANCH.

The fifth meeting of the Session 1923-1924 of the Home Counties' Branch of the Society of Medical Officers of Health was held at the Royal Army Medical College, Grosvenor Road, S.W. (in conjunction with the Fever Hospitals Medical Service Group), on Friday, 25th January, 1924, at 4 p.m.

The Home Counties, Fever Hospitals and the Service Groups were all represented.

Dr. F. H. Thomson, of the Fever Hospitals Medical Service Group, presided, in the absence of Dr. W. Benton, of the Home Counties' Branch.

Dr. A. F. Cameron (Medical Superintendent of Joyce Green Hospital, Dartford, Kent) was introduced by the President, and delivered his lecture on "The Prevention and Differential Diagnosis of Small-pox."

The lecture, which was illustrated by numerous slides, shown by Epidiascope, dealt in detail with the variations in the toxic and focal rashes of the disease. The Lecturer also devoted considerable attention to the distribution of the rash showing numerous slides to illustrate the difference between the small-pox and the chicken-pox rashes.

In conclusion, he discussed the methods which should be employed to increase the practice of vaccination.

A discussion followed, which was taken part in by Drs. Thomson, Newsholme, Garrow, Goodall, and the Honorary Secretary of the Home Counties' Branch.

YORKSHIRE BRANCH.

A meeting was held in Leeds, on February 29th, when the President (Col. Wear, C.M.G.) and ten members were present to hear a paper by Dr. Katherine Gamgee, Assistant Medical Officer of Health (M. and C.W.), Hull, on "Some Impressions of Maternity and Child Welfare Work in a big County Borough." Dr. Gamgee outlined the history and development of this work in Hull, and noticed the fall in infantile mortality which had occurred side by side with extensions of the work, this being at least an interesting coincidence. A reorganisation was described which enabled the health visitors to pay an increased number of re-visits to children under one year of age. Dr. Gamgee dealt with the effect of insanitary environment upon the health of infants, problems of anti-natal work and the need for the co-operation of the general practitioner. The paper was illustrated by charts.

In the brisk discussion which ensued the subjects raised included the unfortunate lack of interest in modern methods for maintaining breast feeding shown by many general practitioners, the effect of this being to defeat the efforts made at the Welfare Centres; the effects of the extended use of dried milk in reducing infant mortality in recent years; the exploitation of welfare centres by commercial firms in connection with the sale of proprietary articles said to have special food values; the school of thought which holds that

infant welfare work might result in the survival of the unit to the detriment of the race.

NORTHERN BRANCH.

A meeting was held in the Medical Institute, 7, Windsor Terrace, Newcastle-upon-Tyne, on Friday, 22nd February, 1924.

In the absence of the President and the Vice-President, Dr. J. A. Hislop was voted to the chair. Sixteen members were in attendance.

The minutes of the meeting held on the 7th December, 1923, were read and confirmed and were signed by the Chairman.

Apologies for absence were read from the following: Drs. T. Eustace Hill, C. R. Gibson, on account of indisposition, and Grace H. G. Dundas.

Nomination for Presidency of the Society, 1924-1925.—The Honorary Secretary reported that letters had been received from the Honorary Secretaries of the North Western and Southern Branches asking the Northern Branch to support the nomination of Dr. Robert A. Lyster for the Presidency of the Society.

Dr. Potts moved that the nomination of Dr. Lyster be supported, and Dr. H. Morrison seconded the motion, which was carried unanimously.

On the motion of the Chairman, which was duly seconded, Dr. Marguerite Anne Reid, Assistant M. and C.W. M.O., Durham C.C., was elected a member of the Branch.

The Honorary Secretary referred to his recent circular dated 12th February, 1924, which had been sent to all Public Health Medical Officers in the Northern Branch Area who are not members of both the Society of Medical Officers of Health and the B.M.A.

The Honorary Secretary informed the meeting as to the action taken by the Branch Representatives in conjunction with the Sunderland Division of the B.M.A., and reported that as a result the matter was again receiving attention from both Sunderland Council and the Ministry of Health.

In reference to an attempt to secure an assistant School Medical Officer at less than the recognised minimum salary the Honorary Secretary reported that a joint deputation from the Gateshead Division of the B.M.A. and the Northern Branch of the Society of Medical Officers of Health (Dr. W. F. J. Whitley) waited upon the Gateshead Education Committee, and it had resulted in the Education Committee agreeing to recommend the Council to agree to offer the

scale rate, viz., £600, which the Council subsequently approved.

From information received it appeared that there had been a recent appointment at South Shields of a woman as M. and C.W. Medical Officer at £500 per annum. Dr. Hislop promised to obtain further particulars of the appointment.

A member reported that the Darlington Council had recently appointed a woman as S.M.O. at £500.

It was understood that the Darlington Division of the B.M.A. had met the Darlington Education Committee, but the latter would not increase the salary to the scale, viz., £600.

Dr. Whitley said that he had been informed that there was a difference in policy between the Scottish Branches of the B.M.A. and the English Branches, as to the scale, and the Honorary Secretary was asked to communicate with Headquarters on the matter.

It was directed that the thanks of the meeting are due to Drs. Eustace Hill, W. F. J. Whitley, A. Smith, senr., Jas. Hislop and H. Kerr, for the work they had done in connection with Sunderland and Gateshead, and that this be recorded on the minutes.

In the absence of Dr. C. R. Gibson through influenza, Dr. H. Kerr read his paper on "The prime factor in the decline in infant mortality."

There was a brisk and interesting discussion in which the following took part: Drs. J. A. Hislop, A. F. G. Spinks, W. F. J. Whitley, Mabel Brodie, A. Smith, senr., and H. Kerr.

Dr. Hislop moved a vote of thanks to Dr. C. R. Gibson for his interesting paper. This was duly seconded and carried with acclamation.

MATERNITY AND CHILD WELFARE GROUP.

A meeting of this Group was held in the House of the Society, on Thursday, January 17th, at 8 p.m. Dr. Harold Scurfield (President) in the chair. There were 20 members present.

The minutes of last meeting were read, confirmed and signed by the Chairman.

Dr. William Cramer delivered an interesting address on "Vitamines and the Borderland between Health and Disease," of which the following is an abstract, arrangements having been made for the full paper to be published in the "Lancet."

"The lecturer showed on the basis of experiments on animals that the organism of a highly differentiated animal requires a maximum supply of vitamins in the food, especially in infancy, in order to reach its full developments. This is due

to the fact that the vitamins have a drug-like stimulating action on specific tissues and organs, particularly the lymphoid tissues and the intestinal mucosa. These tissues are dependent for their full developments on the continued stimulus supplied by the vitamins in the food, in the same way as other tissues are dependent on the presence of internal secretions, for instance, the uterus is dependent on the internal secretion of the ovary. While a complete absence of vitamins produces definite diseases—the so-called deficiency diseases—with specific atrophic lesions, a restricted vitamin intake produces not obvious disease but incomplete development with diminished resistance to certain infections. Between the condition of full development with a maximum supply of vitamins and the obvious deficiency diseases with the more or less complete absence of vitamins there is thus a borderland between health and disease when the organism is subjected to vitamin underfeeding.

The effects of such vitamin underfeeding were demonstrated in a stock of rats on which it had been practiced for several generations. It was pointed out that the diet of large classes of the population is such that they are being subjected to vitamin underfeeding. Clinical evidence was adduced that this condition is far more general than is suspected and that it presents a social problem of the greatest importance. Attention was drawn to the remarkable results obtained in America in an experiment in school children by correcting their diet, an experiment which demonstrated the existence of vitamin underfeeding in these children. An appeal was made to test for the existence of this condition by a similar experiment in this country."

Several members joined in the discussion at the end and asked Dr. Cramer a number of questions.

Dr. Scurfield expressed the gratitude of the members of the Group to Dr. Cramer for his most interesting and suggestive paper. He was sure they would all look forward to reading or studying it when published. He himself had been specially interested as he had recently had the opportunity of visiting the wards in the Sheffield Infirmary in which Marasmic babies were being treated by Professor Mellanby on vitamin-rich diets. The dietaries included Cod Liver Oil, Marmite, orange juice, etc., and the results were claimed to be very good. Several Municipalities now had wards for ill-thriving Marasmic infants and he thought some such subjects as "The provision for and treatment of" this class of baby would be a good one for their

Annual Meeting. He would like to know in what form Dr. Cramer had used yeast.

Dr. Cramer in reply said the preparation of yeast used by him was Marmite and with reference to the results obtained at the Sheffield Royal Infirmary he believed that similarly satisfactory results were being obtained at the Infants' Hospital. There were of course many forms of Marasmus and it was not to be expected that all cases would respond equally to this form of dietetic treatment.

A short discussion then took place as to the subject for the Annual General Meeting in July, and it was decided that members of the Group should be asked to submit suggestions to the Hon. Secretary, and that he should bring them before an Executive Committee for decision.

TUBERCULOSIS GROUP.

A meeting of the Group Committee was held at 1, Upper Montague Street, on Friday, March 14th.

The Secretary reported the results of the Committee's activities at their last meeting.

(1) In Southwark, where a T.O. had accepted the post of M.O.H. at a salary below the scale, attempts were now being made to obtain a T.O. at £150 below the scale. And in Suffolk, where the same thing had happened, it was sought to obtain a T.O. at £250 below the scale.

(2) The Tuberculosis Society and the Society of Medical Superintendents and the Ministry of Health were co-operating cordially in the co-ordination of annual reports and collective research.

On the suggestion of the T.G. Post graduate study was also to be considered. The following had been chosen to represent the T.G.: Drs. Blackmore, Ellis, Brand and Dr. Jane Walker. The representatives of the Society of M.S. were Drs. James Watt, S. Vere Pearson, F. R. Walters and Dr. Peter Edwards. Dr. MacNalty had been selected by the M.H. to attend the meetings as observer. It was resolved to ask the Council of the Society of M.O.H. to nominate one of their members also. (The Council later agreed to this and nominated Professor Kenwood.)

(3) Memo 286 and 486 were discussed and the Secretary was directed to write the Metropolitan Sub-Group "That this Committee cordially agrees with the principle of their resolution, but consider that no further action is necessary at present."

(4) Salaries Scale.—The Committee decided to leave to the discretion of the Secretary any action that might be necessary between this meeting and the next.

(5) *Presidency of the Society*.—Letters were considered from the Southern Branch asking support for their nomination, Dr. Robert Lyster; and from the Midland Branch asking support for Dr. Ridley Bailey.

(6) Resolutions of the West of England Sub-Group were considered:—

(a) Concerning the *Supply of Dreyer's Antigen*. The Committee decided that as this had been arranged by the Medical Research Council—a body independent of the Ministry of Health—it would not be useful to forward the resolution to the Ministry.

(b) *Study Leave*.—This was considered important, and the Secretary was directed to take action and report at next meeting.

(7) *The next meeting* was arranged for 10 a.m., Friday, May 16th.

MIDLAND TUBERCULOSIS SUB-GROUP.

The Third Meeting of the Midland Tuberculosis Sub-Group of the Society of Medical Officers of Health was held at the Anti-Tuberculosis Dispensary, 44a, Broad Street, Birmingham, on Saturday, December 8th, 1923, at 2.45 p.m.

Present: The President (Dr. John A. Watt, Derby), and 10 members.

The Minutes of the previous meeting were read and confirmed.

Dr. Parkinson (Tuberculosis Officer, Staffordshire), gave a lecture on "Review of some Continental methods of dealing with Tuberculosis."

Dr. Parkinson described his journey to Vienna and experiences on the way. He called at Hamburg where he visited Prof. Brier's Hospital, and here he was struck by the poor buildings but excellent grounds, which are made full use of. They had a first-class X-ray department, and he was impressed by similarity of resultant diagnosis arrived at by Radiographer and by Clinician. In the Surgical Department, Prof. Brier did all the surgery himself, never calling in the surgeon. Very little Tuberculin was used here, the native land of Koch. The scenery between Berlin and Hamburg was extremely uninteresting. At Berlin he visited the Beblitz Hospital, a very desolate, ill-cared for, but well-equipped Hospital. The Children's Department was the worst of all. The equipment included an Inhalatorin and the universal use of Quartz lamps.

Vienna, Dr. Parkinson's next place of call, and here living was cheap and everybody most polite. Hospital and Sanatorium paid for by the City—very little active treatment, in the main they relied on fresh air, sunlight and rest to achieve a cure

—no tuberculin was used. Here also he was impressed by the number of tubercular skin conditions.

Pasteur Institute at Lille was then visited, which Dr. Parkinson describes as a Body without Head since Calmette left.

Summarising his impressions:—

1. The great value of X-rays in diagnosis is much more appreciated there than here.
2. The extensive use made of ultra violet rays and of the Quartz lamps especially in treatment.
3. Disease of Tuberculin treatment.
4. X-ray treatment of Pulmonary Tuberculosis is of no use.
5. Surgical treatment, especially at Hamburg, no splintage used, but they are tending to do so.
6. Nothing known of the complement fixation test.

And finally Dr. Parkinson assured us that England has nothing to be ashamed of—nothing he saw abroad which was not used in England. He was immensely impressed by the great courtesy to him everywhere, especially in Hamburg and Vienna. He then showed us specimens of moneys of the various countries he passed through and we had a very delightful and instructive afternoon.

Dr. Crowe mentioned some of his experiences in and around Paris before the war.

Dr. Watt (President) proposed a vote of thanks to Dr. Parkinson, which was seconded by Dr. Elliott and warmly supported by all.

The Fourth Meeting was held at the Council House, Birmingham, on Saturday, February 16th, 1924.

The minutes of the last meeting were read and confirmed.

Prof. John Robertson read a paper on the "Tubercloses that are due to Milk." In his opening remarks Prof. Robertson mentioned the very important statements by physicians in recent years regarding the bovine tuberculosis immunising the population against human tuberculosis, and the consequent desirability of discussing some of the problems arising from the consumption of milk containing the bovine tubercle bacilli. Prof. Robertson expressed regret that Tuberculosis Officers could not get a more intimate knowledge of bovine disease and consequently missed many valuable lessons from the comparative pathology.

Quoting Bang and others regarding the high infectivity of the bovine disease and the possibility

of eradicating the disease from herds, the Lecturer said his experience bears this out strongly. Not only is the infection one which has a great power of diffusion, but quite early cases are capable of spreading the disease, and these statements apply to many cases of human infection, though the difficulty in proving this is increased in both cases.

Taking it, that it is generally agreed that the bovine and human tubercle bacilli are different strains, and while the human subject is occasionally infected by the bovine T.B., the bovine is very rarely infected by human T.B., and having drawn attention to the difficulty, amounting in impossibility in case of some strains, of differentiation between the two, Dr. Robertson said the practical point however is, that the great majority of bovine bacilli recovered from human subject breed true and cannot be reconverted into the human type. Figures giving percentage of each type in the various tubercular lesions under age groups were then given. No very good explanation appeared to be forthcoming as to parts of the human body becoming diseased by bovine bacillus in which the human bacillus did not thrive. Having then mentioned other possible means of infection, Milk was taken as the most frequent source.

Prevalence of Tubercle Bacilli in Milk.—Dr. Robertson took first the cattle producing milk, described means taken in Birmingham to produce T.B. free milk, gave percentage of cattle infected originally. Mentioned Bang work in eliminating T.B. from herds and showing the possibility of keeping herds free.

In mentioning Tuberculosis of the udder, Prof. Robertson reminded us of the prevalence of tubercular ulceration of intestines in advanced cases with consequent infection of the milk via faeces. Infection of air of shed by coughing is frequently proved, while the spit is swallowed. The percentage of samples of milk found infected was then given.

Prof. Robertson considered from the point of view of Preventive Medicine the amount of work done in eliminating Tuberculosis from herds is almost a negligible quantity, and yet there is a very material drop in the death rate from Tuberculosis, and these figures indicated to his mind that the immunising effect of the T.B. had nothing to do with the prevention of tuberculosis. He drew our attention to the other side of the picture—the high death and disablement rate due to bovine variety of T.B. together with high cost of treatment in latter case, and advocated the

elimination of bovine T.B. infection from milk by means of efficient pasteurisation. He asked for the Members' views on Immunisation by the milk supply.

Dr. Bell Ferguson opened a discussion afterwards, and suggested Municipal pasteurisation plant as a remedy.

Drs. Dixon, Watt, and Hefferman, discussed various points arising on the paper.

A vote of thanks to Dr. Robertson was proposed, seconded, and carried unanimously.

CONSUMPTION AMONGST CLERKS.

Dr. Charles S. Thomson, Medical Officer of Deptford, is urging clerks to make representations to the Ministry of Health for improved conditions. He points out that the death rate among clerks from consumption is abnormal, and that the provisions of the Factory Acts ought to be applied to offices as well as factories. Dr. Thomson is performing a public service in ventilating this matter, as there is no doubt that in many large towns, and in the City of London in particular, offices in which clerks work from day to day would not be sanctioned either for workshops, or for living or sleeping rooms in any house. A searching investigation into the general conditions of clerical accommodation would reveal some astonishing facts.

BIRTH CONTROL. INFORMATION FOR WORKING MOTHERS. An announcement calling the attention of secretaries of all local labour organisations to the subject of birth control, states that, "In view of the urgent need for making birth control information accessible, through public health authorities, to all those working mothers who desire it, it is proposed to send a petition to the Minister of Health, and to support such petition by a deputation at the end of April."

SUNDERLAND M.O.H. The Sunderland Town Council recently discussed a proposal that the salary of the Borough Engineer should be increased from £1,000 to £1,200 per annum. In reply to some opposition, a Councillor explained that there was no difficulty in getting Town Clerks, Medical Officers, and Borough Treasurers, but they could not expect to get Borough Engineers at £1,000 per annum. Whereupon, the Council accepted the recommendation. We believe that the Medical Officer of Health for Sunderland receives less than £600 per annum, a scandal that should not be allowed to continue.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

"CENTRAL MIDWIVES BOARD."

SIR,—The "Inspector of Midwives," writing under this heading in the March issue of PUBLIC HEALTH, probably refers to the case sent for the decision of the Board by my Public Health Committee.

Such of your readers as are interested in the supervision of Midwives will probably like to have before them the facts of this case. They are as follows:

A woman, aged 31 years, *primpara*, was confined, a midwife being in attendance. On the tenth day, the midwife, for the first time, sought medical help. The doctor found the patient anaemic, jaundiced, and collapsed, pulse 180. He diagnosed septicaemia and sent the patient to the hospital as a last chance. She arrived in hospital at about 8 p.m. that (the tenth) day.

Condition on admission.

"Extremely ill, very pale, with the appearance of a woman who had lost a great deal of blood. Temp. 101.6. Pulse 140. Lochia most offensive."

Diagnosis.

- (i.) Anaemia from haemorrhage.
- (ii.) Puerperal sepsis.

She died about 7 p.m. the same evening.

Post Mortem.

"There is a large portion of placenta tissue remaining, presenting as a polypoid mass at the external os. Apart from anaemia and sepsis other organs normal. No part of placenta attached to lower uterine segment."

The Public Health Committee alleged the following charges (among others, which were dismissed, relating to the non use of forms) against the midwife.

That she was guilty of negligence in the following respects:—

(1) The placenta not having been completely expelled two hours after the birth of the child, she did not as soon as she became aware thereof call in to her assistance a registered medical practitioner as required by Rules E. 20 & 21 (8).

(2) The patient, suffering from excessive bleeding on the night following the confinement, she did not as soon as she became aware thereof call in to her assistance a registered medical practitioner, as required by Rules E. 20 & 21 (8).

(3) The patient suffering from illness with persistently offensive lochia, she did not as soon as she became aware thereof, call in to her assistance a registered medical practitioner as required by Rules E. 20 & 21 (4).

(4) The patient suffering from a condition supposed to be infectious, she did not send to the Local Supervising Authority the notification required by Rule E. 6.

(5) The patient suffering as last aforesaid, she, without having undergone disinfection to the satisfaction of the Local Supervising Authority, attended another lying-in woman contrary to Rule E. 6.

The mother of the patient, the House Physician at the Hospital, the Medical man called in by the Midwife, and the Inspector of Midwives, attended the Special Penal Board and gave evidence.

The Inspector of Midwives gave evidence that no notification was received by the Local Supervising Authority from the midwife that she was, or had been, in attendance on the patient whose condition was one of infectious illness.

The Mother of the Patient declared that

(1) Her daughter was about four hours in labour, and it was quite an easy confinement.

(2) During the night following the confinement her daughter lost a good deal of blood, and was very faint.

(3) About the fifth day she noticed the discharge was very offensive.

(4) Three times during the week following the confinement she asked the Nurse whether her daughter required the doctor, and whether she (the Nurse) was satisfied. To which she replied she was quite satisfied.

(5) On the ninth day her "daughter seemed to fail about mid-day, and she feared that she could not keep life in her. Nurse did not suggest sending for the doctor, but said she would be better in the morning, and we would then see about sending for the doctor."

The Patient's Medical Adviser declared that on the tenth day he was called to the patient and went immediately. "The patient was anaemic, jaundiced and collapsed. Her pulse was 180, uterus within two fingers breadth of the umbilicus, very tender, lochia foul. I told the nurse that the patient was suffering from puerperal septicaemia, and that she must not go to another midwifery case. She stated that the lochia had been offensive for some time, and that she had had difficulty with the placenta which was ragged. I telegraphed to the Infirmary, and sent patient in as a last chance."

The note from the Nurse, asking him to visit, stated that the patient had been very poorly since the confinement. That she had complained of her

heart and faintness. That the loss at confinement and during the following night had been severe, and that the lochia were free and offensive.

A copy of this letter was put in and admitted on Nurse's behalf. In cross examination he stated that there was no albumen in the urine previous to the confinement.

Later he was recalled, and stated that previous to the confinement on his visits, he had found patient with a good colour, and in no way anaemic, and he had expected a normal confinement.

The House Physician at the Infirmary stated, in evidence, that on admission, pulse was 140, lochia very foul. Patient died four hours after admission. He entirely agreed with the previous medical witness's opinion. At the post mortem the organs were found to be in a high degree anaemic, the spleen was three times its normal size, a portion of placenta twice the size of a hen's egg was found; it was not microscopically examined. He stated that placenta could be readily distinguished from blood clot, that the portion of placenta was adherent to the body of the uterus near the fundus, and there was no possible doubt that it was in fact placenta.

The defence was that this was a case of toxæmia of pregnancy. It was admitted that in face of the evidence it could not be denied that a portion of placenta had been left behind.

The Board dismissed charges (1) and (2), and convicted on charges (3), (4) and (5), and gently censured the Midwife.

Comments.

The Board appear to have completely ignored the evidence of two doctors, and a report from a pathologist of the post mortem findings with regard to the retained placenta. (Charge 1).

With respect to Charge (2), excessive bleeding was admitted in the Midwife's letter produced at the enquiry.

The Public Health Committee reported to the County Council on this case. "While the result amply justifies the action taken in reporting the case to the Board, the Committee feel bound to record their dissatisfaction with the findings of the Board, nor can they regard the 'caution' administered to the Nurse as an adequate way of dealing with such grave neglect in a case where the life of the patient was at stake."

I am, Yours faithfully,

"COUNTY MEDICAL OFFICER."

WOMEN IN MEDICINE.

From Dr. FLORENCE E. BARRETT.

DEAR SIR,—My attention has been called to an editorial article in your Journal of PUBLIC HEALTH,

in reply to which it is only fair to the public to say that the cost of medical training for women in the London (R. F. H.) School of Medicine for Women (with which alone I am acquainted) has proved by no means an unsatisfactory or unremunerative investment. The whole profession, both as regards men and women, is somewhat overcrowded at the moment, owing to the very large entry of students at the end of the War. That entry, however, has rapidly declined, and it would be an entire delusion to found any judgment on the needs of the profession by the numbers qualifying within the last year or two. It would be very interesting to see what kind of women write the letters suggested in your editorial. I can only say that of all our students who have started in practice none of them have had the experiences you describe, and I have never, in my whole experience, heard one medical woman declare "that the continual grind and petty annoyances of practice are unendurable for women, and that they are on the verge of a breakdown in health." I am surprised that, in spite of your view that business is a more desirable employment than the medical profession, you do not utter one word of guidance to the parents of men students, which might deter them from sending their sons into the profession. It seems to be a singularly unfortunate time for an article of this kind to appear in your paper, when medical women have been working loyally to prevent the acceptance of under-paid posts. Such an editorial as yours will only encourage public bodies to offer lower salaries to women, and thereby damage the profession as a whole.

Yours very truly,

FLORENCE E. BARRETT.

P.S.—I have just made careful enquiry as to the actual figures affecting the present time for the women of our own School. There are only six women who will be requiring posts immediately, and three or four of these are not yet out of the posts they are now in. Sixty women have obtained Hospital appointments within six months, and of those who have started in general practice, all are succeeding beyond their expectations.

"THE SOAP AND WATER SCHOOL OF DISINFECTION."

From Prof. H. KENWOOD.

SIR,—A careful perusal of our paper will supply our answer to most of the points which Dr. K. Simpson raises in his letter which appeared in your last issue.

We never attempted to argue that disinfected houses should enjoy an immunity against secondary cases of infection; but only to assert that if room-disinfection were efficiently performed, a few such cases would be prevented. Dr. Simpson is "convinced that the Croydon secondary cases, in practically every instance, were due to undetected cases and carriers. What evidence of this can he adduce in respect to Scarlet Fever cases? It is the merest conjecture. But, assuming that he is correct, I fail to see how it bears upon our argument, save that it might be contended that the disinfection carried out had effectually removed all sources of infection other than personal. We do not however, claim, or admit, that the Croydon facts prove anything, except that a certain number of secondary cases were found to follow upon a certain number of notified cases after their hospital isolation and the disinfection of their homes.

Dr. Simpson states that the employment of a definite strength of disinfectant, for a definite time exposure, are conditions never fulfilled in actual practice! In view of this startling statement it would be useful to know what was done at Croydon when the practice of disinfection was made so "zealous" while the observations as to the secondary cases were carried out.

It is considered strange that we made no reference to the disinfection of infected fomites. We are dealing with *the surface disinfection of rooms*; and we assumed that the need for the disinfection of *all* fomites exposed to infection was universally recognised. If Dr. Simpson is the exception proving the rule, we would ask whether, in his opinion, the handkerchiefs used by a Diphtheria patient, and the sheets and blankets from the bed of an Enteric Fever patient, are quite harmless; and if it is necessary to disinfect these, why is it unnecessary to disinfect *all* infected fomites, as also the floors of the rooms occupied by infected patients?

Dr. Simpson again confuses the issue by suggesting that "in seeking to destroy the germicidal powers of the sun" we carried out our tests in October and December, rather than in April, May and June, when those powers are stronger. We never sought to destroy the germicidal powers of the sun; we simply demonstrated that these are valueless in the circumstances of room-disinfection during at least two months of the year.

Is not that sufficient for our case? We did not, of course, deny the beneficent effects of fresh air and sunshine upon the human organism.—But that is another story.

I am, Yours truly,

H. KENWOOD.

THE CENTRAL MIDWIVES' BOARD.

SIR,—The letter of "Inspector of Midwives," in the March issue of PUBLIC HEALTH, is of considerable importance.

In the writer's judgment, when the Central Midwives Board was limited to six or seven members it was a much more effective unit. At the present time it consists of fourteen members, and it may be stated that more than half of these are Midwives, representatives of Midwives, or persons associated with Nursing Associations whose sympathies and leanings are with the Midwives; it is difficult to see how an unbiased judgment can be arrived at under its present constitution.

The concluding paragraph of the letter is of paramount importance. The Central Midwives Board is a judicial authority, and it is most unfortunate that certain members of the Board should think it right to visit various parts of the country, address meetings, and personally inspire Midwives to write to the Board upon matters upon which they, as members of the Board, may be called upon to adjudicate.

The Executive Officer of the Local Supervising Authority must always act in the interests of the parturient and lying-in woman. A study of the Board's decisions seems to indicate that this fact is frequently overlooked, and the conduct of some of the Board's members is such that it would appear that the interests of the Midwife are the Board's first consideration.

I am, Yours faithfully,

JUSTITIA.

SCHOOL DENTISTRY.

From Mr. GRANTLEY SMITH.

DEAR SIR,—I am desired by the Council of the School Dentists' Society to place before your readers a Resolution concerning the School Dental Chart of the British Dental Association.

"The Council of the School Dentists' Society have had under consideration the Dental Chart sent to the Ministry of Health by the Representative Board of the British Dental Association. It considers that this Chart would be unacceptable to the great majority of School Dental Surgeons, by reason of its complexity, and inclusion of unnecessary detail involving waste of operating time."

Yours faithfully,

GRANTLEY SMITH,

Hon. Sec.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 8.

MAY, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

EDITORIAL—

The Superannuation Act	185
The Central Midwives' Board	186
Courses for Foreign Health Officers	186

SPECIAL ARTICLES—

The Prime Factor in the Decline in Infant Mortality (By C. R. Gibson, M.A., M.B., D.P.H., M.O.H. of the North Riding Combined Districts)	187
Clinical Features of a Mild Type of Small-Pox Prevalent in England (By John A. Watt, M.B., Ch.B., D.P.H. (Aberdeen), Assistant County Medical Officer, Derbyshire)	197
The Tuberculosis Service and the Future (By Cecil L. Williams, B.Sc. (Hons.) Lond., M.R.C.S. Eng., D.P.H. Camb., M.O.H., Todmorden)	201

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Report of Representative on the Central Midwives' Board	205
Yorkshire Branch	209
Home Counties Branch	210
Midland Branch	210
North Western Branch	211

NOTES FROM BRANCHES—

West of England Branch	207
Metropolitan Branch	208
The Southern Branch	208

Editorial.

THE SUPERANNUATION ACT.

The Local Government and other Officers' Superannuation Act has been in force for nearly two years and valuable experience has been gained with regard to its financial working and also as to the views of local authorities. The existence, for many years, of superannuation schemes for the employees of the great railways, banks and insurance companies, as well as the voluntary adoption of such schemes by many large towns, shewed clearly that superannuation was really a businesslike and economical proposition, and on this account many people considered that the Superannuation Act ought not to be adoptive. Subsequent events have proved that the concession, so far as it eased legislation and enabled the feeling of local authorities to be tested, was a wise one, but it has led to the development of serious confusion and hardships among local government officers which should be removed promptly by the application of the Act to the country as a whole.

Those who insisted that the Act should at the outset be adoptive have been justified by the large number of important local authorities which have voluntarily adopted it. The actuarial estimates made for these authorities have amply justified our claim, made two years ago, that the cost to the public would prove to be very small, and the case for adoption by every local authority would appear to be irresistible. Unfortunately, however, a few important local authorities have definitely refused to adopt, and a larger number are postponing it indefinitely, with most unsatisfactory results not only upon the officers of those authorities but upon the local government service generally. The transfer of officers from one authority to another is rapidly becoming complicated and difficult owing to the division of the country into "adopted" and "un-adopted"

areas. A case has recently occurred where an officer has been offered a post in an "adopted" area and has now to choose between accepting the desired post and starting public service afresh, so far as it will count towards superannuation, or remaining in the present "unadopted" area on account of the fifteen years' service which will count towards pension if at any time that authority should adopt the Act.

The Act in its present adoptive condition is likely to remain a dead letter in most of those smaller local authorities who employ less than fifty officials. These authorities can only put the Act in force by combining with other authorities so as to bring the total number of officers up to the required minimum; such combinations are not likely to take place voluntarily.

The matter is really urgent, as the public service will suffer to a constantly increasing extent until the Act is made applicable to all authorities. The necessary legislation would be of a very simple character and should be practically non-controversial.

THE CENTRAL MIDWIVES' BOARD.

During the past few months letters have been published in this journal which indicate serious dissatisfaction with the Board. It must be remembered however that, as a general rule, in such circumstances, it is the critic who is the more likely to make himself heard while the individual who regards the existing conditions as fairly satisfactory is more likely to remain silent.

There is undoubtedly a case to be made out for the Board. The members of that body are obviously handicapped by deficiencies in the Act which created the Board but failed to give it sufficient or satisfactory powers, and which failed to set out the exact relationship between the central body and the local supervising authorities. The Board is essentially a judicial body but it lacks even the elementary and necessary power of being able to obtain evidence on oath. It is not surprising therefore that many of its decisions give rise to great dissatisfaction among local supervising authorities.

The most serious of the charges which have been brought against the Board is its apparent disregard of responsible outside opinions upon matters with which the Board have to deal. The Society of Medical Officers of Health, in conjunction with the British Medical Association, for example, laid before the Board a series of carefully considered recommendations concerning the C.M.B. rules. The alterations suggested were those which had been considered desirable by

senior administrative officers with long experience in the working of the Midwives' Acts, but the result seems to indicate that these recommendations received very scant consideration by the Board.

Similarly the very definitely and widely expressed public and professional opinion with regard to the unsupervised use of dangerous drugs by midwives has not received from the Board the serious and sympathetic attention that it deserves. In this instance the unfortunate practice of the Board in sending merely stereotyped refusals to the important public and professional bodies concerned is likely to lower its prestige and to secure for its critics a hearing which they would otherwise not obtain.

COURSES FOR FOREIGN HEALTH OFFICERS.

The recent visit of parties of health officers from twenty-three nations has been a great success, and reflects the highest credit upon all those concerned with the organisation of the scheme. The Ministry of Health, the Society of Medical Officers of Health, and the local officers in charge of the detailed work in the provinces have all contributed to the formation of very flattering opinions on the part of our visitors who were evidently delighted with the arrangements made for them.

Everyone concerned with these arrangements has been impressed with the enormous educational value of the work done. Those who have taken part in the instruction work have learned at least as much as those who came to gather knowledge, and the general feeling is that these arrangements might usefully be amplified for the benefit of the public health service generally and not limited to a favoured few. Some men have the happy gift of lucid description and explanation, and if these men could be selected and arrangements made for them to use their gifts for the benefit of a succession of groups of officers the much-to-be-desired levelling up of the service would be started.

Perhaps the most striking feature of the courses was the openly expressed opinion of our visitors that their chief interest was for methods of administration and organisation, and not the actual clinical work involved. Several said quite frankly "Our clinical work is just the same as yours, but your methods of organisation and administration, as well as your legal provisions, are quite different, and it is in these that we are mainly interested." This fact might be kept in mind for future occasions.

THE PRIME FACTOR IN THE DECLINE IN INFANT MORTALITY.*

BY

C. R. GIBSON, M.A., M.B., D.P.H., M.O.H. of the North Riding Combined Districts.

"From these three things, Infection, Negligence, and Ignorance, the Accidents of Old Age come on."
RICHARD BROWNE, 1683.

My excuse for commencing an address on mortality in the earliest period of life with a quotation referring to the latest is, that it is equally opposite to the "accidents" of all ages, and is a useful mental clue in the labyrinth of causation. Some clue is certainly needed. A study of the writings on the subject has impressed me with the number of the pitfalls into which the unwary adventurer stumbles; I cannot hope to avoid error when so many abler men have succumbed, and yet I venture to put my views before you, for, if correct, they should have a large bearing on practical policy, and, if incorrect, their public expression will soon reveal mistakes I have been unable myself to detect.

The decline in infant mortality in the last quarter of a century, roughly 50 per cent., is striking, and has attracted much attention. Wheatley¹ found on enquiry that two out of every three Medical Officers of Health in 1928 ascribed the decline to organised maternity and child welfare activities, but, rather unkindly, proceeded at once to show this belief was unfounded, by pointing out that the districts which first adopted child welfare work showed no difference, either in the extent of the decline or its date, from those others which did not officially interest themselves in infant welfare until fifteen years later. Brend and Findlay,² some years earlier, drew attention to the same inconsistency.

Undoubtedly more credit has been assigned to the work of infant welfare centres and health visitors than is rightly their due, and, while the exaggeration may have been useful in sustaining the enthusiasm of voluntary workers, care must be taken that partial blindness to facts does not lead our feet too far astray.

Any study of the changes of mortality at one period of life is incomplete unless their relation to changes at other ages is also noted. Infants and adults live side by side in the same homes, and it is likely that some of the conditions prejudicial or favourable to the health of the one will be found to have a similar effect on the well-being of the other. It has been stated that the reduction in death-rate which has taken place at adult ages not having been

reflected in the curve of the infant rate during the past forty years proves that the same causes have not operated on both.³ This is not correct. As a matter of fact, a glance at the *changes* in mortalities at all different ages of life over a long period of years will show how general in their effects the harmful or beneficial factors have usually been. It will be seen, for instance, that the infant death-rate from all diseases other than diarrhoeal bears a steady proportion to the death-rate at ages 45 to 54 years, the ratio varying, from 1871 to 1910, between seven and eight to one; when the two are plotted as superimposed curves, as in diagram 1, the scale of the death-rate at the higher age being seven-and-a-half times that of the other, the correspondence is evident. When one considers the likeness of the general trend, the correspondence of maxima at 1875, 1891, 1895, 1899 and 1918, and the increase in one mortality between 1910 and 1915 coinciding with an at least arrested decline in the other, it is obvious that the decline in both since the end of last century must be explained by the same cause operating at the two age periods. This necessity rules out most of the suggested explanations of the decline in infant mortality, such as child welfare work, reduction of the birth-rate, improvement of the milk-supply,³ and the beneficial effect of the 1870 Education Act fructifying when the children of 1870 became parents in 1900.⁴ Atmospheric pollution² in urban areas has been advanced as the most potent factor in preventable infant mortality, but I have not yet seen it suggested that the large decline experienced is due to any improvement in this condition.

The reason for the decline must be sought in active causes having a wide action over the different periods of life and over most of the numerous agents of death. A death-rate is the reflection in the statistical pool (there are some who would call it a bog) of the health of the community; as the general health mounts higher the death-rate sinks lower. One may, therefore, find that conditions affecting health, without obviously preventing or leading to death in the individual, may yet have a profound effect on the general death-rate. Such a condition may well be the alteration in nutrition and metabolism consequent on changes in the total consumption of food. In diagram 1 the uppermost curve represents the index of the consumption of food⁵ and other necessities of life from 1871 to 1918, the mean value in that period being taken as 100. The food consumption of the nation in the first two decades of this century was on a much higher level than in 1870, almost one-third as high again, and the increase mostly occurred in three short periods: 1870 to 1875, 1888 to 1892, and

*Read before the Northern Branch of the Society of Medical Officers of Health, on 22nd February, 1924.

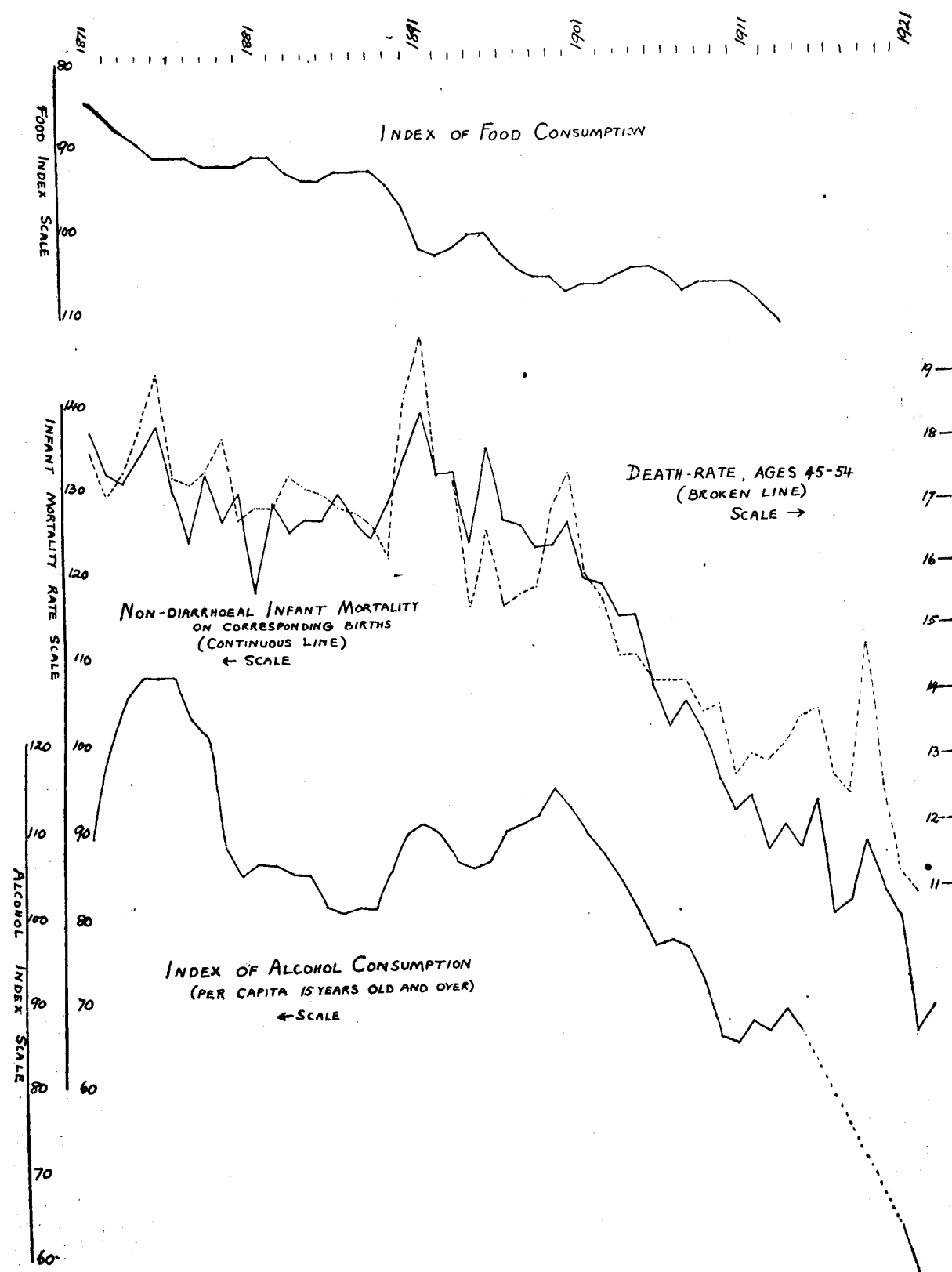


Diagram 1. Infant Mortality (standardised) from diseases other than Diarrhoeal, Mortality at Ages 45 to 54. Index of Food Consumption, and of Alcohol consumed in beer and spirits.

1895 to 1900. Reflecting that, prior to the war, the nutrition of a large proportion of the population was not excessive, one would expect, on *a priori* grounds, adult mortality to show in time, though not immediately, the benefit to health derived from this increased consumption of food, and the downward trend of mortality at ages 45 to 54 follows by some years the increase in food consumption. A close relation between the index of food consumption, or the allied value of real wages, and the general death-rate from tuberculosis in this country, has been demonstrated by Ewart⁵ and others,⁶ and if the increased nutrition has improved health in relation to this disease, it must have been effective in regard to others also. But it is more striking on the diagram that the latter years of each wave of increased food consumption coincide with a sharp and pronounced rise in the death-rate at middle age, which spends itself with the termination of the wave of prosperity; the first effect of a tide of affluence seems decidedly inimical to health. This merely depicts what has been the general induction from experience, and the lowermost curve in the diagram, representing the index of alcohol consumption⁷ (in beer and spirits) per capita 15 years old and over, furnishes an explanation of the mode of action; the mean consumption from 1871 to 1913, taken as 100, was 6.0 proof gallons. The curves show, again a general belief, that any sudden increase of national prosperity leads to a sudden large, but temporary, rise in the consumption of alcohol. The assertion that the excessive mortality at middle age in 1890 to 1892, and again in 1899 and 1901, was directly due to the increased alcohol consumption in these years is difficult, in face of the influenza epidemics which accounted for a large part, possibly even the whole, of the excess of mortality. But the intemperance may have been an effective factor in exaggerating the fatality of the disease; in the 1918 epidemic, when the alcohol rate was less than half, the relative age incidence was almost reversed from what it had been in the earlier epidemics, showing a high incidence under the age of 15, a maximum at 20 to 25, and then declining, instead of, as before, increasing steeply to a maximum at age 70 to 75. Apart from these two peaks the correspondence between the curves of alcohol consumption and of death-rate at middle age is close, particularly after 1900, when the downward trend of the alcohol graph is reflected in the steep decline of the death-rate, the arrest of alcohol decrease from 1905 to 1907, and again from 1910 to 1914, being equally well seen in the curve of death-rate.

Here then, are widely fluctuating general conditions which have apparently influenced health and

mortality at middle age. Can it be assumed that these same influences have operated in the same direction on infant mortality, leading to the close resemblance between the curves of mortality at these remote ages? As regards alcohol there can be no doubt; the variation of infant mortality from home to home directly as the parental intemperance is too well known to medical officers of health to need further argument, the harmful effect resulting from the domestic neglect inseparable from alcoholic over-indulgence. The connection between the index of national food consumption and infant welfare is not so obvious, and may not be so close, but, of course, with the increased prosperity, which is the origin of the augmented food consumption, will go increased expenditure on clothing, on house rent, and a general raising of the standard of self-respect and of cleanliness which are, undoubtedly, favourable to the infant health. Increase in national sobriety as one factor in the reduction in infant mortality was emphasised by Newsholme in his second report on Infant and Child Mortality, published in 1913. I would suggest that it has been the main factor. One has noticed that the arrests at 1905 to 1907, and 1910 to 1914, in the downward course of the alcohol curve were faithfully reflected in the graph of middle-age death-rate; they are also visible, though distorted, in the infant mortality curve.

I do not think it can be contended that the resemblances between the three curves are too slight to be of primary significance, but it may be urged that, after all, they are probably accidental, and do not imply any causal bond. Diagram 2, in which are plotted together for the years 1890 to 1921 the square of the alcohol consumption, the death-rate* from alcoholism and cirrhosis of the liver, and the infant death-rate from "suffocation, overlying," show that these two rates bear a similar relation to the square of the alcohol rate that total infant mortality (excluding diarrhoea) and middle age mortality bear to the alcohol rate. The halts at the two periods in the first 15 years of the century are well seen.

Another factor of general influence on health at practically all ages is climate, but this is more concerned with the occasional fluctuations of the death-rate above or below the mean than with the general trend. The large seasonal variations of mortality are well known; their correspondence in this country with measures of accumulated solar radiation, such as the 4-ft. earth temperature, is not so familiar except in the case of summer diarrhoea, but is, nevertheless, as striking as in that

* Antedated by one year.

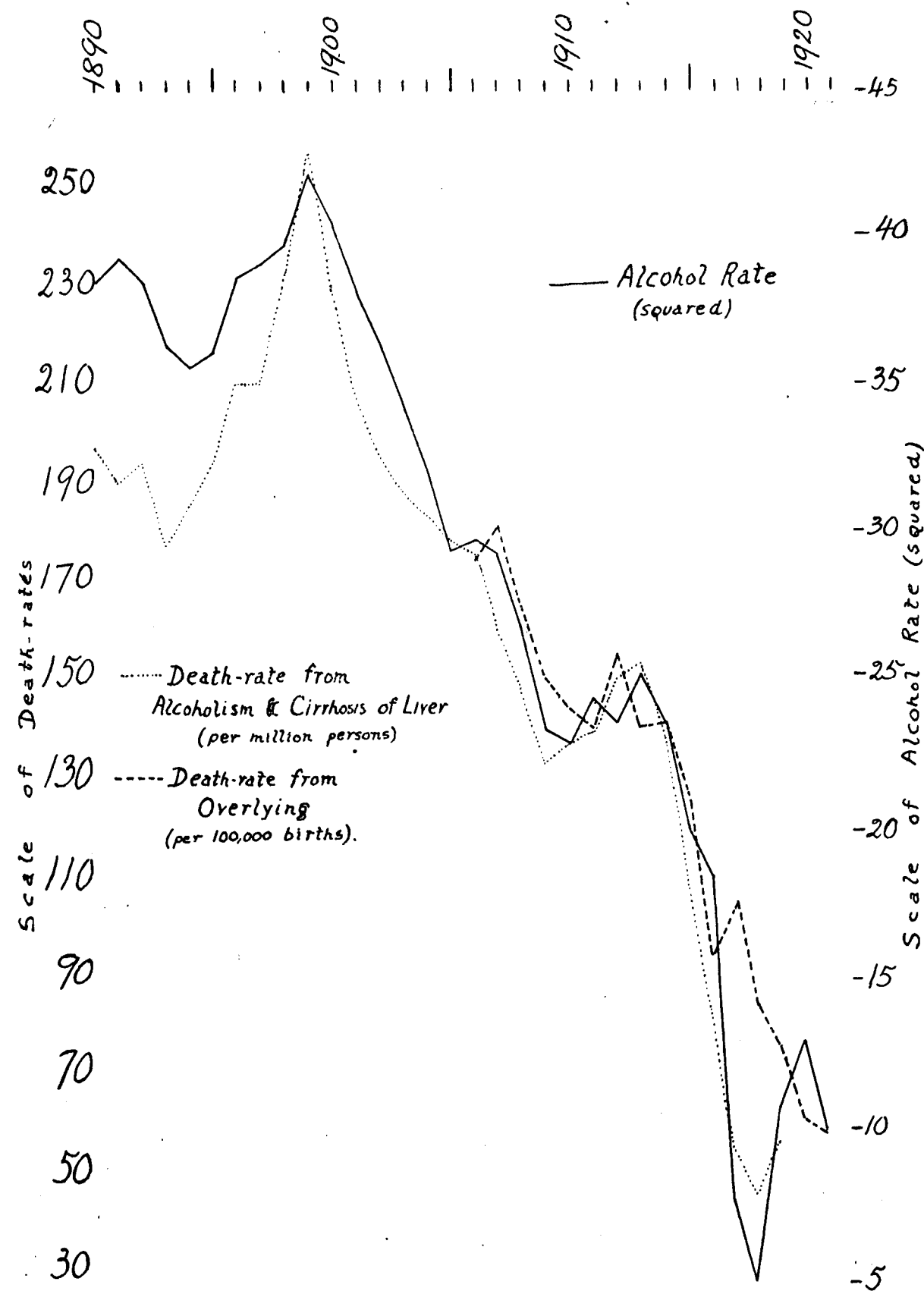


Diagram 2. Death-rate from Alcoholism and Cirrhosis (according to list of causes in use prior to 1911). Death-rate from Overlying, and Alcohol Rate squared.

disease. The death-rate is highest from January to March, when the 4-ft. earth temperature is lowest, and, apart from diarrhoea and a few other causes, the death-rate is lowest from July to September, when the earth temperature is highest. The variation in the mean temperatures of these two quarters leaves its trace on the yearly mortality.

The relations suggested may have their importance estimated by the respective co-efficients of correlation. The correlation between the annual change in the total infant mortality and in the general death-rate is given by Yule⁸ as $+0.77$ for the period 1888-1904. Other correlations referring to the period 1871-1918 are given below:—

Infant mortality from non-diarrhoeal diseases and alcohol consumption $+0.83 \pm 0.05$;

Infant mortality from non-diarrhoeal diseases and food consumption -0.69 ± 0.08 ;

Infant mortality from non-diarrhoeal diseases and mean yearly temperature -0.46 ± 0.12 ;

Infant mortality from non-diarrhoeal diseases and winter temperature (*i.e.*, mean temperature of the first quarter of the year) -0.38 ± 0.18 .

The corrections in each case are the standard errors. There is, however, a correlation of -0.58 ± 0.10 between food and alcohol consumption rates, and non-significant correlations between each of these and winter temperature, $+0.14 \pm 0.15$ in the case of food, and $+0.09 \pm 0.15$ in the case of alcohol. The partial correlation, therefore, between non-diarrhoeal infant mortality and alcohol consumption, food consumption and winter temperature being kept constant, is $+0.90 \pm 0.08$; or with food consumption, the alcohol consumption and winter temperature being constant, -0.47 ± 0.12 ; or with winter temperature, the other two being constant, -0.82 ± 0.05 . These co-efficients indicate the intimacy of the relations between infant mortality and the national sobriety and winter temperature, and the less intimate, but still perceptible, relation between infant mortality and food consumption or general prosperity.

The consideration of the fraction of the infant death-rate due to diarrhoeal diseases has, so far, been omitted. In distinction to most other causes it is definitely associated with high summer temperature, and its inclusion would have rendered less clear the correspondence of mortality in infancy with that at higher ages. Our knowledge of the etiology of the disease is not complete, but is sufficient to enable us to assert that negligence, domestic or public, is a contributory factor, and also that the rate will be affected by variations in the proportion of babies artificially fed. From what has gone before, it may be admitted that there is justification for using the rate of alcohol consumption

as a measure of domestic neglect, and, in the absence of more exact information, I would put forward as a probability that the proportion of babies artificially fed has increased *pari passu* with the material prosperity of the country, *i.e.*, with the food consumption. These views, at least, afford an explanation of the correlations found to exist: Diarrhoeal mortality and summer temperature (*i.e.*, mean temperature of the third quarter) $+0.85 \pm 0.04$; or, with alcohol and food consumption constant, $+0.87 \pm 0.04$; diarrhoeal mortality and food consumption $+0.38 \pm 0.13$, or, with alcohol and summer temperature constant, $+0.60 \pm 0.10$; diarrhoeal mortality and alcohol consumption $+0.08 \pm 0.05$, with food consumption and summer temperature constant, $+0.52 \pm 0.11$.

From the correlations between these variables an arithmetical formula* may be derived to express the diarrhoeal mortality in terms of the other three, which I would not inflict on you if it were not that its general trustworthiness is evidence that these three entities, summer temperature, alcohol and food consumption, were, between 1877 and 1918, measures of practically the sole factors determining the diarrhoeal mortality in infants. Diagram 3 exhibits the actual yearly diarrhoea rate as a continuous line, and the calculated as an interrupted line, and it will be seen how closely, between the dates mentioned, the formula accounts for the widely fluctuating facts.

The earlier parts of this paper have suggested that alcoholic indulgence, or the domestic neglect which it may entail, is one of the leading causes of avoidable infant mortality. As this statement savours of propaganda it may be as well to see if it rests on any wider grounds than the correspondence of a few curves and a co-efficient of correlation derived from our limited national experience. Pearl,⁹ in a recent book which has not been accused of bias against alcohol, gives a graph comparing the alcohol consumption and the crude death-rate (at all ages) in the United States, and remarks that "from 1906 on till the epidemic year, 1918, the two curves ran a course suggesting, but not very closely fulfilling, a condition of parallelism." In Denmark, since 1900, a reduced consumption of alcohol has been accompanied by a reduction in infant mortality. The data to which I have had access are of the scantiest,¹⁰ but such as they are, show a high correlation, of $+0.87 \pm 0.12$, approximating closely to the value already found for the correlation between alcohol and non-diarrhoeal infant mortality in this country. A general comparison of

* Di. Mort. = $3.7t + 4A - 0.425(110 - F)$. t = Deviation of summer temperature from mean. A = Alcohol consumption proof gallons per head 15 years old and upwards. F = Index of food consumption.

national infant mortality rates with national consumption of alcohol will not be expected to give any definite answer, as other large factors come in with the great differences in social custom, intelligence and environment, but when countries similarly peopled are compared, the results are compatible with a decided influence of alcohol on infant mortality:—

ALCOHOL CONSUMPTION AND INFANT MORTALITY RATE, 1906 - 1910.

	Absolute alcohol ⁷ per head (gallons).	Infant Mortality Rate.
Norway ...	·52 ...	70
Sweden ...	·95 ...	78
Denmark ...	1·50 ...	108
New Zealand ...	1·02 ...	70
Australia ...	1·24 ...	78
Great Britain ...	2·12 ...	114

The most interesting comparison of all, between different districts in England and Wales, is, unfortunately, impossible of accurate presentation, owing

to a most regrettable absence of figures as to local consumption of alcohol. The statistics of convictions for drunkenness have been used as an approximate guide to local differences in sobriety; they are not entirely dependable, owing to variations in police or judicial administration; further, they are uncorrected for what, at some future date, the police sergeant may call "transferable drunks," and this penalises particularly towns which are pleasure resorts. Such comparison as can be made is, however, very suggestive, and forms a strong argument for the provision by the excise of local figures of consumption. This comparison was referred to by Newsholme in the report on Infant and Child Mortality previously quoted, and in this connection he states "the mining counties, in which infant mortality reaches its maximum, show a very exceptional amount of drunkenness." Greenwood¹¹ compared four towns, Reading, Northampton, Bolton, and Warrington, as regards mortality experienced in each at different ages, the amount of poverty, and the housing conditions (*i.e.*, over-crowding),

and concluded that the variations in neither of the two latter factors threw any light on the local differences in mortality. The statistics of convictions for drunkenness may point to the existence of a variable more important than even poverty or overcrowding. Below are given data extracted from Greenwood's article, with the addition of the drunkenness statistics:—

	Comparative Mortality 1911-13. Ages 0-5 years.		Percentage of Working class households below poverty line.	Percentage of houses overcrowded.	1913 Convictions for drunkenness per 10,000 pop.
	Male.	Female			
Reading ...	100	100	23	13·5	9·2
Northampton ..	134	131	8	8·7	13·1
Bolton ...	178	178	8	(14-19)	16·0
Warrington ...	181	188	13	19·7	70·8

It is reasonable to argue that the amount of domestic neglect will increase with the drunkenness, and that it is the variation in this which explains, in great part, the difference in mortality experienced.

The Registrar-General's report for 1920 gives a list of the 82 county boroughs arranged in order of infant mortality rates, and in the Alliance Year-Book of recent years the same boroughs are arranged in order of convictions for drunkenness. The order is not the same in both, but is, to some extent, similar. When the list arranged in order of infant mortality is divided into a lower and an upper half, a geographical division is at once obvious; the lower half consists almost exclusively of southern towns, and the higher half of northern ones. This may be partly accounted for by climatic differences, but possibly still more by industrial or social differences, particularly differences in sobriety. Of the 41 towns with the lowest mortality, 24 are found in the lower half of the list in order of drunkenness convictions and 17 in the upper half; similarly, of the 41 towns with the highest mortality, 24 occur in the upper half of the list by drunkenness convictions and 17 in the lower half. And this almost certainly understates the relation, for several pleasure resorts with a low infant mortality take their place in the higher half of the drunkenness list when, if the conviction rate was corrected for "transferable drunks," they should appear in the lower half of that table.

It has been previously found (Diagram 2) that the infant death-rate from overlying has varied as the square of the alcohol consumption, and from Diagram 1 it can be seen that it is approximately true that the total (non-diarrhoeal) infant mortality has varied directly as the alcohol consumption.

The total infant mortality divided by the square root of the death-rate from overlying should give, therefore, an approximately constant figure, and comparisons between different types of district can thus be made, provided the groups are sufficiently wide to avoid the introduction of other factors, such as variations in sleeping accommodation.

INFANT MORTALITY AND OVERLYING DEATH-RATE IN DIFFERENT CLASSES OF DISTRICT, 1920.

	A Death-rate from overlying.	B Infant Mort. Rate.	Ratio of B to square root of A.
County boroughs.	0·80	92	103
Other urban districts.	0·44	76·8	116
Rural districts.	0·43	67·2	103

The same method, with the information given in the Registrar-General's report for 1911, enables an estimate to be made of the effect of alcohol in the inter-class differences in infant mortality:—

Social Class.	A Death-rate from overlying.	B Infant Mort. Rate.	Ratio of B to square root of A.
1. Upper and middle	0·5	76·4	108
2. Shopkeeping	1·0	106·4	106
3-8. Working-class	1·5	132·5	108

The constancy of the ratio lends support to the view that between these wide social classes the infant mortality varies according to the effects of alcoholic indulgence.

The evidence from these different sources all points to the prime importance of alcohol as a factor in general infant mortality, a factor so active in comparison with other agencies that the variations in it alone describe with remarkable accuracy the course of infant mortality in this country from 1880 to the present time. This is shown in Diagram 4 where signs of any other factor effecting more than a temporary fluctuation (such as those due to variations of summer or winter temperature) are only seen after 1916, and presumably point to the disturbance of national well-being due to the great war.* In the diagram the alcohol consumption is measured on an exponential scale; in other words, infant mortality has been taken $= yx^a$, where y and x are constants, and a is the alcohol consumption rate, and values of x and y have been found by applying the equation to the mean values for the quinquennia

* From 1915 to 1918 one-fourth of the convictions for drunkenness were in women, in place of the usual one-fifth or less; more of the consumers of alcohol evidently were women, which would enhance the harmful effect on infant health.

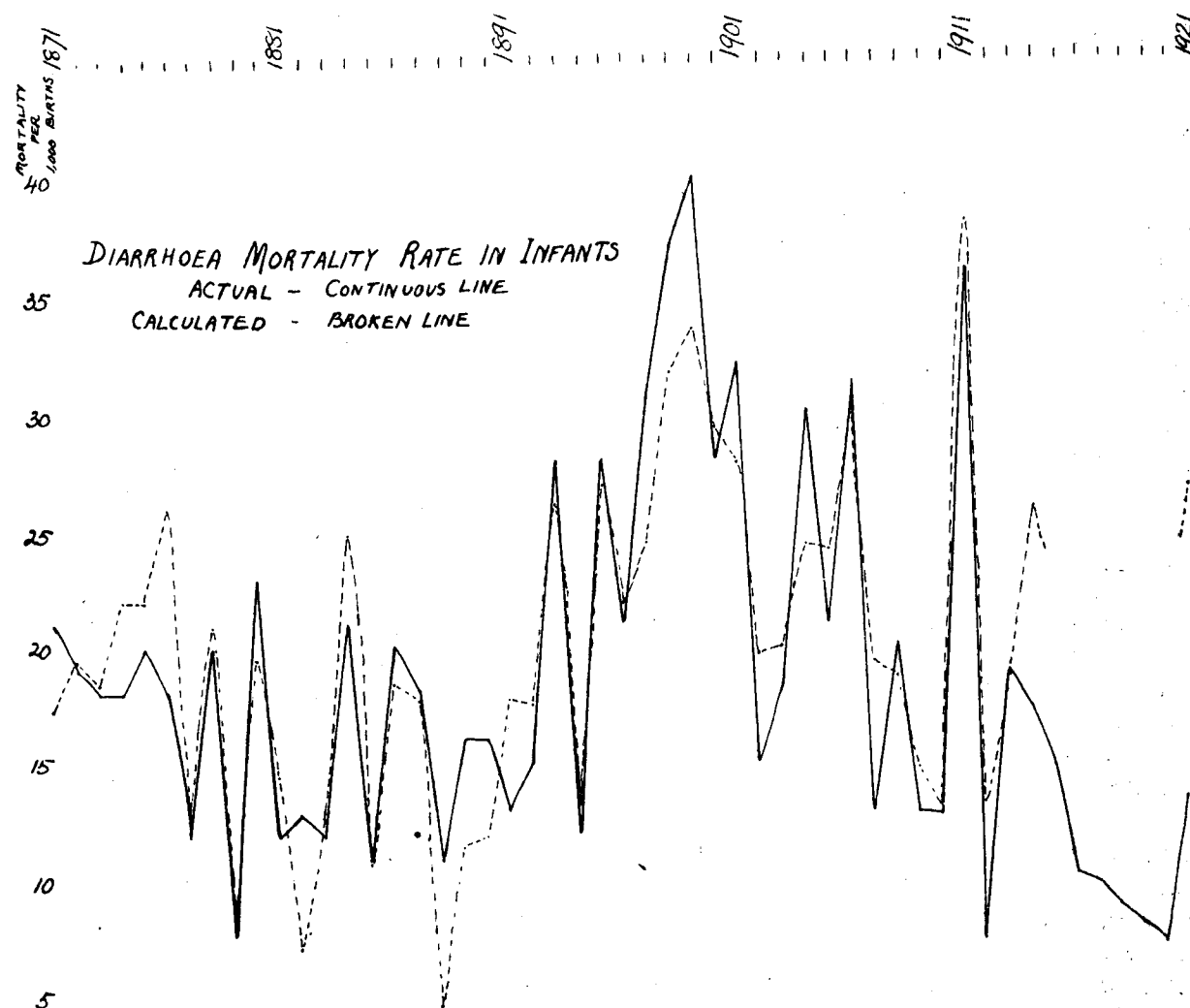


Diagram 3. Actual and Theoretical Infant Mortality from Diarrhoea.

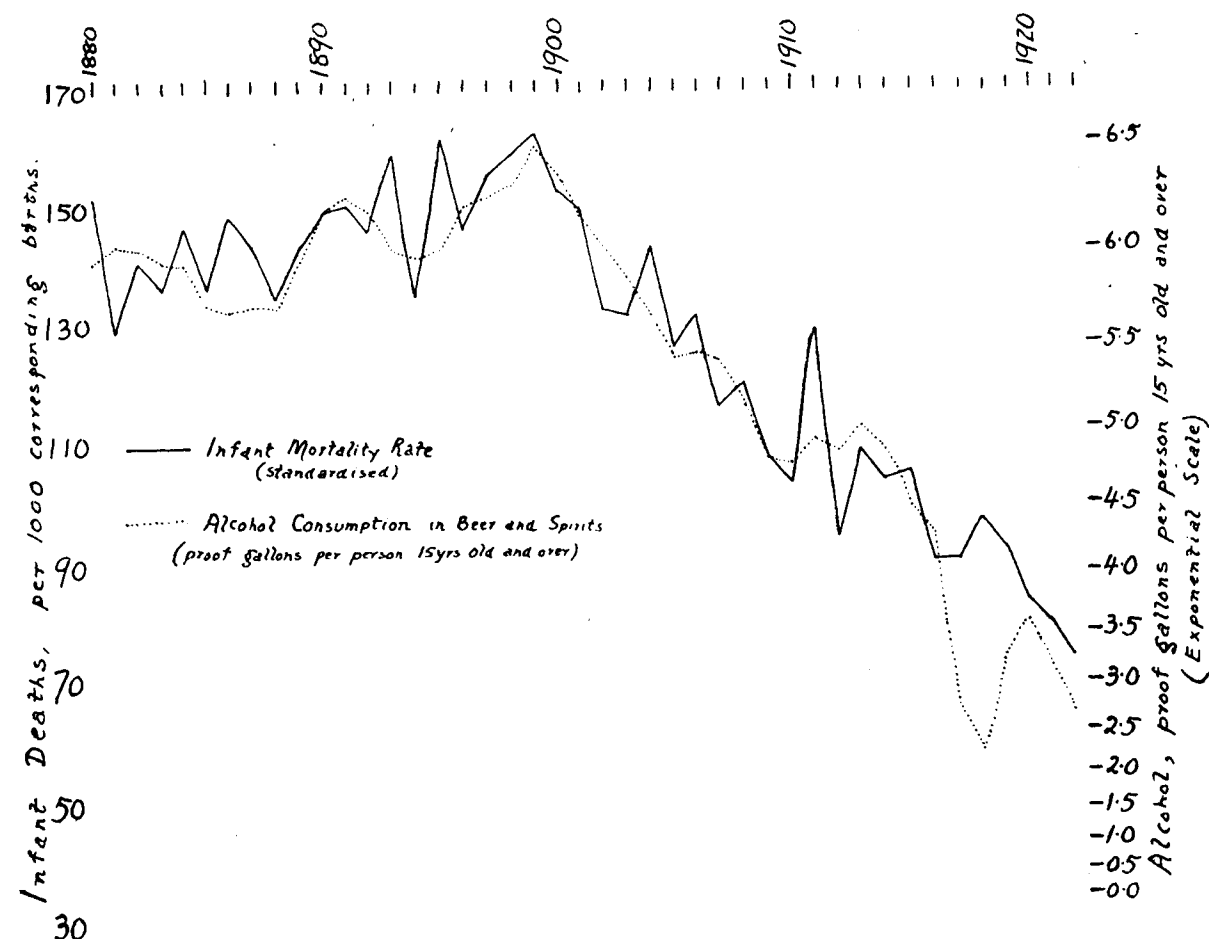


Diagram 4. Infant Mortality (standardised) and Consumption of Alcohol per person, 15 years old and over.

1901 - 5 and 1906 - 10, when, the infant mortality and the alcohol consumption being known, y is found = 34.5 and $x = 1.2675$. The height of the interrupted line, measured on the right-hand scale, gives the alcohol consumption, or, if measured on the left-hand scale, gives the infant mortality as calculated from the alcohol consumption by the above formula. It will be noted that, if alcohol consumption were nil, the formula would show a minimum mortality of 34.5, which agrees with estimates of unavoidable infant mortality arrived at from other directions.

Having thus cleared the wood of the more giant trees, it remains to be seen whether anything can now be observed of the tender sapling "infant welfare." Diagram 4 shows that during recent years, when the infant welfare movement has been most active, the infant mortality has been higher than its previous parallelism with the rate of alcohol consumption would have led one to expect, but it has been already suggested that this failure to keep pace with the reduction in alcoholism has been due to the injurious effect of the war on the national well-being. This may possibly have masked the

beneficial influence of child welfare activities on the infant death-rate, and one notes that from 1912 to 1914, immediately before the war, the infant mortality was actually lower than the alcohol consumption would warrant, but the divergence is too slight and short-lived to be emphasised. One is on surer grounds in comparing the course of mortality in infancy and at ages 45 to 54, which, practically parallel up to 1911, after that date show a uniform improvement in infancy as compared with middle age. From 1900 to 1910 the infant mortality from diseases other than diarrhoea, and the death-rate at ages 45 - 54, both fell by 27 per cent.; from 1910 to 1920-21, the infant mortality fell by 26 per cent., and the death-rate of middle age by 18 per cent. only. The work of child welfare centres, and of health visitors, may have been responsible for the maintenance of the rate of decline in infant mortality, notwithstanding the adverse circumstances. The diarrhoeal mortality shows a change about the same time; up to 1918 (see Diagram 8) there are no signs of any diminution of the diarrhoea death-rate due to public health activities, but, after that date, if one assumes that the index of food

consumption in 1914 and in 1921 was about the same as in 1912, the calculated diarrhoea rate in 1914 would be 26 as against an actual rate of 17, and in 1921, 27 compared with an actual of 14. Evidently, then, the diarrhoea mortality in epidemic years has fallen by almost 50 per cent. This considerable decline, along with the coincident comparative improvement in non-diarrhoeal mortality, may properly be laid to the credit of the child-welfare movement, and may be reckoned sufficient justification for the expenditure of money and energy incurred, without unjustifiably claiming responsibility for all the reduction in infant death-rate since 1900.

If the increased sobriety has been of such benefit to the national health as I have suggested, it is important to know why habits have changed in this direction. Before the war, any increase of taxation does not seem to have seriously affected the sale of beer, which is not to be wondered when it is reflected that the largest increase in the duty was one-third of a penny per gallon. In the case of spirits an increase of duty of 3s. 9d. per gallon in 1909, an, until then, unprecedented rise, does seem to have led to a slight falling-off in spirit-drinking. But, speaking generally, the increased national temperance was neither begun nor maintained by taxation. I have previously pointed out the negative correlation between alcohol and food consumption; notwithstanding that a sudden afflux of prosperity is associated with a marked increase of drinking, the maintenance of the prosperity at the heightened level is quickly followed by a shrinkage of the alcohol consumption below the level of less prosperous circumstances. Probably therefore, it is to the improved prosperity of the country that the more sober habits are due, reinforced in recent years by the very high duties; the increased opportunities for relaxation outside the public-house have doubtless also assisted.

It was at one time customary for medical officers of health to look for the cause of differences of health or mortality statistics in differences of sanitary surroundings, usually thought of solely as tangible objects, such as houses, privies, workshops, etc. The orientation has changed. Sir George Newman, in his annual report for 1914, states: "It is now a well-established truism to say that the most injurious influences affecting the physical condition of young children, arise from the habits, customs, and practices of the people themselves, rather than from external surroundings or conditions." I have elsewhere ventured to suggest that the intangible variations in habits may be of radical importance at older ages also; the preparation of the present paper has strengthened my belief that health in infancy at least depends on the behaviour of individuals

far more than on any physical environment. Improvements in sanitation throughout the country as a whole have probably been less during the last ten years than in any decade since the passing of the Public Health Act, and yet the national health now is much better than at their commencement; that the gain in health has not slackened, but rather increased, can only be due to the improvement in conduct.

Conclusions.

1. That mortality in infants (excluding diarrhoeal mortality) since 1870 has been roughly parallel to mortality at middle age.
2. That the common variations of the two rates, including the large decline since 1900 or 1890, are largely explicable by changes in national prosperity, in habits of alcohol consumption, and in climatic conditions (especially winter temperature).
3. That the variations in diarrhoeal infant mortality are similarly accounted for by changes in national habits and in summer temperature.
4. Over and above these influences the child welfare movement may have contributed to the decline in infant mortality since 1911, and may be responsible for, at most, one-half the decline since then in non-diarrhoeal mortality, and a lessening by one-half of the diarrhoeal death-rate in epidemic years.
5. That the effect of alcohol on infant health is suggested by the statistics of other nations, and by interlocal and inter-class comparisons in this country.
6. That the provision of local figures of alcohol consumption in administrative districts would convey much useful information to health authorities.
7. That, from 1917 onwards, apart from the influenza years 1918 and 1919, and notwithstanding the otherwise continuous decline in infant mortality, the harmful effect on infant health of the national dislocation caused by the war is perceptible in the mortality rate.

References.

1. "Brit. Med. Journ." October 27th, 1923, p. 754 *et seq.*
2. "The Mortalities of Birth, Infancy and Childhood," Medical Research Committee, 1918.
3. Ewart, "Public Health," January, 1924, p. 88.
4. Wheatley, "Brit. Med. Journ." October 27th, 1923.
5. Figures from a paper read before the Society of Medical Officers of Health in 1921, by Ewart, on "The Fundamental Biological Factors underlying the Decline of Tuberculosis."
6. Quoted in "The Elements of Vital Statistics," by Sir Arthur Newsholme, 1923, p. 455; see also, Baskett, "Public Health versus the

- State," Brit. Med. Journ., January 10th, 1920.
7. From material in "The Alliance Year-Book," 1920.
 8. "Introduction to the Theory of Statistics," 1919, p. 198.
 9. Starling, Hutchison, Mott and Pearl, "The Action of Alcohol upon Man," 1923.
 10. Alcohol figures from Hindhede, "Alcohol restriction and Mortality," Brit. Med. Journ., August 12th, 1922.
 11. "Brit. Med. Journ." May 6th, 1922, p. 711.

Discussion.

Dr. Hislop said that the Branch was greatly indebted to Dr. Gibson for his interesting paper, the outstanding feature of which appeared to be that alcohol was the root of all evil. This, he said, contained a lot of truth.

Dr. Spinks, in complimenting Dr. Gibson on his paper, said it was too involved to be fully appreciated without an opportunity of carefully studying it. He said that it seemed impossible to him that anybody could question the great improvement that undoubtedly takes place in the health of children who are first seen by an experienced doctor and nurse for ten or twelve days, and subsequently by the health visitor and at the Maternity and Child Welfare Centre, where the child was kept under observation. For example, if ten children attend a Maternity and Child Welfare Centre, and ten children do not, does not the former turn out to be the healthier lot? Common-sense answers, yes.

The average attendance of each child at the Maternity and Child Welfare Centres in Newcastle for 1923, was about eight, and the death-rate per 1,000 worked out at 20. About 97 per cent. of the children who did not attend the centres regularly were found, when they resumed attendance, to have definitely deteriorated.

He agreed with Dr. Gibson as to the evils of alcohol, but a remarkable fact was that, while the convictions for drunkenness for the years 1920 and 1921 were above the average, the infant mortality rate decreased. Further, drunkenness occurs chiefly among men; women, generally speaking, are more sober, and he contended that this state of affairs gave a child a better chance. An intemperate mother was a calamity.

He was convinced that the best way was to foster maternity and child welfare work, rather than depend upon the sobriety of the nation.

Dr. Whitley said that he did not believe for one moment that the decline in infant mortality was due to the increased sobriety of the nation. He referred to an investigation that he carried out some

years ago in Lancashire on infant mortality. At that time the infantile mortality rate in Burnley was 298 per 1,000 births. He collected all available information and statistics, including financial statements of various cotton mills, and he expected to find that commercial prosperity (which meant a larger number of women workers) would increase the infantile mortality, but this did not happen. The enquiry proved that, when work was plentiful, with resultant good wages, the infantile rate decreased.

On the other hand, whilst of the opinion that the Maternity and Child Welfare movement did most useful work, he did not believe that the whole of the fall in the infantile rate was due to this. In his judgment a great part of the decrease was due to the better education of the public generally.

Dr. Dundas's letter was read by the Hon. Secretary.

Dr. Mabel Brodie stated that the previous speakers had covered most of the ground, but she would like to emphasise the fact that maternity and child welfare work embraced a very wide social movement, including the education of the public.

Dr. A. Smith, senior, said that as far back as 80 years ago he was much interested to try and find out the potential conditions of birth. In his opinion alcohol was the cause of a large percentage of still-births, and a drunken father had as much to do with the condition of a new baby as an intemperate mother. He contended that maternity and child welfare work had played an important part in the decline of the infantile mortality. With regard to his own district he found that breast feeding, which, prior to the commencement of welfare work had decreased, enormously increased. He also referred to dried milk, which undoubtedly had been the means of reducing the deaths from infantile diarrhoea. Maternity and child welfare centres are very useful indeed for educating mothers.

Dr. Kerr agreed that there was a great deal of truth in Dr. Gibson's paper, and he thought there was something more than the maternity and child welfare movement to account for the decrease in infantile mortality. He said that he received rather a shock the other day, when he was preparing a paper to find that the death-rates from enteric fever and diarrhoea in Gateshead were practically the same as those for Newcastle, in spite of the fact that the percentage of conservancy closets in the two towns was 75 and 8½ respectively. He welcomed Dr. Gibson's paper, as it was just as well to look round now and again and take stock.

Dr. Gibson writes: "Unfortunately absent from the meeting I should like to thank the Branch for their courteous reception of my paper, and to have

an opportunity of replying to the discussion. First, I should like it to be clearly understood that I have not denied the good accomplished by infant welfare work, though I deprecate the exaggerated claims made on its behalf.

I regret to see that Dr. Spinks endeavours to show the usefulness of the Newcastle centres by a spurious infant mortality rate; the fallacies inherent in this have been pointed out long ago. Further, the children attending centres are selected: the more negligent mothers do not bring their babies. He finds that practically 100 per cent. of the children who had ceased for a time attending a centre were found, on resuming attendance, to have deteriorated. I have noticed the same thing, but would express it differently, *viz.*, children who have ceased attending for a time, so long as their health is satisfactory, are not brought again, but if the mother sees the child ailing she resumes attendance. The decrease of infant mortality in 1919 and 1920 accompanying an increase in alcohol consumption and in the number of convictions for drunkenness is but a proof, if proof were needed, that alcohol is not the sole factor concerned; the generally improved conditions after the war, diminishing influenza, and possibly welfare activities, were sufficient to mask any injurious effect of the increased alcohol consumption. Dr. Spinks himself, also, has pointed out that female intemperance is more harmful than male: of the convictions for drunkenness in 1918, 25 per cent. were in women, in 1919, 19 per cent., and in 1920, 16 per cent.

My feeble arguments have evidently bounced like hail off Dr. Whitley's case-hardened incredulity as to the leading influence of increased sobriety on the decline in infant mortality. He prefers the view that this has depended on the education of the public. If he can give details showing any relation of education to the decline since 1900 I shall reconsider my contrary opinion. Is it purely a coincidence that the absence of decline in infant mortality from 1910 to 1915, between two periods of decrease, agreed with a rise in general mortality at every age of life, an absence of decline of the death-rate from overlying, a rise in the death-rate from alcoholism and from cirrhosis of the liver, and lastly, a co-extensive rise in the consumption of alcohol? It is unfortunate for Dr. Whitley's view that this period was precisely one of the greatest activity in administrative and educational efforts. I agree, however, with his finding that prosperity, *per se*, tends to reduce mortality."

ASST. M.O.H. BURNLEY.—The salary of Dr. McGraham has been increased from £750 to £850.

CLINICAL FEATURES OF A MILD TYPE OF SMALL-POX PREVALENT IN ENGLAND.*

BY

JOHN A. WATT, M.B., Ch.B., D.P.H. (Aberdeen),
Assistant County Medical Officer, Derbyshire.

Small-pox is a disease of variation and mutation. Among the great infections it stands out pre-eminently as one in which the virulence varies enormously in different epidemics. The full power of the disease has been seen in the past among unprotected populations, where whole tribes have been practically exterminated. On the other hand, the disease may be of such a mild and benign type that no one dies from it.

Recently we have seen these two extreme types running concurrently in England in different localities. The outbreak which occurred in Poplar Poor Law Infirmary last year was severe and caused a Case Mortality Rate of 32 %, while the type which has been prevalent in the provinces has been so mild that only 4 persons have died this year out of 1,928 notified cases up to 29th September, a Case Mortality Rate of .2 %. Two of these deaths were in London in cases of the severe type and both unvaccinated. The other two deaths were at the Brockworth Aerodrome, Gloucester. The first was an unvaccinated child six weeks of age, who died from small-pox seven days after admission. The second was an unvaccinated child, ten months of age, whose death twelve days after admission to hospital was due to small-pox complicated by Enteritis. An unvaccinated man 58 years of age, who was suffering from a mild attack of small-pox, died in Gloucester from cerebral hæmorrhage. His death was not due to small-pox and was not certified as a death from small-pox. The nett result is that out of nearly 2,000 cases of mild small-pox there were two deaths, a Case Mortality Rate of .1 %. There have been 578 notified cases of the mild type in Derbyshire without a death.

Abroad the mild non-fatal type has been prevalent in Finland, Germany, Switzerland, Egypt, Cuba, Jamaica, South Africa, and parts of Canada and the United States of America, while the severe type still prevails in most tropical countries and in Russia, Poland, Japan, and in parts of Central and South America.

Attempts have been made to classify the various types of small-pox according to their virulence, and they have been given as:—

* Paper read before the Midland Branch, M.O.H. Society, on 1st November, 1923.

- (1) Eastern type, East of Moscow, and only between 40°N. and 60°S., Case Mortality 30-60 %;
- (2) The Western Strain, Central Europe, Case Mortality 18-25 %;
- (3) The Western sub-strain, Germany and Great Britain, Case Mortality 8-16 %;
- (4) Amaas or Alastrim, South Africa, America and Australian type, Case Mortality from 4 % down to 1 %.

The term "Amaas" was given to the disease by the Kaffirs realising that the pus in the pocks was thick and white like sour milk. In general the type of small-pox prevailing in the United States since 1898 has been very mild. In 434,547 cases notified during 15 years the deaths amounted to 7,003, giving a Case Mortality of 1.6 % and in the latter part of the period to .6 %.

It is reported that there were 1,073 cases in New South Wales with only one death, and Chapin records that in North Carolina there were 3,294 cases without a single death. Here again the virulent type and the mild type were found in different places in America at the same time, and both forms appeared to "breed true."

It must be remembered that small-pox and chicken-pox were not clearly differentiated until the end of the 18th century and the beginning of the 19th, or about the time that vaccination was introduced. Amongst older writers, Sydenham, who gave a very clear description of small-pox in the 17th century, said that "small-pox had its peculiar kind which takes one form during one series of years and another form during another series of years." He wrote about epidemics of a mild character and spoke of genuine and "bastard" small-pox. His contemporary, Morton, wrote of genuine and "spurious" small-pox.

Many terms were used to indicate this mild type, such as Stone pox, Water pox, Wind pox, Sheep pox, Swine pox, Horn pox, and Nirle pox. From the description it is clear that some of these indicated chicken-pox and others meant modified small-pox, and that usually the modifying influence was a previous attack of the disease either by infection or by inoculation. Mild forms of the disease became established in a locality and so fixed in type that they prevailed as epidemics. Jenner discusses such an epidemic and Sydenham describes an outbreak of variolous fever without eruption. In the beginning of the 19th century, after vaccination had been introduced for some years, McVail records that "there occurred in the presence of small-pox epidemics multiple

cases of transient indisposition associated usually, but not invariably, with a general eruption on the face and body, or both, with papules and vesicles which ran a short course and were not attended by a so-called 'fever of maturation.'" Later Ricketts and Byles in their excellent writings on the diagnosis of small-pox, say that "from time to time we hear of epidemics in which the illness is so inconsiderable and the eruption so slight that there is some hesitation about the name. If the rash be unlike that of small-pox and it is equally different from chicken-pox, there may be a temptation even to assume a third disease and to invest it with points of distinction from each. This flux of opinion is caused by prevalence of a very degraded strain of virulence."

Dr. Monckton Copeman reported on a small outbreak of 31 cases of varioloid disease resembling small-pox which occurred on the borders of Norfolk and Suffolk during the summer of 1919 (See Annual Report of the Ministry of Health for 1919-1920). The description given by Dr. Copeman differs in several important characters from what we have seen in Derbyshire, viz. :—

- (a) The eruption developed, as a rule, on the chest and abdomen before appearing on face;
- (b) It came out in definite crops;
- (c) Prodromal rashes were noted in a few cases.

This Report discusses fully its relationship to the outbreaks in Trinidad, West Indies and Africa, which have been termed Alastrim, Amaas, Kaffir milk-pox, Cuban Itch, and other synonyms.

During 1920 an outbreak occurred in the Borough of Middleton, on which a very full report was published by the Medical Officer of Health of Lancashire.

In 1921 a focus of the disease was prevalent round Nottingham and district, and it has been prevalent in Derbyshire, Yorkshire, Lancashire and Gloucestershire. It still smoulders on, flaring up in new places as it reaches susceptible communities unprotected by vaccination. It has been difficult to control as it generally gets a start in a new district before it is recognised as small-pox. There is evidence of a good many missed and unrecognised cases. The illness has been so slight often that after a day or two in bed persons have resumed their ordinary vocations without ever having called in a medical man.

Description of the Disease.

Incubation Period.—The incubation period would appear to be rather longer than that of ordinary small-pox, which is usually given as

twelve days. It varies within limits of 10-18 days, with an average of about 14 days.

Symptoms of Invasion.—The onset is often sudden; a patient would go to bed perfectly well and wake in the morning with a severe headache. Not infrequently there was biliousness and gastric disturbance for a day or two. Most were obliged to take to bed. There was malaise, fever, reaching a temperature of 100 to 102 for a few days, headache, backache, generalised pains in the bones and muscles, and dizziness, faintness or shivering. The symptoms were those of a mild toxæmia resembling influenza. A few patients had no symptoms other than slight general malaise. In rare cases there was delirium. In all, the symptoms terminated abruptly on the appearance of the rash. Those affected were able to get out of bed and go about their usual vocations. The average duration of this period was 4-5 days. It should be noticed that this period again is longer than what is usually seen in true small-pox, where the average duration from the commencement of the illness to the appearance of the rash is three days. The severity of the early symptoms did not indicate that the eruption would be profuse, nor did it bear any relation to whether they were vaccinated or not. This sharp initial illness was characteristic and constant and was of considerable value for diagnosis. No prodromal rashes were seen.

Stage of Eruption.—On the 4th or 5th day of the illness the rash appears on the face. Usually it is seen first on the forehead, nose, malar eminence or mouth, and then on the scalp and the arms. In broad terms the rash begins at the top and travels downwards and invades the legs some 24 hours after its first appearance. The whole of the rash does not appear at once, and there seems to be a consensus of opinion that fresh spots develop for 3 or 4 days. The eruption consists of small dull-red scattered papules, which resemble acne at first. In 24 hours or so a minute vesicle develops in the centre of the papules. On the face they are indurated and can be felt to lie deeper in the epidermis than a chicken-pox eruption. The vesicle becomes grey in colour, is round, tense, dome shaped, and surrounded by a bright red areola. Vesicles are often seen on the palate and buccal mucous membrane. By the 3rd or 4th day the vesicles have become pustules of a dull yellow colour, sharply defined, glistening, tense, bulging pustules, ultimately becoming darker and more flattened. It is unusual for them to become confluent or semi-confluent. By the 6th or 7th day the pustules have commenced

to desiccate and the areola fades. There is a flat yellowish brown crust or scab formed, which tends to fall off about the 12th day of eruption, leaving granulation tissue. The drying begins first on the face and then on the chest, back, forearms and legs in the order in which it appeared. It is unusual to find "pitting," but a good deal of resulting pigmentation is left for some weeks. The skin is practically always left smooth. There is considerable tendency for the whole eruption to abort and dry up after the formation of vesicles, both in vaccinated and unvaccinated cases. Pustules may develop on the soles and under the thick layers of the horny skin of the hands, which form brown seed-like bodies and are painful. The rash is abundant on the face, it is fairly abundant on the back, and scanty on the abdomen and chest. It favours the limbs, especially the distal parts, *e.g.*, forearms, wrists, hands and feet. The axilla, groins, popliteal spaces, orbits and loins are almost free. The eruption may be very sparse—only two or three spots—or there may be hundreds when the rash becomes semi-confluent, only a small proportion, about 5 %, show a profuse rash. It is unusual to find much secondary rise of temperature; probably about 1 in 3 show a rise of temperature not over 100°F. In semi-confluent cases the temperature may rise to 101° and 102°F. There may be an extensive rash with a trifling pyrexia.

Complications are not important, and consist of boils on the neck and face, eczema, and conjunctivitis.

Differential Diagnosis from Chicken-pox.—It has been found that at the commencement of epidemics of mild small-pox the first cases have been mistaken for chicken-pox. Occasionally one hears them described as influenza with spots, but this diagnosis only indicates that the nature of the disease has not been sufficiently investigated.

Though chicken-pox is a disease of the first ten years of life, it is not uncommon among adults, and occurs up to the middle period of life, but the diagnosis of chicken-pox in an adult should not be arrived at lightly.

The eruption of small-pox is usually preceded by a period of febrile disturbance, whereas the eruption of chicken-pox is more often the first symptom of the illness—particularly in children. On the other hand, a well marked invasion does sometimes occur in chicken-pox in adults which is occasionally severe with pyrexia, headache, shivering and malaise for one or two days. If small-pox is prevalent in the district a febrile

attack with headache, backache, and muscular pains, is suspicious. If a previous case has occurred in the house it would be still more suspicious, and immediately the eruption appears the patient should be removed to hospital.

It is essential to examine *the whole body in a good light* and consider the distribution and density of the rash as a whole. When the eruption is scanty, amounting to only one or two spots, diagnosis presents great difficulty, and one must be influenced by the presence or absence of either disease in the locality.

The cardinal physical sign, and sometimes the only one of much value, is the distribution and relative density of the rash, which has been so well worked out by Ricketts and Byles, and for full details their book on the "Diagnosis of Small-pox" is invaluable. The rash in small-pox is most abundant on the face, back, and then the forearms, wrists and legs. It is scanty on the chest and abdomen. In chicken-pox the seat of election is the trunk, especially the back, though the face may be covered as thickly as the abdomen and chest. Chicken-pox tends to avoid the limbs, the forearms, hands and feet suffer least of all, and if it affects them shows no preference for the extensor surfaces. The eruption is most profuse on the trunk and the upper parts of the limbs (centripetal), whereas with small-pox the rash is most profuse on the wrists, legs and feet (centrifugal), and the larger and better developed spots come at the ends of the limbs. The rash in small-pox favours prominences and surfaces exposed to irritation; it tends to avoid protected surfaces, flexures, and depressions, such as the axillae, groins, popliteal spaces and orbits. Ricketts laid great stress on the immunity of the axillae from the small-pox eruption, but cases have been seen in this epidemic with spots in the arm-pits.

In classical small-pox the focus of the lesion lies deeply among the epidermal cells; with chicken-pox the focus lies immediately beneath the cuticle and near the surface. This difference in position is easy to appreciate in the ordinary type of small-pox. In the mild type, it is of more value on the face than on the extremities, and causes some difficulty in the differential diagnosis from Acne. Sometimes lesions of chicken-pox are to be met which are every bit as deep as those seen in cases of mild small-pox, as evidenced by scars left on the body, giving direct proof of the depth of the lesion. The efflorescence of vesicles in successive crops, characteristic of chicken-pox, is of little value as lesions are found in all different

stages of evolution in the present epidemic.

The eruption in small-pox is rounded, whereas in chicken-pox the vesicles tend to adopt an oval, jagged, or irregular outline, especially where they occur on folds of the cuticle or lie near a flexure. This is caused by the cuticle stripping more easily in the direction of the creases of the skin.

I am afraid that in the type of a typical small-pox now prevalent, you will get little help from those old diagnostic points of our student days, umbilication, shottiness, cropping, uniloculation, and lesions on the palms and soles of the feet. In the differential diagnosis of the present type they may lead you astray, though the presence of many lesions on the palms and soles is a point in favour of small-pox.

Infectivity.—It was believed that almost everyone was born susceptible to small-pox and that persons exposed to infection, if unprotected by vaccination or a previous attack, were almost invariably attacked. Instances were quoted of exceptional individuals insusceptible to the disease. The present type, I am sure, is of a much lower infectivity. Many individuals who have been in contact with cases have not contracted the disease, and even unvaccinated members of the same family, exposed to continuous close infection for days, frequently escaped the disease. As evidence of its lower infectivity than ordinary small-pox, I quote the following:—

The Head Teacher in an Elementary School in an isolated mining village with a population of 450 reported that she had a large number of children absent from school, said to be suffering from influenza with spots. Small-pox was epidemic in two towns at a distance of two or three miles. Examining the children the same day with the District Medical Officer of Health, the conclusion was formed that they were all cases of mild small-pox, some of them, in fact, recovering from the illness. One or two cases approaching the ordinary type were seen, but the bulk were cases with a sharp initial illness followed by the eruption of a few spots. Further investigation showed that small-pox had been in the village for at least a month and infection had been widespread amongst a population largely unvaccinated. The total number of cases notified was 48 and the epidemic finished in a few weeks' time without further spread. Here was a small epidemic confined to a village where infection had been almost universal, and even assuming that there were some unrecognised cases, only about 1 in 8 of the population were attacked.

There is no evidence that infectivity occurs during the stage of invasion nor that the disease was spread otherwise than by a personal contact of a fairly close and intimate kind. The striking distance seems to be short and it is doubtful if infection is spread by inanimate objects. Personal contact and the occurrence of missed cases are in the main responsible for the conveyance and spread of this type of small-pox. No sanitary conditions—unless overcrowding—influence the spread of the disease. Every now and again a case was seen which would have been impossible to diagnose had not a previous case occurred in the same house.

The average period of infectivity dating from the appearance of the rash to the disappearance of the scabs and infected epithelium was about three weeks.

Vaccination.—In England and Wales the vaccination of infants has declined to 38 %. In parts of Derbyshire it is now about 20 %, and in certain districts the Vaccination Acts are almost a dead letter. The Midlands has always been a strong centre for anti-vaccination propaganda.

The epidemic has, of course, been largely prevalent amongst unvaccinated persons, although those whose immunity was obtained by infantile vaccination have not been exempt in adult life.

One cannot estimate the ratio of unvaccinated in the total population, but it must approach 50 %.

Going through one or two reports, the figures are given as:—

	Vaccinated.	Un-vaccinated.
Doncaster	33	130
Ilkeston	36	54
Belper	6	43
Middleton	13	66
Gloucester	28	469

In the same way the youngest person who had been vaccinated in infancy found to contract the disease was:—

In Gloucester—5 years of age—1 scar only and in area 1/32 of an inch.

In Middleton—11 years of age (4 good marks).

In Ilkeston—17 years of age.

In Doncaster—27 years of age.

In Heanor—31 years of age.

After the first week of the eruption cases uniformly show a negative result to vaccination, and if a positive result was found it would indicate a negative diagnosis of small-pox. The only exception I find to this is that Dr. Copeman reported in the Norfolk epidemic that it was possible, in one instance, to vaccinate with success during convalescence.

If vaccination is carried out within the first three days of incubation the attack does not develop, whereas after the fifth day of incubation vaccination may be successful, but the disease will not be prevented from developing. A successful vaccination may be attained up to the second day of the eruption, but towards the end of this period the result of vaccination tends to be atypical.

THE TUBERCULOSIS SERVICE AND THE FUTURE.*

BY

CECIL L. WILLIAMS, B.Sc.(Hons.)Lond.,
M.R.C.S. Eng., D.P.H. Camb., M.O.H.,
Tadmorden.

The Tuberculosis Service was organised to mitigate the present unhappy conditions of this country, riddled as it is with Tuberculosis.

The time has come for stocktaking and heart-searching and unless we are prepared to examine ourselves we shall find ourselves called for examination before the bar of public opinion.

The man in the street must be excused for looking on the Tuberculosis Service as having failed in the mission which he understood it would achieve.

In the court of Public Opinion "Success" is the only defence recognised when a public service, especially a spending one, is on trial, and a Nation which permitted the foul murder of a very good man because he was a very bad King will not allow the respect it owes to the enthusiasm, the devotion, and the self sacrifice of the Officer, to weigh in its judgment of the efficiency of the Office.

The fact that some of my years in Public Health have not been unconnected with the Tuberculosis Service may bring upon me the reproach that "When the mob attacks the Palace there is always some prince ready to open the door," but my opening remarks do not imply hostility. I only wish in friendship to advise that we should examine ourselves lest worse befall us.

The Tuberculosis Service when it was inaugurated was the plaything of politicians and became the sport of the political arena. It could not possibly have been born under worse auspices. The first baby born on the "Bart's." district under the maternity benefit of the National Health Insurance, had the umbilical cord twisted three times round its neck, and Dr. Mackenzie in

* Paper read before the Yorkshire Branch, Society M.O.H., January 25th, 1924.

recording the case expressed the hope that this might have some prophetic significance with regard to the author of the Health Insurance Scheme. I think that the child might very fittingly have been named "Our Tuberculosis Service."

As an infant the Tuberculosis Service was born with a cord round its neck, a cord weighed with political promises which were impossible of fulfilment, and we must on all occasions impress those with whom we associate with the fact that the rare and refreshing fruits were never of our imagination, and that we have never held out spurious hopes and should not be judged by the fervid orations with which politicians acclaim the birth of this struggling infant. Such acclamations are the stock in trade of political jugglers and find no place in responsible literature.

To decry what has been done, to minimise the effort which has been put forth, to speak slightly of the achievements which have been attained, these are the last things I wish to do.

It is easy to be declamatory and thus, according to Masfield, speaks "The Daughter of a King":—

"How blessed to be a prophet who forever

Does but condemn another man's endeavour,
How blessed not to decide, nor be, nor do,
But help the many to condemn the few."

It is difficult to be constructive but I will try, by laying before you certain recommendations, to show my willingness to be constructive, not declamatory.

In the first place I would suggest that the Tuberculosis Service should offer opportunities for advancement within itself, comparable with the opportunities afforded in any branch of private or public practice.

In the second place, that the duties of a Tuberculosis Officer should be strictly consultative.

In the third place, that all Tuberculosis Officers should be permitted to charge fees to persons of the non-insured classes.

In the fourth place, that general practitioners should be remunerated other than by contract under the National Health Insurance for consultations with Tuberculosis Officers in all cases where the patients are of the insured classes.

It will be seen that these recommendations deal essentially with the financial aspect of the situation. I am persuaded a re-organisation of the service depends essentially upon sound finance.

At the present time the Tuberculosis Officer is a junior officer and enjoys only the pay of a junior officer. This leads of necessity to such appointments being filled by junior men. It tends also

to make the appointments more or less temporary.

Now it must be recognised that the factors which promote the success of the office of Tuberculosis Officers are essentially those governing the success or otherwise of a private practice, nor do I think we can sufficiently impress this upon our various authorities.

There is no magic in a public appointment whereby success can be achieved on any other foundation than those that operate in the case of private practice.

No general practitioner would expect a practice to maintain its position if it were constantly changing hands, and if it were as constantly passing into the hands of junior men.

The temporary and junior nature of these Tuberculosis appointments, involving constant changes, leads to a lack of co-operation between officers and general practitioners, and without co-operation success will always be denied the service.

It is too late now to redeem the fault, if fault it were, but the possibility of having chosen Tuberculosis Officers in the first place from amongst general practitioners is an idea that did not receive the consideration it demanded.

I do not suggest that an ideal Tuberculosis Service could be run by part time officers from amongst general practitioners, but this might have been a better beginning than the one which was made.

The general practitioner disapproves the Public Service and although a panel practitioner to-day finds himself bound up in as much red tape and is as bureaucratic as any public official, he still looks upon the public health service as essentially different from his own.

Panel practice was begun under conditions where the iron hand of bureaucratic control was very carefully hidden under the silken glove.

It is becoming more and more bureaucratic and interference, whilst resented by the general practitioner, is recognised as a necessary nuisance.

In the same way, had the Tuberculosis Service started from amongst the general practitioners its development into a Public Service might have taken place without any serious opposition from general practitioners.

How to win the co-operation of the general practitioner is a serious question which demands consideration. Nor can it ever be achieved unless the Tuberculosis Officer can meet the general practitioner on terms of professional and social equality, and by continued association win the respect of his professional colleagues. I would

suggest that the work of a Tuberculosis Officer should be essentially that of a specialist and that much of the work which at the present time magnifies his office by glorifying statistics should be deleted.

Such work can be taken over by the school service and by general practitioners to the advantage of the patient, and to the ultimate advantage of the Tuberculosis Officer whom it will release for more remunerative employment.

The Tuberculosis Officer should be allowed to develop a consultative private practice. To do so would require very close co-operation with the general practitioner, and no doubt we shall have this co-operation if the financial remuneration of the officer concerned depended upon the goodwill of his professional colleagues.

The general practitioner cannot be expected to spend his time consulting with a Tuberculosis Officer unless he gets some adequate recompense and, with this in view, a definite allowance should be allotted from the funds at the disposal of the Insurance Commissioners.

The recommendations I have laid before you would only involve some slight alterations in the present system.

They would offer to a capable and enthusiastic Tuberculosis Officer the fullest scope for the development of his talent, and reasonable hopes that his energy and devotion to service would be suitably rewarded.

These recommendations, if adopted, would promote co-operation and co-ordination and so promote efficiency in a service, the greatest drawback in which is its splendid isolation.

The Tuberculosis Officer should have a possibility in the discharge of his duties of attaining the same financial security as any other officer in the Public Health Service, and the same as any other practitioner engaged in similar work, and until this is so the Tuberculosis Service will only be, and can only be, a junior branch of what we look upon as the legitimate branch of our profession.

It must be regretted that a service which was organised to fight our great enemy, Consumption, has failed to realise the high expectations with which it was inaugurated.

Those expectations may still be realised if we set our house in order and make the Tuberculosis Service one in which a willing officer may attain his highest professional ideals and financial security.

It is futile expecting to raise the Tuberculosis Service unless we deal with the financial considerations, because whilst the Tuberculosis Officers have

set before us the highest ideals of professional capability, zeal and self sacrifice, we have to realize that not only in Yorkshire but throughout the world there is "Naught like brass."

The outlook of the Tuberculosis Officer—I refer now to his work and not to his financial prospects—will vary of necessity according to the individuality of the Officer; but there should be some sound general principles guiding the service as a whole without limiting the personal characteristics of the Officer.

It seems to me the time has come for us to look upon Tuberculosis as a social and to a certain extent, an industrial disease, which should be dealt with by general preventive and curative measures as well as by specific treatment.

Indeed I must confess myself pessimistic when I review the possibility of advance in specific treatment.

One thing I think is fairly clear with regard to specific treatment and that is that the more highly developed the organism and the more highly specialised its life and its method of attack, the easier it is to prepare an adequate defence, and the more hopefully may we anticipate the discovery of a specific remedy.

From this standpoint, unfortunately, the Tubercle Bacillus may be contrasted with either the Spirochaeta Pallida or the Klebs Loeffler Bacillus and compared with the Colon Bacillus.

The Tubercle Bacillus seems to be a hanger on, a camp follower, an organism of no personal consequence except that on account of its universal prevalence it is always present and willing to take a hand in the fight of the microbe against man whenever the man is down and out and circumstances are such that it has a reasonable chance of success.

For this reason I think that specific therapy is likely to be a long way, a very long way off indeed, and although I hope I am no modern Calaneo and I have no desire to desecrate the feast of good things which research may be providing for us in this direction, I very much fear my gloomy prognostications are unhappily well founded.

It seems to me that the Tuberculosis Officer must take the widest possible view of this disease, embracing preventive measures as well as curative, and that research on his part into social, economic, and industrial problems will promote the best welfare of the people who engage his attentions.

The possibility of promoting colony life in this country in sufficient extent to deal with the problem from a National standpoint appears to me to be remote.

It is a primitive system of social life and requires essentially a guiding hand with almost despotic powers, which system is the antithesis of the ideals of almost every section of our countrymen to-day.

The possibility of placing these patients on the land need only be mentioned to be dismissed.

As Henry Ford has shown there are a very large number of positions in industrial life, the work in which can be efficiently carried out by men not quite physically fit. The grading of industrial occupations by Tuberculosis Officers taking into consideration the remuneration, the conditions of labour, and the hours of labour, would form a basis on which it would be possible to star certain positions which should be filled only by persons debilitated by Tuberculosis.

I feel quite convinced that great as the necessary labour would be in drawing up such a scheme, it would not be greater than that devoted to much of our present research in Tuberculosis and would yield a return commensurate with the effort expended and out of all proportion greater than our present returns from effort in the direction of serum and allied treatment.

The position of the Tuberculosis Officer with regard to education is very difficult but is one which he must seriously consider. The more one considers the fate of Empires, the rise and fall of Nations, and the destinies of Peoples, the more one is impressed with the impossibility of super imposing on any social system, a system higher than the mental vigour of the people themselves will maintain.

All progressive social systems must be essentially democratic. Professor Flinders Petrie quotes Russia as the most tragic example of the inevitable ruin which overtakes a country organised beyond the inherent capabilities of its constituent units.

Education is a long and difficult process and I see but little reason to believe that the modern man is more educatable than his forefathers. It seems to me that neolithic man was mentally as fine a product as we are to-day and that he only lacked the consensus of experience which the written word can alone develop.

Whether it will be possible to educate people to-day so that they may be prepared to fight the battles of to-day before the dawn of a new day fundamentally alters "This sorry scheme of things entire"; alters the scope and the nature of the present necessary operations, is a problem only the future can decide, and this problem holds the ultimate destiny of the human race.

It is easy for us to be pessimistic about education and I must frankly confess myself a pessimist, but because as I have shown, education is the only possible avenue by which we can introduce the social and economic reforms which alone can banish tuberculosis, we are constrained to take education seriously and to make it one of the chief measures in our fight against tuberculosis.

It is not for us to ask, "Can we educate the people in time for us to take a certain action before the varying fortunes in the battle between the microbe and man make action too late?" It is for us to try, it is for us to do our best. It is for us to face defeat, realising that those who come after us may dig to the foundations of our knowledge only to find inscribed on the stones thereof those tragic words so aptly used by Kipling:—

"After me cometh a builder, tell him I too have known."

It is for us to court success in the hope, however little justified we may be therein, that the structure we are building may live through aeons of time and posterity may say of us,

"They builded better than they knew."

Discussion.

Dr. Z. P. FERNANDEZ.

1. A closer co-operation is necessary for the future of Tuberculosis Service between clinical workers and Medical Officers of Health in discussions on the subject of tuberculosis.

2. The clinical ability and experience should be the primary consideration for tuberculosis appointments, and financial encouragement be given to maintain the clinical men in service. The T.B. death rate is not an index of the success of the tuberculosis campaign in any area, as the diagnosis of bronchitis and tuberculosis widely vary as also industrial conditions. For every 100 phthisis deaths, the deaths for bronchitis and other respiratory diseases are higher in areas with a low T.B. death rate, e.g., for 100 phthisis deaths in 1922, Lancashire County had 187 deaths from bronchitis and other respiratory diseases, the West Riding, 157; Bradford, 183; Leeds, 118; and Liverpool, 119.

The success of the work depends on the quantity and the quality in any individual area. Taking, for example, contact examinations, Leeds and Birmingham had over 40% clinically positive (a figure corresponding with the Ministry's report), whilst in an area which has a low T.B. death rate, only 4% is found positive, the bronchitic death rate being higher.

There were 450 domiciliary doctor's visits for consultation, etc., in Leeds last year, and in areas with a lesser death rate this work is not carried out.

Dr. BANKS

Was opposed to allowing Tuberculosis Officers to charge fees for consultations. Their services should be freely available to all ratepayers without distinction. Salaries should be fixed sufficiently high to enable men to concentrate on good work without the distraction of looking round for fees from consultations.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

REPORT OF REPRESENTATIVE ON THE CENTRAL MIDWIVES' BOARD.

Your representative during the past year has attended nearly all the meetings of the Board and its Committees, and has also continued to serve as a member of the Sub-Committee dealing with the approvals of lecturers and teachers.

The most important event during the past year has been the revision of the rules. In connection with this subject the M.O.H. Society appointed a Sub-Committee which drew up recommendations which were subsequently approved by the Society and forwarded to the Board. The recommendations reached the Board somewhat late, but your representative was able to urge their adoption in every case, unfortunately with only very moderate success. Your representative regrets to have to report that he was not successful in obtaining a seconder to many of the alterations suggested by the Society, and proposed by him at the meetings of the Board. Among the recommendations of the M.O.H. Society might be mentioned specially the following:—

1. *Alteration of the Midwives' Act, 1902.*—The Board is unanimously in favour of the omission of the words, "Habitually and for gain." Possibly political action could be taken by the M.O.H. Society in this direction and it would certainly receive all the support that the Board could give.

2. *Operative Procedure.*—In the new rules it is clearly stated that midwives must not undertake operative procedure, or any treatment which is outside their province. Unfortunately no illustration is given in the rules of operative procedures or treatment which are obviously outside the province of a midwife, and so we shall probably continue to have cases occur where midwives are applying forceps, suturing perineums,

and carrying out treatments obviously beyond their capacity and thereby constituting a very serious public danger.

3. *Monthly Nursing.*—By far the most important modification of the rules is in connection with the long standing trouble of the evasion of the rules by midwives on the excuse that they were acting as monthly nurse. In the new rules some useful definitions have been added as to when a woman is acting as a midwife and when she is acting as a maternity nurse. Your representative is still strongly of the opinion that there ought to be no distinction between these grades of practice, and that a woman on the Midwives' Roll should in all her midwifery work be subjected to all the rules of the Central Midwives' Board. Even with the improved condition of affairs it will be possible for a considerable amount of evasion and malpractice to take place and for no punishment to be possible because the midwife will claim to be acting as a maternity nurse.

4. *Poor Law Institutions as Training Centres.*—The preferential position formerly occupied by Poor Law Institutions with regard to training candidates has been modified. Previously, in addition to certificates signed with regard to candidates by practitioners and others approved by the Central Midwives' Board, certificates were accepted from Poor Law Institutions without the necessity of approval or recognition by the Board. Certificates in future will be accepted only from approved teachers.

Among other important matters which may be recorded are the following:—

(i) *Improvement of Training of Midwives.*—It is laid down in the new rules with regard to the period of training that intending candidates must produce to the training institution or teacher evidence of education sufficient to show that their general education is adequate. The course of training in midwifery is to be extended to not less than twelve months in ordinary cases, and six months in the case of fully trained nurses. The scope of the examination is extended and improved. These new regulations will probably come into force on the 1st January, 1926.

(ii) *Post Certificate Training.*—The need for some organisation of post certificate training is obvious to all medical officers of local supervising authorities, and in order that this subject may receive adequate attention, both from the Board and from local supervising authorities, your representative has moved the following resolutions:—

(a) That the Board approach all local supervising authorities on the subject of

arrangements for the post certificate education of midwives in their respective areas.

- (b) That the Board make the necessary arrangements with large training schools in London and in the provinces for short courses of post certificate training for midwives to be provided.

These resolutions have been received favourably by the Board and have been referred to a Sub-Committee.

(iii) *Dangerous Drugs*.—The Society is aware of the fact that very strong representations have been made both by this Society and the British Medical Association, the County Councils Association, and numerous other bodies and local supervising authorities all over the country with resolutions similar to the following:—

“That the Central Midwives Board be urged to consider the desirability of making a rule prohibiting the application or administration by a midwife of any drug (*e.g.*, pituitrin or ergot) other than a simple aperient, except under the direction in each case of a registered medical practitioner.”

To each of these communications it is, unfortunately, the custom of the Board to send a stereotyped reply to the effect that, “The Central Midwives Board has always declined to schedule drugs except in so far as stated in Rule E.19, and sees no reason to depart from its practice in this respect.” Rule E.19 merely imposes upon the midwife the obligation to note in her register of cases each occasion on which she is under necessity of administering or applying in any way any drug other than a simple aperient.

The position with regard to this matter is thoroughly unsatisfactory and there seems to be little hope of persuading the Board to regard this matter from what is regarded by many as the point of view of public safety. The fact that numerous lay bodies and combined medical professional opinion regard the present position as dangerous to the public does not appear to weigh sufficiently with the Board. Your representative has put down for consideration at the next meeting a resolution to the effect that an inquiry should be made as to the extent to which local supervising authorities are supervising the observance of the conditions under which midwives are allowed to possess preparations containing opium and other drugs, and also as to the nature of the preparations which are in actual practice being used.

In this connection it seems necessary to refer to an unfortunate occurrence. The B.M.A. had sent in the common protest against the unsupervised use of these drugs by midwives. To the great surprise of everyone, however, a letter was subsequently received by the Board from the British Medical Association to the effect that the Association had decided not to press any further its objection to the use by midwives of opium. Still more recently (January, 1924) a further letter was read from the B.M.A. stating that it was desired to renew its protest against the permission given to midwives to use opium on their own initiative. It appears that the representative body in July, 1923, passed a further resolution that the B.M.A.'s protest against the use of opium and pituitrin by midwives should be renewed.

In a comparatively recent case a midwife was proved to have been in the habit of injecting hyoscin without the case having been examined by a doctor, or being under the care of a doctor in any way. In the case in question two doses of hyoscin were injected and the woman died. The decision of the Board was to censure the midwife.

There is abundant evidence in many of the cases coming before the Board that an increased amount of direct supervision of midwifery practice is desirable in the interests of the public. Two cases have been reported to the Board where strong nitric acid was put into the eyes of newly-born infants in mistake for a weak solution of nitrate of silver. In a third case the midwife put lysol in the eye, the bottle being labelled, “Silver nitrate 2 per cent.”

(iv) *Penal Cases*.—A conspicuous feature in connection with many of the charges brought against midwives is the scarcity of definite evidence as to the condition of the child during the period for which the midwife is responsible. The whole aspect of most of these cases would be altered if it were a rule all over the country for the health visitor to call not later than the 7th day. No adequate protection for the newly-born child or the lying-in mother will be set up until this rule is observed. A great number of cases come before the Board where the charge, although quite convincing in the eyes of the Local Supervising Authority, cannot be held to be proved in the opinion of the Board owing to the omission of any skilled evidence of this kind. Your representative would suggest that this point be made a subject of a very determined effort on the part of the M.O.H. Society to obtain an alteration in every area and to secure

visiting by health visitors not later than the 7th day. This is the rule in some areas and results in a striking increase in the number of cases found to be neglected by practising midwives.

(v) *Position of Local Supervising Authorities*.—As the result of experience obtained as a member of the Board your representative feels strongly that perhaps the most important alteration that he can suggest, and possibly help to bring about, is an alteration of the relations between the Board on the one hand and the local supervising authority on the other. It is not exaggeration to say that evidence is constantly being produced to the effect that there is an atmosphere of veiled hostility existing between the two bodies. This is most unfortunate. The Midwives Act obviously intended the Board to act as the central supervising authority and for it to be represented in each locality by the local supervising authority. The Board should regard the local supervising authority as its direct local representative and communications should only be made to practising midwives through the medium of the local supervising authority. Your representative had the opportunity of raising this point definitely at a recent meeting and was gratified to receive substantial support. The whole system of administration in connection with midwives will be improved if the relations between the local and the central bodies can be altered in the way suggested.

(vi) *Medical Officers' Reports*.—This report should not conclude without reference to the work of medical officers of local supervising authorities. Your representative regrets to have to express the opinion that in many instances they do not take full advantage of the opportunities they have to put in full and helpful reports upon various subjects when they are invited to do so by the Board. Also, in some areas, the penal cases are not regarded as seriously as they should be. In one important case the County Medical Officer wrote to the Board to say that the County Inspector of Midwives could not come, and that he could not come himself, and that there was no assistant Inspector of Midwives, and so that no one representing the local supervising authority could attend. This is a most unfortunate happening and should be avoided at all costs in the future.

M.O.H. SHEPTON MALLET URBAN DISTRICT.—Dr. J. T. Hyatt has resigned after 47½ years' service. The Council, in accepting his resignation with regret, recorded their deep appreciation of such long and faithful service.

NOTES FROM BRANCHES.

WEST OF ENGLAND BRANCH.

SOMERSET HOSPITALS.

The second report of the Somerset Voluntary Hospitals Committee, signed by the Hon. Secretary, Mr. H. N. Crouch, well deserves a circulation outside the County to which it more particularly refers, since it contains a most illuminating and helpful discussion on the basic principles underlying the voluntary hospital system in England.

One of the main points insisted upon is the necessity for decentralisation of hospital work by diverting some of the enormous pressure on the large central institutions to the smaller cottage hospitals. The largest general hospital in Somerset had a long waiting list throughout the year, while the smaller ones were ordinarily only half full and between them had 150 or more beds available daily for occupation. At the same time, one of the Union Infirmaries with 217 beds had an average of 57 unoccupied. The natural evolution towards a well co-ordinated system which this country is striving to work out through its local hospitals and the County and Municipal Institutions, is considered to be artificially hindered in Somerset, and indeed throughout England, by the unwillingness of cities to decentralise and of the voluntary hospitals to co-operate with public bodies.

Two large hospitals in Somerset have 236 beds between them, and during 1922 treated 2,683 in-patients, while the 14 smaller ones with 299 beds dealt with 2,776 in-patients.

The Report is a 12-page foolscap pamphlet and can be obtained at the Herald Press, Northgate, Bath, for 7d., post free.

THE TUBERCULOSIS PATIENT AND HIS EMPLOYMENT.

Dr. C. F. Pedley, until lately the senior resident medical officer at the Winsley Sanatorium, has contributed an interesting paper on “A ‘Graded Factory’ for Tuberculosis patients and ex-patients” to a recent number of the “Lancet.”

On the assumption that it is usually both injurious and unnecessary for a sufferer to give up his ordinary occupation and learn a new one, it is suggested that in any area where a Sanatorium has been deemed necessary a “graded factory” should be erected. The kind of provision to be made for the employment of tuberculous subjects would naturally vary according to the area, and subsidies to the extent of the difference between the working capacity and full efficiency would be required.

In the course of the paper Dr. Pedley makes a much needed plea for the larger use of Sanatoria for purposes of observation, and also for the wider acceptance by the public of the fact that they are so used. As he points out, it is of great importance that a difference should be recognised by everyone between a patient who has received sanatorium treatment for a condition not clearly distinguished, and one who has received such treatment because he is suffering from tuberculosis. It is very helpful to a patient who enters a sanatorium to know that his case is only under observation and that he may be passed out as not suffering from tuberculosis.

METROPOLITAN BRANCH.

BRANCH MEETINGS.

On April 4th some forty members accepted the invitation of the Director (Dr. R. A. O'Brien, C.B.E.) to visit the Wellcome Physiological Research Laboratories at Beckenham. A tour was made of the various departments—bacteriology, biochemistry, pharmacology, immunology, serology, and veterinary pathology—and descriptive talks and demonstrations were given by Dr. O'Brien and his colleagues, special interest being shown in the work that was being done in regard to diphtheria. At the conclusion of the visit, which was greatly enjoyed by the members, the President (Dr. Frederic Thomson) on their behalf expressed keen appreciation of the excellent programme that had been arranged.

The next meeting of the Branch will, by invitation of the President, take place at the North Eastern Hospital, St. Ann's Road, Tottenham, on Friday, May 30th. Business will be transacted at 3 p.m. (agenda paper to be circulated separately), followed by a tour of the hospital.

SCHICK TEST DISCUSSION.

In the Sanitary Science Section of the Royal Sanitary Institute Congress to be held at Liverpool, various aspects of the Schick Test and Active Immunization against Diphtheria will be dealt with on July 15th in papers by Dr. R. A. O'Brien, Dr. H. P. Newsholme, Dr. E. H. R. Harries, and Dr. J. Bell Ferguson. "Public Health Education in a Public Health Programme," by members of the National Council for Combating Venereal Diseases, and "Medical Statistics and Progress in Sanitation," by the Eugenics Education Society will form the subjects of papers to be read on the second day (July 16th). The Sectional Secretary, Dr. Charles Porter, M.O.H., St. Marylebone, will be glad to

hear from members willing to take part in any of the discussions.

THE SOUTHERN BRANCH.

THE SALARIES SCALE.

Considerable dissatisfaction has been caused by an extraordinary intervention by the central office of the B.M.A., which has had the unfortunate effect of holding up an energetic campaign proposed to be undertaken by the local division of the B.M.A. on behalf of the salaries scale for medical officers of health.

By a unanimous decision the division of the B.M.A. resolved to approach all local authorities in the area with a view to the adoption of the salaries scale by those authorities. With the best of intentions the help and advice of the central office of the B.M.A. was asked for, but, to everyone's astonishment the result was that action was entirely held up. The letter advising the local division to take no action was couched in mysterious terms which have added to the dissatisfaction and irritation that has been caused in the area. A subsequent communication has removed some of the difficulties but the occurrence has been most unfortunate.

THE FOREIGN HEALTH OFFICERS.

The visit of the Foreign Health Officers to this area has left behind it pleasant memories of new friendships formed, new ideas obtained, both by the visitors and the visited, and at the same time a happy recollection of hard work at top speed for many days in succession. The visitors covered the ground very thoroughly and were cordially received by the Mayors and Chairmen of the local Councils, with their respective Medical Officers of Health, all over Hampshire. A great amount of preparation was necessary for three successful courses, but everything went smoothly, and the visitors appeared to be delighted with the arrangements.

M.O.H. SELKIRKSHIRE.—Dr. W. N. Kennedy has resigned in order to enter private practice.

M.O.H. HAMPSTEAD.—The basic salary (excluding war bonus) of Dr. F. E. Scrase has been increased from £1,000 to £1,100.

M.O.H. HEYWOOD.—Dr. W. Alexander has resigned in order to take up private practice at Colne. Dr. Alexander's salary is £700 as compared with the scale minimum of £800 for that district.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

YORKSHIRE BRANCH.

A meeting of the Council was held on Friday, March 28th, 1924, at 2.15 p.m., at the Education Offices, Calverley Street, Leeds.

Present: Dr. A. E. L. Wear, President of the Branch, in the chair, and Drs. J. J. Buchan, Bertram Hill, Jervis, Pearce, Scatterty, Cecil Williams.

The Hon. Sec. of the Branch, Dr. Cyril Banks, being indisposed, was prevented from being present and at his request Dr. Pearce acted in his place. The hope was expressed that Dr. Banks would soon be again in his usual health.

Dr. Pearce reported upon the interview which Dr. Banks and himself, as representatives of the Society of Medical Officers of Health, had with representatives of the Leeds division of the British Medical Association at the Medical School, Leeds, on Thursday, March 29th, 1924, respecting the pending appointment of an Assistant School Medical Officer under the Leeds Education Committee. The Committee offered a salary of £500 per annum and a medical man with local connections requested that permission be given him to apply for the post and that in this instance the scale salary of the B.M.A. and Society of Medical Officers of Health, £600 minimum, be not insisted upon owing to special circumstances. These were stated to be (1) that in 1923 when £500 p.a. was the minimum scale salary of the B.M.A. and the Society, applicant was a candidate for a similar vacancy under the Leeds Education Committee, (2) that there was every probability he would have been appointed (3) owing to illness he was unable to continue as a candidate, (4) if it had not been for such illness it was expected he would have actually been in office at the present salary of £500 p.a. Drs. Banks and Pearce pressed strongly that the present scale salary of £600 be adhered to, but the B.M.A. representatives unanimously voted that permission be granted to the applicant to apply for the vacancy. Drs. Banks and Pearce then urged that it be specially recorded by the Leeds Division of the B.M.A. that their decision was owing to the special circumstances which were to be stated and that this case must not be taken as a precedent. This was agreed to. A full report of the proceedings was transmitted by Drs. Banks and Pearce to the Executive Secretary of the Society of Medical Officers of Health to be dealt with as might be thought desirable.

A report of the proceedings at the Council meeting of the Society in London, on March 21st, was given by the President of the Branch and Dr. Pearce, two of the three Branch Representatives at which the Hon. Sec., Dr. Banks, was also present.

Consideration was given to letters from the North Western and Southern Branches of the Society pressing the claims of Dr. R. A. Lyster, the Midland Branch, respecting Dr. T. Ridley Bailey, and the Home Counties Branch in favour of Dr. Alfred Greenwood for the Presidency of the Society of Medical Officers of Health during the session 1924-1925.

An Ordinary Meeting of the Branch then followed.

Present: Dr. Wear (Branch President) in the chair, Drs. J. J. Buchan, Dunne, Katherine Gamgee, B. Hill, Huey, Jefferson, Jervis, Kaye, Mair, Pearce, Roe, Scatterty and Cecil Williams.

The President offered a cordial welcome to three visitors, a lady and gentleman from Belgium, and a gentleman from Bulgaria, members of the foreign medical delegation arranged by the League of Nations which is at present touring this country.

The minutes of the last meeting were read, confirmed, and signed.

Apologies for absence were received from Drs. Banks (Hon. Sec.), Francis, Gibson, Fox Linton, E. M. Smith and Mitchell Wilson.

Presidency of the Society, 1924-1925: It was proposed by Dr. J. J. Buchan, seconded by Dr. J. Johnston Jervis and resolved that the Yorkshire Branch nominate Dr. J. R. Kaye, Medical Officer of Health to the West Riding County Council, as a candidate for this position.

A paper was then read by Dr. Jervis, Medical Officer of Health, Leeds, entitled "The importance of Care work in a Tuberculosis Scheme." Dr. Jervis was thanked for his interesting contribution. The members then proceeded, under the guidance of Dr. Jervis, to the "Factory in the Field," the headquarters of the Leeds Tuberculosis Ex-Service Men's Society where opportunity was given for seeing these men at work brush making, firewood chopping, etc., in their premises. The venture was stated to be self-supporting and provided the workers with an economic income weekly. A return was then made to the Education Offices where afternoon tea was served.

A presentation of a silver tray was then made to Dr. J. R. Kaye by the President, supported by Drs. Jervis, Buchan, Scatterty, and B. Hill, in recognition of his continued services as honorary

secretary of the Branch until his retirement some years ago. A previous presentation had been made to Dr. Kaye before the outbreak of war, which, it appeared, was unknown to a number of the later members of the Branch. Dr. Kaye suitably replied.

Owing to lack of time adequately to discuss the paper by Dr. Jervis it was agreed that this be postponed to a future date.

HOME COUNTIES BRANCH.

The Sixth meeting of the Session 1923-1924 of the Home Counties Branch was held at the House of the Society, on Thursday, March 6th, 1924, at 3.30 p.m.

The minutes of the previous meeting were read and approved.

It was resolved to send a message of condolence to Dr. Paterson on the recent death of his wife.

It was decided to hold the May Meeting of the Branch on the 9th May, at Tunbridge Wells, in conjunction with the Sessional Meeting of the Royal Sanitary Institute, provided that suitable arrangements could be made. The Secretary was instructed to communicate with Dr. Linton, the Medical Officer of Health for Tunbridge Wells, on the subject.

The Secretary submitted letters from various other branches and Groups in regard to nominations for the Presidency of the Society for the Session 1924-1925. It was unanimously agreed, on the proposition of Dr. J. M. Clements, seconded by Dr. D. C. Kirkhope, to put forward the name of Dr. Alfred Greenwood, Medical Officer of Health for the County of Kent, as President.

Dr. Alfred Greenwood then read his paper on "Clean Milk in Kent."

Dr. Greenwood mentioned that the origin of the first Clean Milk competition in Kent lay in the desire of certain members of the public, alarmed by articles in the lay press, to be assured of a clean milk supply.

The competition was organised by the Kent Education Committee and the Kent Milk Recording Society with a four-fold objective.

- (1) To shew that there was already in the County a supply of clean milk in addition to the "graded" milks.
- (2) To assist farmers by examination and advice to produce a clean milk supply.
- (3) By friendly rivalry to stimulate farmers and more especially their milkers to learn the

essential conditions necessary for the production of clean milk.

- (4) To demonstrate that the production of clean milk did not necessitate excessive expenditure on building or equipment.

Awards were made on the qualities of the milk, bacteriological and chemical, and on the health of the herd, equipment and methods. The number of entries was large and the result of the competition satisfactory. Periodical reports were sent to each competitor and defects pointed out.

The competition proved that large quantities of clean milk can be and is being, produced in Kent in the ordinary farm buildings and that the principal requirement is care and attention to details of method.

A discussion ensued, in which Drs. McIntosh, Thomas, Scurfield and the Hon. Secretary took part.

A hearty vote of thanks was accorded to Dr. Greenwood for his excellent paper, to which he suitably replied.

The meeting then terminated.

MIDLAND BRANCH.

The Fifth Meeting of the Session was held at the Carnegie Institute, Hunter's Road, Handsworth, Birmingham, on Thursday, March 6th, 1924, at 5 p.m.

Prior to this meeting members were conducted over the Institute by Dr. John Robertson and obtained an insight into the various branches of Maternity and Child Welfare Work carried out there.

Present: The President, Dr. A. Hamilton Wood, and 18 members.

The minutes of the previous meeting were read and confirmed.

The Hon. Sec. reported the action taken by him in connection with the Midland Branch's nomination of Dr. T. Ridley Bailey for the Presidency of the Society, Session 1924-25.

The Hon. Sec. also referred to the recent death of a well known member of the Branch, Dr. Henry Malet, late Medical Officer of Health, Wolverhampton, and stated that he had sent a wreath to the funeral in the name of the Midland Branch, and had also written a letter of sympathy to Mrs. Malet, whose reply he then read. It was resolved that the action of the Hon. Sec. be approved and confirmed.

The President then called upon Dr. John Robertson for his paper, "Problems which are in dispute in regard to the Milk Supply."

After a few introductory remarks the speaker claimed that the contamination of milk in the

home was more objectionable than at the farm. The spread of Diarrhoeal Diseases by Milk was mainly due to the want of care and intelligence on the part of the housewife. In support of this statement tables were exhibited shewing the incidence of Summer Diarrhoea in various classes of dwellings in Birmingham, all having a similar Milk Supply.

Figures were given of the daily average consumption of milk per head of population in this country, and Dr. Robertson then proceeded to arrive at an estimate of the real requirements per head, if this food were used as much as it ought to be. He allowed amounts varying between 1 and 2 pints for children of different ages up to 15 years, and $\frac{1}{2}$ pint per head for adults, and calculated from this that 13 ozs. per head of the population should be consumed daily. On this basis Birmingham, with a consumption of 8 ozs. a day, was taking 63 % of its estimated requirements.

Consideration was then given to the present minimum standards of Fatty and Non-Fatty solids, and it was suggested that the purchase price of Milk should be on a Fat basis. This would remove the present difficulties in connection with warranty, would encourage farmers to study the production of Milk with a high fat content, and make them join a Milk Recording Society.

Dr. Robertson stated that even Grade "A" and "Certified" Milks were liable to spread such disease as Scarlet Fever. There was also some risk of finding Tubercle Bacilli in "Grade A" (Tuberculin tested) Milk, although the cows in the herd were regularly examined and tested. For these reasons he considered that it was unsafe to give even Milk sold under one of these special designations to a young child without first boiling or pasteurizing it.

Dr. Robertson believed that for many years "Grade A" (T.T.) Milk would be too expensive for 99% of the population, and concluded by advocating properly pasteurized Milk, supplied in bottles, as the safe, cheap, and expedient form which the Milk supplies of town should take.

A valuable discussion followed in which several of the members participated.

A hearty vote of thanks was given to Dr. Robertson for his interesting Paper, and also for his kind hospitality.

NORTH WESTERN BRANCH.

Meeting held in Manchester, March 19th, 1924.
Present: Dr. G. Lissant Cox (President) and 24 Members.

Minutes of last meeting read and confirmed. The Hon. Sec. briefly reported on the position with regard to the scale of salaries.

Dr. R. Veitch Clark addressed the meeting on the subject of "Non-Tuberculous Respiratory Condition," with special reference to Broncho Pneumonia and Lobar Pneumonia which are responsible for 7 to 10% of the total deaths at all ages, and expressed his opinion that a new period was opening in the treatment of the pneumonias comparable to that which followed upon the introduction of serum-therapy in Diphtheria. He showed charts illustrating the deaths from lobar and broncho-pneumonia at various age periods, similar charts in respect of measles and whooping cough, and charts illustrating the distribution throughout certain years of the deaths from broncho-pneumonia and measles. These latter charts presented no overlying peaks, from which it was inferred that in broncho-pneumonia one was dealing with a disease of specific epidemiological significance. Dealing with lobar pneumonia Dr. Clark referred to the differentiation of the pneumococcus into four main types possessing serological differences, 60 % of the cases being due to types 1 or 11, the organisms of which were practically never found in the healthy mouth or naso-pharynx. Referring to recent American work on serum-therapy he spoke of the useful results recorded by serum treatment in type 1 cases, especially if commenced within the first three days and persisted in with eight-hourly injections of 100 cc. serum given intravenously; the mortality in a series of cases was thus reduced from the normal 25 % to 7 %. Vaccine-therapy, most of the work in connection with which had been done in South Africa with polyvalent pneumococcus vaccine, had given promising results, especially in cases treated from the first day. Dr. Clark also mentioned a third line of treatment from the use of a synthetic product introduced by Leandro Tomarkin and used with good results in Rome.

As regards epidemiology it has been found that the pneumococcus could be isolated from the mouths of the patients for periods varying from 7 to 90 days, but commonly disappeared in 3 to 4 weeks; type 1 pneumococcus had been isolated in 13 % of contacts examined.

As regards the role of the Public Health Department it was suggested that it was essential first to determine the type which in a suitable laboratory was a matter of twelve hours' work only, and then to organise machinery for the administration of the appropriate serum.

Prophylaxis by vaccine inoculation had not proved of much use so far, but whether for prophylaxis or for treatment, propaganda work needed conducting to educate the public to the possibilities of a large reduction in pneumonia mortality through the use of the modern methods referred to.

The President raised certain points and invited Dr. Peck to move a vote of thanks to Dr. Veitch Clark for his very interesting address; this seconded by Dr. Daley and supported by Drs. Wood, Whitehead, Stewart, Jessel and Colonel Barrow. Dr. Veitch Clark, in acknowledging the vote of thanks, dealt with the points raised by the various speakers.

Proceedings of a meeting held at the Medical Institution, Liverpool, on Friday, April 11th, 1924.

Present: Dr. G. Lissant Cox (President) in the chair, and 30 members.

Minutes of last meeting read and confirmed.

Professor Blair Bell (University of Liverpool) gave a very interesting address entitled "The influence of longevity and lead-work on the mortality rate of Cancer." He submitted that if we can overcome the mortality rate of infant life we shall eventually reach a time when man will die from accident and old age only, and he gave statistics to show what progress we had made towards this ideal.

From 1911 to 1921 the general population increased by 5 %, but the population over 70 years of age increased by 18 %. People are therefore definitely living longer and it is difficult to decide to what factor the improvement is due. Infant mortality has only been substantially reduced during the last 20 years, so that this cannot account for it, but probably the fact that less alcohol and more baths have been taken has something to do with it. However, the result is that more people are brought into the cancer age.

There is a definite increase in the number of deaths ascribed to cancer.

We are gradually eliminating the obstacles to a healthy old age except cancer.

Tuberculosis and other diseases have been tackled by schemes organised for the community whereas the work against cancer has been left more to the individual. He instanced the work of the Liverpool Cancer Research Committee and outlined their views of the origin of Cancer, that it was purely a biological action analogous to the development of the trophoblasts of the ovum. These cells, if damaged, may get out of co-ordina-

tion with the somatic cells and go back to a chorion-like existence. The action of lead has a specific action on the chorionic cells and prevents their development. Professor Blair Bell then gave figures to support the theory that as the incidence of plumbism among the population had decreased so the incidence of cancer had increased. The apparent immunity to cancer of workers in lead (subject to lead-poisoning) was also shown.

Dr. Mussen, in proposing a vote of thanks, asked to what extent the increase of cancer was due to greater accuracy of diagnosis. Dr. Daley, in seconding the motion, mentioned six cases of cure of Cancer by Professor Blair Bell's method. He said that the Registrar General's figures showed there was also an actual increase of Cancer of the accessible sites and this went to show that the increase was not due to better diagnosis.

Professor Bickerton and Dr. Stallybrass also spoke in support of the resolution, which was carried unanimously, and to which Professor Blair Bell replied.

M.O.H. RICHMOND.—The salary of Dr. C. S. Brebner has been increased from £800 to £1,000 per annum.

M. O. H., BLACKBURN. Dr. W. Allen Daley, Medical Officer of Health for Blackburn, has received the grant of a free official residence, with fuel and lighting. These are estimated as equivalent to £120 per annum.

M. O. H., HESTON AND ISLEWORTH. Heston and Isleworth District Council is recommended by its Health Committee to pay the medical officer six guineas to cover the loss of his overcoat and gloves, which were stolen at the Guildhall, when he attended a conference on "milk" as the Council's representative.

CONSTABLE

PUBLIC HEALTH CHEMICAL ANALYSIS.—By Robert C. FREDERICK and Aquila FORSTER, Ph.D., M.Sc., A.I.C.

Demy 8vo. Illustrated. 21s. net.

Medical Times.—"The book which is suitably illustrated, will be invaluable to all Public Health Chemists and Sanitary Authorities at Home, in the Dominions and in Foreign Countries. It should therefore make a wide appeal."

Guy's Hospital Gazette.—"The book is decidedly one to recommend to all who want to take their laboratory work seriously."

London Hospital Gazette.—"This book should prove of value to all engaged as public analysts and to medical men holding municipal appointments."

The Analyst.—"The Authors have produced a volume which is essentially practical and extremely clearly written."

LONDON: CONSTABLE & COMPANY, LTD., 10-12, Orange Street, W.C.2. Bombay and Sydney.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 9.

JUNE, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

CONTENTS.

EDITORIAL—

	PAGE
A State Medical Service	213
Voluntary Hospitals Commission	214
Epidemic Encephalitis	214
League of Nations Health Committee	215
Public Health Teaching in the Medical Curriculum	215
International Society of Public Health Medical Officers	215

SPECIAL ARTICLES—

An Address on the Nature of Cancer and the Relation of Longevity, Plumbism and Preventive Measures to the Mortality Rate of this Disease (By W. Blair Bell, B.S., M.D., Lond., Professor of Gynaecology and Obstetrics in the University, Gynaecological and Obstetrical Surgeon, Royal Infirmary, and Honorary Director, Cancer Research Fund, Liverpool)	217
Public Education Concerning V.D. (By H. Wansley-Bayly, M.C., M.R.C.S., L.R.C.P., Honorary Secretary of the Society for the Prevention of Venereal Disease)	223
The Public Significance of Mental Deficiency (by Meredith Young, M.D., D.P.H., Barrister-at-Law, County Medical Officer of Health, Cheshire, and Medical Adviser to Cheshire Mental Deficiency Act Committee)	226
"The Water Supply of the South Yorkshire Coalfield" (By Professor Fearnside, Professor of Geology in the University of Sheffield)	230

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Notices	216
Council Meeting	231
Ordinary Meeting	233
Northern Branch	233
Yorkshire Branch	234
Home Counties Branch	234
School Medical Group	235
Tuberculosis Group	235
The Dental Officers' Group	236
The Health Committee of the League of Nations	236
The Neech Prize, 1922-23	236

CORRESPONDENCE—

Parents' Contributions Towards Sanatorium Treatment	237
The Central Midwives' Board	238
Treatment of Tuberculosis	239
The Soap and Water School of Disinfection	240
Brackenbury Testimonial	240

Editorial.

A STATE MEDICAL SERVICE.

The publication of a memorandum entitled "A State Medical Service as the Basis of Wise Legislation" reminds us of pre-war discussions on the subject, and brings to the fore, in an up-to-date fashion, a matter that is bound to demand consideration by all progressive forces in public health before long. The memorandum has been issued by the National Medical Union and the Scottish Medical Guild jointly. It is pointed out that only about half the doctors on the medical register have accepted service under the National Health Insurance Act. The other half has no collective voice, but is in part represented by two societies—namely, the National Medical Union, with its headquarters in London and a strong section in Manchester, and the Scottish Medical Guild in Edinburgh. These societies were formed when the Act came into force. Their policy from the outset consisted of two parts:—(1) Opposition to the panel system of medical practice; (2) the basis on which a State medical service ought to be established.

Before suggesting an amendment of the National Health Insurance Act, the memorandum analyses the conditions which existed when the Government adopted the Insurance Bill. The conditions, it says, were as follows:—

"(1) There was a Poor Law system intended for destitute persons, destitute from a great variety of causes, while their generic appellation was paupers. Doctors were appointed to districts to give medical attendance to them.

"(2) There was a great mass of wage-earners, many of whom had irregular and precarious employment; but many of whom had steady employment, sufficient wage to live comfortably, and, when thrift was exercised, to save some money. Many, if not all, of the latter were members of clubs or associations which provided sickness benefit, medical attendance, and even allowances for permanent disability.

"(3) There was a large body of people who did not fall into either of these categories.

"From the humanitarian point of view, the people who required to be considered were certainly not those grouped in No. 3; nor those in No. 2, who were in a position to take care of themselves, and of their wives and children, and were already doing so.

"The people whose circumstances definitely called for a generous scheme of medical help were the labourers, the little-skilled and the untrained workers, often with wives and children dependent upon them. These merged into and often drifted into No. 1 category.

"When the position is thus analysed, it is evident that enlightened humanitarianism should have begun here, and it could certainly have evolved a scheme of medical benefit on the lines of the Poor Law, taking from it the stigma of pauperism, and including in its scope not only No. 1, but the section of No. 2 nearest to it. Unfortunately, this plain and reasonable line of advance in social amelioration was not adopted."

The signatories to the memorandum point out that it was from the first the declared policy of the National Medical Union and the Medical Guild that a State medical service should take the place of the Poor Law service, and in the light of the working of the Insurance Act they hold that the application of this doctrine now is the only line along which true and pure social reform can efficiently move. The memorandum continues:—

"Our contention was, and is, that true State philanthropy ought to have begun here. The class referred to is so large in populous districts that it would require a whole-time service—a State medical service, in fact. Many medical men and women would deliberately adopt such a service as their life-work. In it salaries would be paid, and no fees exacted. Some would enter the service from the highest of motives, and on the whole the work would be conscientiously done, while the men and women in it would hold an honourable place in public and professional confidence and esteem. The State service would, of course, be graded, and at the head of it would suitably be placed a well-organised, equipped, and staff State Hospital—replacing the present Poor Law Hospital."

Whether the proposals as stated will find much favour with the medical profession or, much more important, with the public, remains to be seen. It is well known that an influential body of opinion exists in insurance and labour circles wholly in favour of an organised whole-time medical service. Now that thousands of medical practitioners have become state officials under the Insurance Act it is impossible to prophecy about the developments.

VOLUNTARY HOSPITALS COMMISSION.

In reply to a recent question in the House of Commons regarding the number of persons requiring hospital treatment but unable to obtain it through lack of beds, the Minister of Health indicated that he proposed to ask the Voluntary Hospitals Commission to undertake an enquiry into the shortage of hospital accommodation.

Mr. Wheatley has now remitted this question to the Commission with the following terms of reference:—

"The Voluntary Hospitals Commission are requested to enquire into and to report upon the extent of the additional voluntary hospital accommodation required in England and Wales and the best means of providing and maintaining it."

The Commission will be communicating immediately with the Local Voluntary Hospital Committees in regard to the steps to be taken in pursuing the investigation, and the matter will also be the principal subject of discussion at the conference of representatives of the Local Voluntary Hospital Committees, which is to be held on the 18th June at the Ministry of Health.

It is understood that a separate enquiry will be undertaken in regard to hospital accommodation in Scotland.

EPIDEMIC ENCEPHALITIS.

The Ministry of Health states that the total cases of Encephalitis Lethargica (sometimes called Epidemic Encephalitis or, incorrectly, "Sleepy Sickness") notified in England and Wales during the week ended May 17th amounted to 286, to be compared with 291 for the week ended May 10th and 262 for that ended May 3rd. Since the beginning of the year the number of notified cases has been 2,473 (as compared with an annual average of 839 in the previous four years). Out of this total, 281 have occurred in London; the chief centres affected elsewhere being Manchester, Sheffield, Birmingham and Bristol. In general, however, the cases have been widely scattered throughout different parts of the country. It is too soon to estimate the mortality caused, but on the deaths so far reported the mortality has varied in different cities from 12 to 21 per cent. of the notified cases.

The present epidemic prevalence is similar to, though more extensive than, that of the corresponding period in 1921 when a total of 1,155 cases was reported. Speaking generally, there are signs of decline in the districts mainly affected, but the spread of infection to new districts results in the maintenance of the total prevalence.

The existence of the disease in this country and its chief characteristics were established and described fully in reports and memoranda issued by the Local Government Board in 1918 and by the Ministry of Health in 1922. A further memorandum, about to be issued, will embody the result of the extensive enquiries now being made by the

medical staff of the Ministry in different centres during the present period of prevalence.

As in previous years there is little evidence that the definitely recognised cases of the disease are responsible for spreading infection, the epidemic being presumably kept up by slight and unrecognised cases or by healthy carriers of the virus of the malady. No specific measures such as vaccines are at present available either for prevention or treatment. Researches on the nature of the virus and many other problems arising in connection with encephalitis are being actively pursued under the direction of the Medical Research Council, and in numerous laboratories at home and abroad.

LEAGUE OF NATIONS HEALTH COMMITTEE.

The Committee have appointed a member to the Governing Board of the London School of Hygiene and Tropical Medicine. The Governing Board lays down the general programme of education for the School, and since it is desired to make this education as broad as possible, in order to give an education in hygiene applicable not only in England but in other countries as well, it was considered essential to have one of the governors nominated by the League Health Committee. Sir George Buchanan, the British member and Vice-President of the Health Committee, was nominated by the Committee for this purpose.

One of the Sub-committees is making an enquiry and preparing a report on the teaching of the public health and social questions in the different countries of Europe, America and Japan. This was a task accepted by the Provisional Health Committee before the Permanent Committee was formed, at the request of various governments. The interest in this question is considerable, for it is generally realised that the connection between health instruction and progress in sanitary efficiency is extremely close.

The Committee has also expressed its gratification at the success of the system of "interchanges" of medical health personnel organised by the League Health Committee with the aid largely of funds from the Rockefeller Foundation.

There is already a small sum on the League budget for this purpose and the Committee, in view of the fact that the system of interchanges "is proving of permanent value to a very large number of Public Health Services and lends itself eminently to facilitating an intimate collaboration between the Public Health Services of all countries through the intermediary of the Health

Organisation of the League," resolved that "the organisation of the 'interchange' of medical officers of health has proved its practical utility and ought to be continued systematically," and therefore recommended that there should be an increased allocation in the 1925 League budget for this purpose, in order to prepare the way for the time when the League would have to take over the full expense of the interchanges.

PUBLIC HEALTH TEACHING IN THE MEDICAL CURRICULUM.

We have received a very interesting communication from an experienced examiner commenting upon our remarks in the issue of April last upon the subject of housing and tuberculosis. Our correspondent first of all congratulates us upon the paragraph in question and agrees with the suggestion therein contained that it is very easy to exaggerate the influence of housing upon tuberculosis and that as the result of such exaggeration the public have been in the past frequently misled. He goes on to say that during the course of a recent examination a question was set in one of the papers concerning the causes of tuberculosis. In a great majority of the papers the candidate suggested no other cause of tuberculosis than bad housing and lack of sunlight.

This examiner's experience throws an interesting light upon two subjects. First of all there is evidently a deplorable lack of thorough teaching in many of the medical schools in connection with the subject of preventive and state medicine. The time given to this subject is totally inadequate and needs immediate revision.

The other subject illustrated by this examiner's experience is the extent to which the insufficiently-taught student of to-day has to depend for his instruction in preventive and state medicine upon the various "stunts" which are so energetically organised from time to time.

INTERNATIONAL SOCIETY OF PUBLIC HEALTH MEDICAL OFFICERS.

The recent course for foreign medical officers in Great Britain was followed by a conference at the headquarters of the League of Nations at Geneva, when a number of papers on British methods of public health administration were read and discussed. At the close of the conference a strong wish was expressed that those medical men, now over 200 in number, who have been privileged to take part in the courses organised

by the health section of the League should form the nucleus of an international society of public health officers. A meeting was therefore held at the Hotel Metropole, Geneva, on Tuesday, 15th April, 1924, attended by medical officers representative of twenty-one nations, when the following resolutions were adopted unanimously:—

1. That this meeting approves the formation of an international society of public health medical officers.

2. That the headquarters of the society shall be in Geneva.

3. That all those medical officers who have taken part in the interchanges organised by the health section of the League of Nations be invited to become original members of the society.

4. That a provisional committee be elected to draft the constitution and rules of the society, as follows: Dr. Lewis R. Thompson (United States), Dr. Salmon (France), Dr. Grimaldi (Italy), Dr. Breger (Germany), Prof. Wladimiroff (Russia), Dr. Tubiasz (Poland), Dr. Pareja (Ecuador), with a representative of Great Britain to be nominated by the Society of Medical Officers of Health.

5. That the objects of the society shall be:

- (a) The advancement of preventive medicine and public health administration in their international aspects;
- (b) The exchange of information on public health matters amongst the members of the Society;
- (c) The organisation of international conferences and publication of reports in the medical periodicals;
- (d) The promotion of the international activities of the health section of the League of Nations.

6. That the provisional committee shall circulate to those invited to become members the draft rules of the society, asking for criticisms and suggestions before they are finally adopted.

7. That the constitution and rules having been approved, the provisional committee will retire in favour of a general council, consisting of, say, ten members, of whom two shall retire each year.

8. That the first duty of the general council will be to elect officers of the society as follows: (a) a president, (b) three vice-presidents, (c) an honorary treasurer, (d) an honorary editor, (e) an honorary secretary, (f) assistant honorary secretaries for nations and groups of nations.

The hope was expressed that strong support for the society would be forthcoming from England, admittedly the pioneer country in matters of public health administration. It was agreed that in

addition to those who have attended the League of Nations courses, all those who have assisted in the organisation of the work and in the local direction of courses should be invited to become original members of the international society. A further announcement will be made when the constitution of the society has been completed by the provisional committee.

As recorded elsewhere (see proceedings of Council, p. 232), Dr. W. J. Howarth has been nominated to represent the Society of Medical Officers of Health on the provisional committee of the International Society.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTICES.

The Annual Provincial Meeting of the Society will be held at Wallasey, on Friday, 18th July, during the Liverpool Congress of the Royal Sanitary Institute.

Members of the Society who hope to be present should notify the Executive Secretary, 1, Upper Montague Street, Russell Square, W.C.1, stating if they will be accompanied by ladies. A full programme of the meeting will appear in the July issue of "Public Health."

M. O. H., STOCKTON-ON-TEES. Dr. Thomas Horne has been compelled by ill-health to resign his appointment as Medical Officer of Health for Stockton-on-Tees. He will occupy the post of Consultant, at a salary of £300 per annum.

Dr. H. H. Brind, Medical Officer of Health for the Chertsey, Walton, Weybridge and Windlesham Combined Districts, has received an increase of salary to £1,270 per annum.

DEARTH OF R. A. M. C. CANDIDATES. The underpayment of Army doctors has led to an extraordinary dearth of candidates. In the examination a year ago the number of candidates who presented themselves was said to be four. In the July examination it rose to six, and the same number presented themselves at the last examination. It is generally stated that the Medical Service of the Army is within measurable distance of being run entirely by Majors and Captains, mostly Majors, a condition of affairs likely to persist until the rates of pay are readjusted.

AN ADDRESS ON THE NATURE OF CANCER AND THE RELATION OF LONGEVITY, PLUMBISM AND PREVENTIVE MEASURES TO THE MORTALITY RATE OF THIS DISEASE.*

BY

W. BLAIR BELL, B.S., M.D., Lond.,
Professor of Gynaecology and Obstetrics in the
University, Gynaecological and Obstetrical Sur-
geon, Royal Infirmary, and Honorary Director,
Cancer Research Fund, Liverpool.

INTRODUCTION.

I was much gratified when my friend, and your distinguished President, invited me to address you on some aspects of the vast subject that has absorbed so many of my energies during the last fifteen years. Yet, to use the words of Sir Thomas Browne in his preface to *Pseudodoxia Epidemica*, "Surely in this work attempts will exceed performances; it being composed by snatches of time, as medical vacations . . . would permit us. And therefore also, perhaps it hath not that regular and constant style, those infallible experiments, and those assured determinations, which the subject sometime requireth, and might be expected from others, whose quiet doors and unmolested hours afford no such distractions."

Moreover, being unfamiliar with the language of Public Health, which appears to consist of figures rather than letters, I have been hesitant in facing so critical and expert an audience, the members of which spend long hours recording the entrants for the Race of Life, and laborious days guiding the starters past the nutritional and infective obstacles of infancy that they reach in greater numbers the so-called 'cancer age'!

What then?

EVOLUTION AND DEATH.

Nature, it seems, adhering to her great principle Evolution, will not be balked of her goal. Man must die, even as mankind must disappear or be superseded. In these cataclysms we are permitted to influence only the manner of dying. Still, rightly or wrongly, it is not a philosophy of the Inevitable that governs our thoughts and actions; instinct and reason demand a variation of the law of self-preservation that it may include the preservation of others and the alleviation of

* An address delivered at a Meeting of the N.W. Branch, held at the Medical Institution, Liverpool, 11th April, 1924.

suffering. So it comes about that we are prepared to leave at the disposal of Nature only what we describe as death due to old age. It is strange, therefore, to read in the Registrar-General's Statistical Review (1921) that "The declining vogue of 'old age' as a form of death return causes a difficulty" in making comparisons in recent years with regard to the principal causes of mortality in persons over 70 years of age.

If, by overcoming infant mortality and that associated with preventable infective disease in adolescents and adults, we can prolong the duration of life and render it comfortable up to that period known as the 'cancer age', then I feel assured that eventually we shall be able to take mankind into a neobiological era wherein death will only occur as the result of accident or senility, and it is conceivable that in that far off time the occurrence of accidents will be rendered impossible.

It is worth while, then, briefly to enquire how far medical science has already brought us towards this ideal state.

INCREASED LIFE-EXPECTATION.

Few statistics are needed to prove the generally-accepted fact that the expected age-limit has risen rapidly during the last few decades. Since 1911 the figures representing the total population have been increased by 5 per cent., whereas, in the same period those in respect of persons over 70 years of age have become greater by 18 per cent. It seems probable, however, that this increase in the later age-periods has been more directly related to improvements in the general conditions of life, and in the prevention and treatment of disease of middle life rather than to a reduction of the infant mortality-rate, for, although in England and Wales the latter has been reduced by one-third during the present century—that is, from 128 per 1,000 births in the decade 1891-1900 to 83 per 1,000 in 1921—there was little improvement during the nineteenth century. No doubt, a rise in life expectation from birth onwards will be evident in statistics sixty years hence.

It is, then, clear that the factors mentioned are all tending to prolong the average duration of life, and, therefore, to bring men and women more frequently into contact with the last and most formidable barrier that separates them from natural death.

That the standardised death-rate from malignant disease is higher in the age periods over 70 years than in those below this figure, and that there is a general increase above the age of 45 years, are demonstrated by the following figures:

TABLE I.

Average death-rate from malignant disease per million population in different age-periods.

Age periods.	1911-1914.	1921.
45-70 ...	4,078 ...	4,367
70 upwards...	9,147 ...	10,804

Below the age of 45 years there has been no increase in the death rate from malignant disease.

In spite of the prolongation of life the great Insurance Companies have not as yet increased their fundamental life-expectation figures; and the reason of this appears to be that many companies insure the lives of men chiefly for immediate financial reasons, and this class of life is somewhat precarious. Moreover, figures with which I have been supplied show quite definitely that the present average life-expectation is reduced by 8 per cent. in insured people dying of cancer. In other words, the Insurance Companies lose on the lives of those who die of cancer to an extent proportionate to this figure.

We are, as I have said, gradually eliminating all the other obstacles to healthy old-age and natural death one by one: indeed, it may be asserted that the basis—the essential scientific foundation—of the prevention and treatment of all fatal diseases, except cancer, has been established, even though the details have not always been fully elaborated.

PREVENTION AND CURE DOES NOT ALWAYS FOLLOW KNOWLEDGE OF THE NATURE OF DISEASE.

In many directions our methods of treatment are still crude and unsatisfactory, even though we have taken up the right positions from which to launch our attacks. For example, we know the cause of tuberculosis, and the nature of the lesions produced by the organism concerned; and we realise that it is some inherent incapacity of resistance, further weakened, it may be, by unhealthy environment, rather than the mere presence of the *bacillus tuberculosis*, that enables the ravages of consumption to continue almost unchecked.

I do not pretend to know much of the great campaign of prevention in which your President and others are so earnestly engaged, I am simply using this disease as an example of how vast accumulated knowledge may be held up at the brink, as it were, although some day it must span the gap that separates us from complete comprehension, however long this desirable end may be considered overdue.

So it is in regard to cancer: despite of the feeling of hopelessness that has settled upon many who are weary of waiting while the spectre stalks through the land with ever-increasing rapacity,

there can be no doubt that if we can gain the necessary knowledge, eventually a successful campaign will be conducted against this disease.

I would, however, here give a word of warning against undue optimism in the near future. With the example of tuberculosis before us—the example of a disease whose cause, mode of action, and selective propensities are so well understood, yet the complete control of which has not so far been vouchsafed to us—it does not seem probable to those of us who do not believe in parasitic specificity as a cause of cancer, that any sudden discovery will lead to the successful treatment of all cases. Indeed, I hold that with Preventive Medicine lies the power of checking the frequency of malignant disease. When that epoch arrives in which there is complete freedom from senility—as opposed to healthy senescence—infection, trauma and nutritional disturbances; that is to say, when there is freedom from all the predisposing and inciting factors in the causation of cancer—syphilis, alcohol, parturition per vaginam, betel-nuts, tar, hot drinks, kangri-baskets, and the rest—then only will the incidence of this disease come under control.

Meanwhile, we may witness in regard to the treatment and prevention of cancer an *impasse* worse than that which has held up the suppression of tuberculosis; and, while awaiting the millennium of preventive accomplishment, it is our duty to accumulate knowledge concerning the natural history of malignant neoplasia, and attempt to cure those who suffer with this disease in its manifold variations.

Although there are many advanced cases which never can be relieved, there is some method or combination of methods by which a number can be arrested or cured. The difficulties are, and always must be, immense; and in this disease success is only likely to reward those who are capable of taking a comprehensive view of the problem. To work out the various ramifications of the subject, experts in the different branches are required. This is the ideal at which we have aimed in our own organisation, in which we have many expert workers in special lines, who by reason of close association with their colleagues are able to acquire the comprehensive view of which I have spoken, and which I believe to be essential to success.

NATURE OF MALIGNANT GROWTH.

Malignant neoplasia in the human subject, as I see it, is a biological atavism. There is a time in the development of the ovum when somatic cell-correlation and differentiation can hardly be

said to exist, except potentially. At that early stage the trophoblast, of which the ovum is largely composed, is engaged in a struggle for existence: unless it can eat its way into the maternal tissues* the whole ovum will perish. The zygote possesses, therefore, the power of developing into cells of two types, the undifferentiated nutritive cells and the differentiated somatic cells.

Normally, when satisfactory attachment has been obtained, and the maternal blood vessels have been eroded with dispersion of the circulating blood of the mother among the advancing columns of trophoblastic cells, the area in which the foetus is to develop grows rapidly, and, *pari passu* the activities of the trophoblast, so far as plastic and invasive properties are concerned, are gradually arrested. Thus it appears that, when the elusive factor in somatic cell correlation becomes operative and ensures normal and differentiated development in the foetus, the growth of undifferentiated, 'malignant', epithelium of the chorion is stayed. It is the nature of this controlling factor that we are endeavouring to determine.

Should the foetus die and the supply of somatic 'correlating-secretion' cease at a critical time in the period of control, the chorionic epithelium, suddenly relieved of the inhibitory action of this substance, may develop into that most unrestrained and malignant manifestation known as chorion epithelioma.

The chorion, as I have indicated, has a nutritive function, and to the epithelium is assigned the task of seeking and finding nourishment not only for its own metabolism, but also for the correlated and differentiated somatic cells of the embryo, which in turn send a hormone, we may presume, to restrain chorionic activity once a large enough source of food supply has been tapped.

MECHANISM UNDERLYING THE ORIGIN OF MALIGNANCY.

In view of the method of implantation of the ovum in the human subject, and of the origin of chorion epithelioma, it seems reasonable to suppose that the cells of somatic tissues, formerly normal, may, through senility, injury, infection, and the other inciting and predisposing factors of cancer, slowly lose their power of obtaining or utilising nutriment, and as the process of starvation is a slow one, adjust themselves to the altered and altering conditions, by reverting to an earlier undifferentiated chorionic, nutriment-seeking, type.

It is probable that every cell in the body

* A somewhat different process occurs in Ungulates.

has this potentiality of atavistic reversion to the nourishment-providing proclivities normally possessed in a special degree by the chorionic epithelium. Once started on the perverted course there is no reason why the growth of dedifferentiated somatic cells should be arrested, for like those of chorion epithelioma, they are free of differentiated, somatic control.

Holding these views it occurred to me to use lead in the treatment of cancer, for I have found that this metal is not only specifically lethal to the chorionic epithelium, but also has the power of arresting normal growth, which in regard to intrinsic metabolic factors is probably of the same nature as malignant neoplasia.

LEAD POISONING.

It has been of considerable importance to us, therefore, to understand the symptoms of lead poisoning and the lesions produced thereby, for we are using lead every day in the treatment of malignant disease.

Of no less importance is accidental lead poisoning to Public Health Authorities for many lives have been lost, and much ill-health and misery have been caused among workers in certain types of industry in which lead is employed, and among the general population when the drinking-supply has been contaminated.

Lead poisoning was well known to the Romans, and is described by various writers who recognised that the passage of drinking-water through leaden pipes might be the cause of poisoning in human beings, and that contaminated pasture was deleterious to the health of cattle. From that period onwards lead poisoning from impure drinking-water has received much attention.

In the seventeenth century adulteration of light wines with litharge, to improve the taste, was found to cause lead poisoning and the practice was, with the promptitude and thoroughness of those rude times, made a capital offence.

In the last half of the eighteenth century Sir George Baker discovered that "Epidemic colic" in Devonshire was due to the use of lead in the construction of presses and cisterns for the making and storage of cyder.

A few years later Dr. Thomas Houlston, Physician to the Liverpool Royal Infirmary, in an essay on the accidental use of lead, among a very large number of other interesting observations mentions that lead exists in drinking-water in two states, namely, in suspension and in solution. This is interesting in view of our present knowledge that lead may be contained in water in an ionic and also a colloidal condition.

Today, all sources of lead poisoning whether industrial, inhibitional, or even cosmetic—a method of conveyance known to Thomas Houlston—come under the control of Public Health Authority, and are eliminated as far as possible.

We have, therefore, been concerned in an attempt to discover whether persons poisoned with lead are less liable to malignant disease than the rest of the population; and, moreover, whether the decrease in the number of cases of lead poisoning as the result of legal enactments has led in particular occupations to an increase in the number of deaths from cancer.

In the absence of precise records, it has been possible only to obtain evidence either of a personal character, or from statistics of doubtful value.

In the first place I approached the Registrar-General, but he appears to be so little interested in the subject that he did not trouble to acknowledge, let alone reply to, my letter asking him if he could help me in the matter.

In marked contrast with this has been the help I have received from those concerned in private enterprise—industrial and insurance—and I take this opportunity of acknowledging with gratitude their kindness and interest. Indeed, it was the following voluntary letter—slightly altered for publication by the sender, and with a few passages of a personal nature deleted—which stimulated my investigations in the matter, although I had previously made a few tentative enquiries from friends in the Midlands.

Dear Sir,

I have had, and still have, under my observation the Chemical Plumbers employed in the various works of the United Alkali Co. distributed over the country. This experience in managing Chemical works has extended over the long period of more than 50 years, during which I have always taken a keen interest in the question of industrial diseases, such as Plumbism associated with Chemical manufacturing.

From time to time I have read, with very great interest, the researches you are making, on the influence of salts of Lead in the cure of Cancer, and when I heard of your . . . work it struck me that I had never, in my long experience, come across a case of cancer with the enormous number of Chemical plumbers that have passed under my control. With this striking fact before me I wrote to our managers in Glasgow, Newcastle, Bristol, Widnes and Runcorn, to ascertain from them, from their own experience, and that of my old foremen and plumbers, whether their observations corrobor-

ated my own, and I enclose herewith the seven reports from these gentlemen, and one from Mr. Johnson of the Plumbers' Union, the contents of which will explain themselves, and from which you will see that my impressions have been amply confirmed by the fact that in no case have they found deaths from Cancer amongst the Chemical plumbers in their various works. This led me to address this communication to you, in order that I may direct your attention to these important facts, and which possibly may be of value to you in your researches, in which I take a very deep interest. This question, to my mind, divides itself into two parts:—

1st: Chemical Plumbers, and

2nd: Plumbers employed in House building, ship-building and engineering,

and I make the following observations on the conditions of employment of these two classes of men, in respect to the difference in the likelihood of their absorbing lead, and thus enjoy immunity, or otherwise, from Cancer.

Chemical Plumbers. The Chemical Plumbers we employ are subject to the unfortunate disease of Plumbism, but never to Cancer, and I explain this fact in the following way.

Our men are largely employed in building and repairing Vitriol Chambers, Acid cisterns and the like. For this purpose they burn the lead seams by the oxy-hydrogen blow pipe, which gives a flame of intensely high temperature. As lead melts at the low temperature of 600°F. some certain portion of it is volatilized by this intensely hot flame, probably becomes immediately oxidized and breathed by the men in a fine state of division, producing symptoms of Plumbism, but it has occurred to me that inhalation of this volatilized lead in minute quantities, may have the important effect of explaining their immunity from Cancer, and this view seems to be supported by the fact that none of us can find a genuine case of death from Cancer amongst our Chemical Plumbers.

House, etc., Plumbers. With regard to Plumbers working in houses, ships, engineering, etc., the conditions of their work are entirely different. When water cisterns, etc., are lined with lead the seams are made by soldering with a bolt, the temperature being so low that little, or no, lead can be volatilized, as compared with that which rises from the intensely high temperature of the oxy-hydrogen flame. In this manner we would expect that the House plumbers would not absorb lead to render them immune to Cancer, but their death rate from that disease would probably be similar

to that for ordinary workmen in other industries.

All the information and figures that I have been able to get from the Plumbers' Union support this view.

All these facts, therefore, to my mind, point to the important fact that the inhalation of volatilized lead by Chemical plumbers not only explains the production of Plumbism amongst them, but also the important fact that Cancer amongst this class of men is unknown.

I submit these data for your consideration from the medical point of view, in the belief that possibly they may throw some light upon the effect of lead compounds in preventing this terrible disease.

Yours truly,

(Signed) THOMAS W. STUART,
General Technical Manager,
United Alkali Co., Ltd."

I do not think it necessary to append the letters received by Mr. Stuart from the various branches of the United Alkali Co. They are unanimous on the subject.

The communication received from District Secretary of the United Operative Plumbers and Domestic Engineers' Association, is however, worth quoting:—

"I have been at the Trade for 40 years and it will be easy for you to imagine that in such a long period a *huge number of Chemical Plumbers* have been known to me personally.

Again, I have been an official in our Association for 25 years and in such a position that *all medical certificates pass through my hands*, and in the whole of my experience I have never known a single case of cancer." (Italics by W. B. B.).

I shall not comment on these remarkable statements, beyond saying that no criticism can destroy their value, for, even though a number of cases of cancer had been overlooked, the general truth of them would not be affected, since they concern "a huge number" of men.

With regard to the qualifications concerning house plumbers contained in Mr. Stuart's letter, in the statistics received from the Plumbers' Union no attempt is made to distinguish between the different types of plumbers, and, therefore, as Mr. Stuart says, no true relationship can be drawn between the mortality rate among this class of worker as a whole and the general population; but a matter of interest to be extracted from the figures supplied by the Union is the rise in the cancer rate proportionately to a decrease in the number of deaths from plumbism.

An analysis, from this point of view, of the figures given is shown in Table 2.

TABLE 2.
Plumbism and Cancer.
Percentage of all deaths.

1911-1914.		1920-1921.	
Cancer.	Plumbism.	Cancer.	Plumbism.
4.3	1.5	9.7	0.5
General Male Population, ages 25 to 65.			
6.0	—	10.0	—

I well know that figures based on percentages of a small number of deaths from two variable diseases one of which is diluted may or may not approach statistical accuracy; but I am tempted to give them because they accord with the other evidence to be adduced.

A similar, but also not entirely accurate relation between the decrease in lead poisoning and the increase in the cancer mortality to which I have just referred, is shown in the mortality figures of England and Wales for the years 1900-1902 and 1910-1912, in relation to the three occupations in which lead poisoning is most prevalent.

TABLE 3.
Comparative mortality rate per 100,000 population at ages 25-65 years.

	1900-1902.	1910-1912.	Percentage increase or decrease.
Cancer	68	78	+15
Plumbism	1	1	0
File Makers.			
Cancer	57	78	+37
Plumbism	56	10	-82
Lead Manufacturers.			
Cancer	81	80	-1
Plumbism	102	123	+21
Plumbers, Painters and Glaziers.			
Cancer	73	87	+19
Plumbism	23	20	-13

It will be observed that these figures, whatever value they may have, show that a decrease in the number of deaths from Plumbism is accompanied by an increase in the mortality rate of cancer, and *vice versa*. The numbers are, however, too small for strict accuracy.

Again, after the introduction of strict legislation in regard to the use of lead in the manufacture of pottery there is apparently an increase in the mortality rate of cancer among the workers concerned.

From figures given by Hoffman we find that the standardised death-rates from cancer among males over 15 years of age in 35 occupations showed an average rise of 15.6 per 100,000 of the

population in the ten years between 1890-1892 and 1900-1902, but possibly owing to the legislation introduced in the middle of the decade—that is, in 1896—plumbism decreased, and the death rate from cancer increased by 27·2 per 100,000 of the population—11·6 per 100,000 above the general average. Had restrictions been introduced at the commencement of the period we might reasonably have expected a still greater increase in the mortality rate of cancer.

It is only fair to state that in one or two other occupations the rise in the death rate from malignant diseases was greater, but I dare say that some cause could be found for the increases, if investigations were made. In striking contrast, however, was the decrease in the chimney-sweeps' cancer in the same period by -40·6 per 100,000. In this trade preventive measures had been directed against the cause of the cancer.

Further, Hoffman gives details of 2,452 deaths from cancer concerning which a considerable amount of information was forthcoming, and the probable predisposing causes were impartially recorded.

In only three of these cases is lead poisoning mentioned along with other pathological conditions, and in only one is there anything to suggest that the patient may have been suffering from lead poisoning when attacked by cancer of the liver.

Again I would insist that the value of these figures lies not in their infallible statistical accuracy, but in their suggestive harmony.

LEAD CONTAMINATION OF DRINKING-WATER.

The question of the death rate from cancer in districts in which the water supply is contaminated with lead has also received our attention.

With regard to Glossop, a town with a population of 20,000, and in which the water supply is contaminated with lead to the extent of 0·00314 grammes per litre of ionic lead and 0·00057 grammes per litre of lead in a colloidal state, Dr. Marcus Milligan, M.O.H., was kind enough to furnish certain particulars of the mortality rate. He states that the still-birth percentage is high, that deaths from renal disease are greatly in excess of the average for England and Wales, and that the cancer death-rate is above the ordinary. At first sight, therefore, it might have been inferred that the lead contained in the water not only causes 'lead-nephritis', but also produces still-births, and is actually associated with an increase in the cancer death-rate.

I thought it advisable, therefore, to compare the figures given with those of some other town in which the conditions of occupation and methods

of living are similar, but in which the water does not contain lead.

Oldham appeared to be especially suitable for comparison, for the water supply is similar to that of Glossop, and would be contaminated with lead if preventive measures were not practised. This town has a population of about 150,000. I am much indebted to Dr. Wilkinson, M.O.H., for kindly supplying the information required.

In table 3 a comparison is made between the relevant mortality-statistics of the two towns.

TABLE 4.

Comparison between certain mortality rates in Glossop (lead contaminated water) and Oldham (lead-free water).					
Town.	Population.	Percentage still-births, 1921-1922.	Percentage rate renal disease per 1,000, 1911-1921.	Mortality rate cancer per 1,000, 1911-1920.	
Glossop ...	20,000	5·3	0·69	1·14	
Oldham ...	150,000	5·8	0·54	1·15	

It appears that the stated quantity of lead in drinking water exercises but little ill-effect on the population concerned. An exception must probably be made in regard to renal disease, for in England and Wales during the eleven years 1911-1921 Dr. Milligan informs us that the average mortality-rate from nephritis was 0·352. Nevertheless, the figures for Oldham also are high.

The still-birth percentage does not seem to be unduly high; indeed, in comparison with recent selected statistics the percentages in both places appear to be low.

Since the death rate from malignant diseases in England and Wales in the decade ending 1920 is stated by Dr. Milligan to have been 1·03 per thousand, the mortality rates for these two towns are a little high, but that of Oldham with lead-free water is the higher.

It seems impossible, therefore, to draw any conclusion from these figures in regard to the effect of lead-contaminated water on the prevalence of cancer.

I am afraid that my remarks have been more discussive than I had intended, and that the information submitted is suggestive rather than decisive. I hope, nevertheless, that what I have said may induce Medical Officers of Health to look into the question of a possible relationship between lead poisoning and cancer, and to furnish statistics based on larger figures, properly standardised in the way indicated. By "properly standardised" I do not mean only in regard to age and sex, but also to

the absolute possibility of cancer arising in a patient suffering with lead-poisoning.

I would, therefore, ask all Public Health Authorities who can help in this matter to tabulate their mortality rates in regard to the male population between 25 and 65 years of age in the few occupations in which lead-poisoning is possible, in such a way as to make it easy to discover whether there is any real evidence of comparative immunity from malignant disease in association with lead poisoning.

Whether this will be found possible I do not know. A diluted mortality-rate is unsatisfactory, and can demonstrate little more than I have already shown in the foregoing figures.

The statements of Mr. Stuart are, however, of particular importance in that they deal with a class of worker who must inevitably absorb lead by inhalation. In such circumstances the whole of the men engaged can be considered poisoned and the dilution-effect would be infinitesimal.

To take potters as a group would be useless, the dilution of the figures by at least 80 per cent. of those engaged, who never come in contact with lead, would falsify statistics to an extent that would render them useless.

All statistics concerning the matter under discussion must then show:—

- (a) Inevitability of lead poisoning.
- (b) Existence of lead poisoning.
- (c) The coexistence of one of these conditions with the onset of cancer.

PREVENTIVE MEASURES.

I should not adequately fulfil my duty today were I not to emphasize the fact that there is a great deal that the Guardians of Public Health should be able to do forthwith to lessen the fearful mortality rate of cancer. Having brought more people into the cancer period, Public Authorities should recognise their obligations in this matter. So far no organised attempt has been made along the lines of prevention. It is not enough, although vastly important, to disseminate knowledge among the lay public of the characteristics and predisposing causes of malignant diseases; steps must also be taken to ensure that, in the case of the poor at any rate, opportunities shall be available for visiting special clinics where predisposing conditions, 'mastitis', lacerated and infected cervixes, and other easily recognisable conditions can be treated before malignant neoplasia supervenes. Judging by the success of antenatal and venereal clinics, immediate response on the part of the public would not be lacking.

I have laid special stress on 'mastitis'—the

"mazoplasia" of Sir G. Mental Cheate—and cervicitis, for during the year 1921 in England and Wales alone 9,081 women died of cancer of the breast and uterus. Such a dreadful and almost entirely preventable holocaust should be impossible in the world of today. Think of it: nearly 10,000—if the number has not already exceeded this appalling figure—of our women in England and Wales die from cancer of organs concerned in child-bearing. It is inconceivable that we shall stand still and watch, without concern, this figure steadily growing, when we have the power of checking it.

Individual effort and private enterprise have already done something. Insurance Companies are wisely and boldly advocating periodic examinations with reduced premiums. Is it not time that Public Health Authorities should seize the opportunity now presented by the uneasiness of the public in regard to the ravages of malignant disease to organise a campaign on the lines I have indicated?

Initiative, courage and instant action, rather than procrastination and red-tape, are required for this too long delayed crusade in Preventive Medicine.

PUBLIC EDUCATION CONCERNING V.D.*

BY

H. WANSEY-BAYLY, M.C., M.R.C.S., L.R.C.P.,
Honorary Secretary of the Society for the Prevention of Venereal Disease.

The question of education is one in which the Society I represent, the Society for the Prevention of Venereal Disease, is particularly interested. In fact, my Society was inaugurated in 1919, because we believed that the reduction, and possibly the final elimination of venereal disease directly depended on a far greater degree of education in regard to medical prevention than that recommended by the President of this Section (Lord Astor) in the report of his Inter-departmental Committee.

My Society believe that the great prevalence of venereal disease is largely the direct result of lack of education and consequent ignorance regarding the nature of the disease (particularly that the causal organisms have low resisting power to disinfectants, and can easily be destroyed before they have got beyond the reach of such disinfectants by penetrating below the surface of the skin or mucous membrane) and the means and

* Paper read at the Social Hygiene Congress at Wembley, on May 13th, 1924.

the methods of medical prevention, and we claim that it has been clearly established that where the life-giving light of knowledge has dissipated this disease-encouraging ignorance, venereal disease has been very markedly reduced.

My Society recognise quite as clearly as the President of this Section and the National Council for Combating Venereal Diseases, the very great importance to the nation as a whole and to the individual in particular of maintaining, cultivating and developing the national and individual conscience towards ever higher ideals of sexual morality, but we consider that such ideals are more likely to flourish under the sun of knowledge than if kept in the darkness of ignorance for fear of scorching. We also recognise that moral exhortation and training alone, which have been zealously carried out by moral teachers for countless generations, have failed to stop the advance much less to check or destroy, the venereal disease plague, and we are compelled regretfully to accept the logic of history that irregular sexual relations will continue to be all too frequent in the future as in the past.

We have never imputed other than lofty motives to those who hold other views, and we deeply regret that an equally generous, broadminded and charitable attitude towards us has not always been maintained by our opponents (amongst whom one of the most prominent in the past has been the President of this Section).

In regard to educational policy our opponents have too frequently adopted the ecclesiastical attitude of the middle ages, and have claimed that their particular view of education alone has the support of Religion, the Gospels or the Churches! This medieval intolerance with persons holding different opinions is in the present generation, just as much as in the past, the chief obstacle to education and progress, and is equally harmful when applied to venereal diseases as to any other social evil, such as the abuse of alcohol.

We have always believed that the people of this country are to be trusted to put to a wise and proper use all true knowledge to which they are permitted access; and that it is the clear duty of those who are responsible for the people's education to make such knowledge as wide as possible in regard to simple scientific facts which have a direct bearing on national health. We believe that as far as venereal disease is concerned that it has been proved beyond doubt that disinfectants do disinfect, and we hold that the people should be educated in such knowledge by clear

and simple statements. We consider that it is unfair to the people to camouflage this simple and true scientific fact by vague, meaningless and exaggerated warnings as to uncertainty of protection and difficulty of application. If immediate self-disinfection is efficacious if promptly and properly applied, as everyone now acknowledges, it deserves enthusiastic and wholehearted support. Up to the present education in immediate self-disinfection has, by our opponents in the controversy, been first vehemently opposed, then omitted, and finally damned with faint praise and relegated to a very unimportant position amongst anti-venereal weapons. This, however, will not do, and is cowardly and illogical, for "if it is good it is very very good, whilst if it is bad it is horrid."

The Society that I represent desire that the child mind should maintain its sweet innocence until the child is compelled to go forth from its sheltered home and commence its struggle in the great world outside. Then we believe it is essential that the male adolescent should be made aware of the perils of the fight, and should be entrusted with the full panoply of knowledge.

As regards venereal disease this education should comprise the dissemination of knowledge regarding:—

- (1) The existence of venereal disease.
- (2) The medical as well as the moral importance of chastity.
- (3) The means of medical prevention should a moral lapse occur.
- (4) The importance of efficient treatment should disease have been acquired.

My Society have concentrated their efforts on the third educational heading, not because we consider it the only important method of prevention, but because the other three planks in the education platform have been under the able care of the National Council for Combating Venereal Diseases, who have received large financial grants from the Government and County and Borough authorities. In our insistence on the importance of education in the health-preserving knowledge of preventive medicine we have received no such financial support from public funds, and have been obliged to use our slender resources, obtained only by private subscription, on propaganda of a nature to fill in the gap left open by the exclusion of education in medical prevention by other bodies.

Our policy has been so widely published that there appears to be no excuse for misstatement, or

misunderstanding as regards such policy, which is as follows:—

- (1) To instruct the public as to (a) the great importance of self-disinfection at the time of exposure to risk, as a preventive of venereal disease, and (b) the methods of application of such disinfectants.
- (2) That such instruction should only be given to men above the age of eighteen, to adult women on demand, and to younger persons in special cases at the discretion of those responsible for their welfare.
- (3) To ensure the sale of the disinfectants required together with full instructions to such persons, but to such persons only.
- (4) That instruction regarding the nature and application of such disinfectants should be conveyed to such persons:—
 1. By leaflets supplied (a) with the disinfectants at the time of sale, and (b) by attendants at public conveniences on demand.
 2. By lectures.
 3. By medical officers of venereal clinics.
 4. By officers or officials in charge of Naval, Military and industrial units.
- (5) To advocate such further steps for the prevention of venereal disease as may from time to time be deemed advisable by the Executive Committee.

It will doubtless interest this Congress to hear that this Policy was drawn up with the help of Educational as well as Medical authorities, and that our Vice-President, Bishop Welldon, late Bishop of Calcutta and Headmaster of Harrow, wrote the preamble to our policy and also greatly helped in its framing.

My Society also believe that a very important method of education is to be obtained through chemists and druggists who, under the Venereal Diseases Act, 1917, are not permitted to sell approved disinfectants accompanied by printed instructions for use; and ever since the inception of our Society we have emphasised the importance of altering the law so as to permit the sale of such disinfectants by chemists accompanied by printed instructions. This Congress is doubtless aware that the Special Inquiry held under the chairmanship of Lord Trevethin in regard to the medical prevention of venereal disease, has recommended that this alteration in the law should be made and that the National Council for Combating Venereal

Diseases have joined with us in urging that this recommendation of Lord Trevethin's Committee shall be put into effect. Lord Trevethin's Committee also stated their opinion that:—

- (1) A man who after exposure is properly and thoroughly disinfected with disinfectants of appropriate nature and strength runs little risk of infection.
- (2) That an intelligent man if furnished with reasonable instructions can in favourable circumstances effectively disinfect himself.
- (3) The instruction of Medical Officers in charge of venereal disease clinics of male persons attending such clinics in the preventive use of disinfectants offers a useful means of education for the community.
- (4) There is no evidence of facts in support of the view that any system of disinfection would tend to increase the number of exposures and raise the disease rate.

It is impossible in a short address to lay before you in detail the whole controversy regarding education in medical prevention, and to meet point by point the criticisms which have been directed against the educational policy of my Society, but if any member of the Congress desires further information I shall be most pleased to supply such information to any delegate if he will write to or call at our offices in 143, Harley Street.

I am not one of those who believe that the controversy on the advisability or inadvisability of education in medical prevention which has taken place in Press and on platform during the last five years has been harmful to national health or national morals, on the contrary I believe that it has done great good, has had great educative value and has produced a publicity which has been of the highest value and which has already markedly reduced the incidence of venereal disease. We are a democratic people, and in the end the will of the people must prevail, and I have no hesitation in saying that the will of the people has been expressed in the report of Lord Trevethin's Committee, and that the people of this country are determined to assert their right of access to disease-preventing knowledge as regards venereal diseases as in the case of other preventable diseases. It is the opinion of my Society, the Society for the Prevention of Venereal Disease, that education in the medical prevention of venereal disease will be most efficiently carried out and safeguarded if developed along the lines I have submitted to this Congress as our policy.

THE PUBLIC SIGNIFICANCE OF MENTAL DEFICIENCY.

BY

MEREDITH YOUNG, M.D., D.P.H., Barrister-at-Law, County Medical Officer of Health, Cheshire, and Medical Adviser to Cheshire Mental Deficiency Act Committee.

The importance of this problem which has been facing us now for about ten years, may be gauged by the fact that—apart from certified lunatics—there are approximately 150,000 mentally defective persons in England and Wales at the present moment, of which number about 66,500 are in urgent need of provision, either in their own interest or for the public safety.

The principal causes of mental deficiency are syphilis, alcoholism, meningitis, polio-encephalitis, cranial haemorrhage, the toxæmias of pregnancy including eclampsia, unsuccessful attempts at abortion, and possibly some of the acute infections or their consequential toxæmias and meningeal complications. This is by no means an exhaustive list but it is sufficient to form a text for what follows.

The effects of alcohol are sufficiently indicated by the fact that Potts found that 41.6% of the mentally defective children in Birmingham came of alcoholic ancestors, though one must qualify this statement by the consideration that alcoholism is *per se* a neuropathic manifestation.

The evidence as to the influence of syphilis is extraordinarily varied, even when Wasserman re-actions are taken as the index, for the incidence varies from 1.5% up to 30%.

Ill-health of the mother during gestation probably ranks high as a causative factor. Tredgold and others are disposed to set small value on prolonged or instrumental labour as a cause of mental deficiency pointing to the large number of forceps deliveries which occur daily and to the fact that in the Toulouse province and in other parts of the world the infant's head is tightly compressed after birth: he also points out that in a natural birth the head is subjected to considerable pressure on the parturial canal. I am not sure that I can accept this view for in a considerable number of my cases I have obtained a history of prolonged labour—in fact it stands out as one of the commonest histories in cases of mental defect.

I am indebted to my friend Dr. Sidney Barwise for drawing my attention to the dangers attendant on instrumental interference in confinements. He points out that many years ago Dr. Spencer,

Obstetric Physician to University College, London, drew attention to the large number of cranial haemorrhages found in still-born children delivered by forceps. The inference is obviously that in a certain number of live-born infants, instrumentally delivered, cranial haemorrhages must also occur and that here we have the explanation of an indefinite number of permanently damaged brains.

The toxæmias of pregnancy in relation to mental defect do not appear to have been studied, but *prima facie* one would expect them to account for an appreciable percentage.

Traumatic and other brain lesions occurring after birth naturally lead to arrested development, though one must endeavour to distinguish between cause and effect when dealing with so-called "convulsions" and "fits."

Inasmuch as malnutrition coupled with endocrine insufficiency or aberration may induce cretinism it is only logical to assume that it may also be a cause of mental deficiency.

The occurrence of insanity amongst stocks which are tainted with that infirmity appear to make it a certainty to assume that the insane diathesis is inherited with at least as great an intensity as any physical or mental character in man. It forms probably no exception to an orderly system of inheritance in man, whereby on the average about one-half of the mean parental character, whether physical, mental or pathological, will be found in the child. It is accordingly highly improbable that it is, in the same manner as other physical characters, capable of selection or elimination by unwise or prudential mating in the course of two or three generations." (D. Heron; A first study of the statistics of insanity, Eugenics Laboratory Publications. Univ. Lond.)

We may regard it as proved by the researches of Galton and Pearson that "not only bodily characters but also those of the mind are essentially determined by the hereditary endowment received by the parents. This result is of great importance practically: it shews how little room is left in the development of the individual for the effects of environment even on the intellect or mind in the broadest sense of the word: no doubt the direction which intellectual development takes is to a considerable extent determined by circumstances, but the *kind of mind* is irrevocably decided before the child is born. Still less is there room for the inheritance of the mental acquirements made by the individual during his life and hence the hopes held out of improving the race by education and by special care of the dull or

feeble-minded are illusory, except in so far as they improve the *tradition*. . . And the effects of special care given to the weakly or feeble-minded may be absolutely harmful to the race if the improvement so effected leads to more frequent marriage among such unfortunates than would otherwise be the case, for then an increased number of defective children may be born and the race average be lowered. . . . The whole trend of the results obtained is that . . . to prevent the production of the weakly and feeble-minded the only method is to prevent such from having offspring." (*Loc. Cit.*).

Clouston (*Hygiene of Mind*) discusses the effect of town and city life on mental health and concludes that with the absence of the Nature experience of the country "there is an undoubted arrestive effect, which, continued generation after generation contracts the mental habit as well as the mental vision." His remedy would be "to introduce as much Nature into our large cities as is possible." This aspect is receiving a fair amount of attention in our Town Planning and Garden City movements and so may be passed over as *un fait accompli*.

The problem of dealing with defectives so far as the low-grade types are concerned is an easy one for custodial care is the only one we can apply short of the lethal chamber. And I am ready to admit that I can see nothing but pure sentiment (which ever will prevail in matters of this kind) against the induction of a painless passage to oblivion in the case of idiots who are so diagnosed by a competent medical board after due inquiry and observation. Such beings are not and never can be a part of the community: they can never be anything but weeds and tares.

For the imbeciles perhaps a little more charity and hope can be spared, though not a great deal, unless indeed organotherapy can be developed as to make a few of their immature buds of intelligence sprout into even rudimentary fruit-bearing branches.

But these two classes do not cause much trouble from the public point of view, though the cost to the State of maintaining 15,000 of them in Institutions every year is undoubtedly serious.

It is the high-grade and especially the unstable, those with vicious and criminal tendencies, those unable to support themselves, the temperamental who may degenerate into lunatics and those living under bad environment who constitute the main problem.

Great interest has centred round the question of sterilisation of mental defectives. A short time ago the Central Association for Mental Welfare

referred this question to their Medical Committee, who, after very careful consideration of the matter from all possible standpoints, presented a report in which they stated that "sterilisation was not at the present time a *practical* proposition, though it may be applicable to individual cases." The Council of the Association were in complete agreement with that finding. A few extracts from that Report may be usefully reproduced. The following is from the Report of the Council.

"It is very important to remember that although propagation by defectives is one of the causes of the spread of mental deficiency, nevertheless this is by no means the only social menace attaching to their presence in the community. If left unprotected and unguided their lack of stability and control may lead them to commit serious crimes such as theft, arson, assault and even murder. Their inability to maintain economic independence results in vagrancy and destitution. Their helplessness in the face of obstacles frequently brings about their complete collapse at the first rebuff which they have to meet. The interests of the community can only be adequately protected by the segregation of a considerable proportion of these persons in suitable Institutions."

"A sterilised defective would not be any less liable to these happenings than would one who was unsterilised. A defective woman, from the fact of her being sterilised and incapable of bearing children, would be more prone to illicit intercourse, to adopt a life of prostitution and to spread venereal disease."

"It follows that segregation would still be needed in the case of a very large proportion of defectives. But if they are segregated, sterilisation is unnecessary. On the other hand, there can be little doubt that any general adoption of sterilisation would, in actual practice, lead to the non-segregation of a large number of defectives who should be under care, and thus to an increase of the social evils mentioned."

"It is sometimes contended that defectives are happier at large than in suitable Institutions, and that sterilisation, by permitting their liberty, would consequently add to their happiness. The Council of the Central Association for Mental Welfare desire to protest most strongly against the suggestion that institution care entails unhappiness. It is true that some defectives resent such care, but it is almost invariably found that these are possessed of such strongly marked anti-social propensities that their liberty would be a menace to the community. On the other hand, it is the general experience of those who

have had many years practical acquaintance with defectives that the majority are far happier in suitable Institutions, engaged in congenial occupations and having the companionship of their mental equals, that when they are exposed to the difficulties of an outside world to which they are incapable of adapting themselves. In many cases, indeed, such freedom amounts to the infliction of positive cruelty."

"Another claim frequently advanced in favour of sterilisation is that, by doing away with institutional care, it would conduce to economy. The Council of this Association are convinced that this view is fallacious. They consider that the expense which would be entailed in maintaining defectives in Workhouses, Rescue Homes, Prisons, Workhouse-Hospitals, etc., together with the cost of administrative and legal proceedings, would be greater than that involved in maintaining them in suitable Institutions where a certain amount of remunerative work is performed."

"The Report of the Medical Committee who confined themselves to the purely medical and biological side to the exclusion of legal and ethical considerations contains the following sentences which I think, taken together, constitute a fair representation of their views.

"Regarding sterilisation in general, we think there can be little doubt that its extensive application to certain well-defined and readily recognisable types in the community would, by eliminating those types, be attended with more or less pronounced racial changes. The question referred to us, however, is the more specific one of the influence which the sterilisation of persons suffering from Mental Defect would exert upon the prevention of Mental Deficiency. . . . It has to be remembered that even in this Country our information as to the social conditions of defectives as a whole is still limited; that although the lower grades of mental defect are readily recognised, the diagnosis of the milder degrees present considerable difficulty; that in the only country where sterilisation has been extensively practised (United States of America), the evidence of the subsequent social career of those operated upon is very meagre; and lastly, that the available evidence is to the effect that the cause of Mental Defect varies considerably in different cases. We therefore feel that any conclusion reached at the present time must be of a provisional nature.

"Sterilisation is advocated for two main purposes:—

(a) With the object of ameliorating or curing certain abnormal or perverted sexual tendencies

and improving the mental condition and character of the individual.

(b) With the object of eradicating or preventing the spread of mental defect.

The first of these objects would not be attained by the comparatively simple operations mentioned, (vasectomy, Salpingectomy or ovariectomy), and we regard the evidence as to individual improvement from the more serious operations of removal of the testes and ovaries as inconclusive."

"Excluding cases of mental defect which are not germinal in origin, but which are a consequence of accident or disease acting directly on the individual and are not transmissible, the weight of the available evidence is to the effect that although the fact of the transmission of mental defect by mentally defective parents is undoubted, a proportion only of mental defectives are the offspring of mentally defective parents. The majority are either the children of parents who appear to be normal, although frequently 'carriers' or of those suffering from insanity, psychoneuroses or a mild degree of mental or physical abnormality which is not certifiable. It consequently follows that even were all certifiable defectives sterilised, mental defect would not be eradicated, and its prevention would only be effected to a partial extent. . . . Although the prevention of mental deficiency is of paramount importance this is not the only aspect of the question. There is abundance evidence that a large proportion of mental defectives as a consequence of their defect evince such marked anti-social propensities or social incapacity as to render institutional care necessary. This necessity would be in no wise lessened by their sterilisation, and since adequate segregation is at once an effective preventive of propagation and the best means of dealing with the social failings of the individual, we regard it as a preferable procedure."

"We further think that not only would the sterilisation of certifiable mental defectives be attended with limited preventive and racial effects, but that it would entail serious disadvantages in certain other directions. We consider that it would lead to a false sense of security and would result in a large number of male and female defectives who should be segregated being set at liberty. We are of the opinion that the presence at large of these sterilised defectives might increase sexual assaults and would encourage promiscuous sexual intercourse, and would consequently lead to a direct increase in the incidence of venereal diseases and their sequelae."

The United States have dealt with the question of the after-care of defectives who have been trained in institutions and who have been allowed out to try and earn a living by providing hostels to which they can return at night and where they can be kept under sympathetic observation; if they should prove worthy of it they are later allowed out on parole or may even be discharged altogether.

The experience of the War shewed that many of these high-grade cases could earn a fair living at some simple occupation, but it is probable that they will need some kind of supervision for all time.

I am no believer in the statement that mentally defective persons can be so trained that they can maintain themselves either in an Institution or outside except to a very limited extent. But I do think that training has a great value, especially in preventing the development of criminal and vicious tendencies. With the real defective, however, no matter how highly he is trained, we can never afford to relax supervision—in other words it is rarely indeed that we can turn him out of the training institution and leave him to himself: if we do we are pursuing an uneconomical plan, for he will drift before long and have to be expensively cared for again.

We need a much better understanding of mental deficiency in those who have to deal with crime. It is no uncommon thing to have a case reported from the police where the person concerned has a dozen convictions on his records and where eventually the Mental Deficiency Act is called in aid and the offender is placed where he ought to have been years ago. Dawson found in the Dublin Prisons that 12.21 % of the inmates were defective and that in the case of a woman, aged only 29 years, she was serving her 236th term of imprisonment. The offences were usually minor ones but not always so, murder, rape and arson being all too common.

In Birmingham the matter is being dealt with as it should be by referring cases to a Mental Expert for observation and report.

Whilst all those responsible for the care of defectives have noted with gratification the willingness of Poor Law Guardians to make provision for such cases, it cannot be said that many of these Institutions are as well equipped for this purpose as they might be. In particular the training facilities are usually either absent or inadequate. There are still many Poor Law Institutions where mental defective children are

housed along with the insane of all types—a condition to be greatly deplored.

The Board of Control deplore the fact that so few cases are placed under guardianship but realise the difficulty of finding suitable homes and guardians. I agree with them that an extension of this system of care is desirable, but I fear it will not become practicable until housing and economic conditions generally improve.

All Special Schools for the Feeble Minded or Retarded should, of course, be under the direct personal supervision of the School Medical Officer and he should be empowered to treat not only concomitant conditions such as anaemia, but also to administer such things as thyroid gland with thymus and pituitary (which combination incidentally will almost always give much better results than thyroid alone), and to observe the effect of organotherapeutics preparations. It is in this direction that, as one who has studied endocrinology pretty deeply, I think we may expect our greatest advances. I prophesied this a few years ago and I see signs of my prophesy coming true already.

The ascertainment of Mental Defectives does not appear to have been carried out except in a perfunctory manner in many areas. One cannot see any valid excuse for such a neglect of a statutory duty. The Mental Deficiency Act of 1913 affords a measure of protection and care for this unfortunate class which they never had before and which works out not merely for the benefit of the individual, but of the State as well. Failure to use the provisions of the Act must therefore be regarded as reprehensible from the public point of view.

In order to secure any real advance in connection with this problem there must be a much greater co-operation than exists at present between all the Authorities concerned—Education, Poor Law, Police, Mental Hospitals, Reformatory and Industrial Schools, the Local Authority under the Act and the several Government Departments concerned. The body to co-ordinate all these Agencies is undoubtedly the Local Authority constituted under the Act, and the best way to set about securing co-ordination is to arrange conferences at which all concerned can discuss their difficulties and find a means of lessening the gaps which now exist between them.

BROMLEY (Kent) town council have granted Dr. W. Stewart Stalker two months' further leave of absence in order that he may complete his recovery from his recent illness.

*" THE WATER SUPPLY OF THE SOUTH YORKSHIRE COALFIELD."

BY

PROFESSOR FEARNSIDES, Professor of Geology in the University of Sheffield.

Professor Fearnside forecasted that as the productivity of the Eastern (" Concealed ") portion of the South Yorkshire Coalfield develops, the provision of water supplies for the mining villages will become a serious problem; and proceeded to give his reasons for the forecast.

Towns such as Sheffield, Rotherham, Penistone, Barnsley and Huddersfield, situate not too far from the western edge of the exposed Coalfield, have already taken up almost the whole of the Millstone Grit watershed; and the available unpolluted run-off of the Millstone Grit moorlands and the Shale Grit and Pendleside Shale slopes which flank the High Peak Limestone ground to the west of them already flows in pipes to South Yorkshire and other North Midland towns. Since the Millstone Grit consists mainly of impervious shales and only about one-third of its thickness is really grit, none of the central Pennine water, and not more than one-tenth of the rain which falls on the Grit moorlands, can pass underground, and it is therefore hopeless to rely upon artesian water from the Millstone Grits, which though they surely underlie the whole of the Coalfield area, are at a depth of some 500 to 1,000 yards beneath the workable seams of coal.

The geological formations of the Coalfield were described in order from west to east, and the arrangement of their outcrops as a succession of north-south ridges or escarpments of the harder sandstones with intervening valleys determined by the shales, was demonstrated. The upstanding ridges all consist of more or less pervious rocks, and each of them in the old days provided sufficient potable water for the farms and village communities, who obtained their water from shallow wells not too high up on the dip-slopes or escarpments.

Within a couple of miles eastward of the major escarpment of the grit group in the midst of the Lower Coal Measures, and again towards the top of the Middle Coal Measure series in the central area of the Coalfields basins, deeper wells (but not more than 500-ft. deep) might still find sufficient water in the sandstones to supply colonies of several thousand people. Water in Coal Measure sandstones, however, is not completely filtered,

and as the settlement due to the working out of the coal in the area between the outcrop and the village-wells proceeds, is liable to pollution by surface drainage and leakage from sewers, etc., disturbed by the subsidence. Juvenile waters associated with all sandstones of the Coal Measures and Millstone Grit formations at depths exceeding 1,000 feet is saline, with abundant chlorides and sulphates of sodium, calcium, magnesium and iron, and there are several local records of the occurrence of foul alkaline sulphurous and other non-potable waters in faulted or otherwise completely enclosed blocks of porous rock at comparatively shallow depths within the coalfield.

The Magnesium Limestone rests unconformably across the denuded edges of the Coal Measure Rocks, and dips gently and regularly to the north-eastward. At its escarpment it is a porous, open-jointed, and often cavernous dolomite or limestone; and underground the water-table is maintained only a very little above the level of the neighbouring stream-courses. All collieries to the east of a north-south line through Pontefract, Conisborough, and Kiveton, have either to " tub back " or pump vast quantities of water when they are sinking through this open-grained formation; and for about four miles eastward from the edge of the exposed coalfield, this limestone water, treated in a softening plant, can economically be made available for the new colliery villages. Because of the cavernous and open-jointed character of the limestone, such local water supplies are particularly liable to the grosser forms of pollution, and as the communities located upon the limestone outcrop become larger and more numerous, and subsidence due to coal working grows more extensive, it is certain that chlorinating or some other disinfectant process will have to be put in series with the softening plants. To the east of Doncaster the dip of the rocks takes the limestone ever further and further below sea-level. The joints still keep open, but what, nearer the surface, are pores and caverns in the stone itself, are there filled with anhydrite or gypsum, and some associated magnesium chloride and common salt. To make such waters potable is not at present an economic proposition.

The sands and pebble beds of the Bunter overlie the Permian Limestones in regular succession, but their catchment, and therefore their water-table, is held separate from that of the Limestone by the impervious Upper Permian Marls. In the neighbouring Sherwood Forest area of Nottinghamshire, and generally throughout the Midland Counties, the sub-soil waters of the Bunter have

qualities which entitle them to rank with the purest and most satisfactory well-waters of the world, but this is only in districts where the Bunter outcrop forms hills of moderate elevation so that the rainfall percolates continuously, and having leached out the soluble salts, filters itself through considerable thicknesses of sand. In the South Yorkshire Country, the outcrop of the Bunter (and also that of the Keuper Waterstones and Marl above it) is mainly below and nowhere more than 50 feet above sea level, and accordingly the water which has filled up the inter-grain spaces of the rock is stagnant, and remains unpleasantly saline. Over most of this Triassic outcrop, the ground surface is formed of irregularly distributed Glacial boulder-clays and sands, or post-Glacial sands, silt, and recent " moss " and tidal warp, having no regular conformation, and affording no sure supplies of drinking water. The average elevation of that whole countryside at present is less than 16 feet above O.D., and one foresees that when the settlement consequent upon the exploitation of its 20-ft. thick reserve of coal occurs, the difficulties to be overcome in dealing with the surface water and sewage will be not less than those attendant upon providing the coal-mining communities with a satisfactory water-supply.

On evidence such as this, Professor Fearnside has concluded that the problem of supplying water to the rapidly-developing eastern part of the South Yorkshire Coalfield is so difficult that there will have to be some concerted action, and the promotion of a great scheme for piping a large supply from catchment areas in the Northern Pennines or in East Yorkshire, and suggested that the Medical Officers of Health, as a body, will do well to interest themselves in the problem without delay.

MR. GERALD KESSICK BOWES, M.A., M.D., Oxon., M.R.C.P., D.P.H., assistant medical officer of health for the county of Wiltshire, has been appointed an assistant medical officer for the city of Birmingham.

A DEPUTATION from the boot operatives' union waited upon the Home Secretary on 4th April calling attention to the high rate of pulmonary tuberculosis among boot operatives, and made a number of suggestions concerning lighting, air, and floor space. The Home Secretary, in reply, stated that the Home Office will shortly present a factory bill, and that endeavours would be made to include therein some of the suggestions put forward by the deputation.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the House of the Society on Friday, 16th May, 1924, the President, Dr. T. W. Naylor Barlow, in the chair. There were also present: Lt.-Col. F. E. Fremantle, M.P., Profs. H. R. Kenwood and H. Kerr, Lt.-Col. Herbert Jones, Drs. Lyster, Thomas, Snell, G. F. Buchan, Wilshaw, McMaster, Nash, E. Ward, Ridley Bailey, Fleming, Jolly, Cox, Rees Jones, Joseph, Wheatley, Cates, Howarth, Garstang, Milligan, Frederic Thomson, Stirk, Banks, Pearce, Clements, Gibbons Ward, Porter, Eustace Hill, Benton and Col. H. W. Grattan.

The minutes of the last meeting having been approved and signed, a letter of apology for absence was read from Dr. James Fenton.

Correspondence.—(1) From the Home Office in reply to a suggestion from the Society that a representative of the School Medical Service should be appointed to serve on the Committee set up to inquire into the working of the provisions of the Factory and Workshops Acts relating to the medical examination of young persons as to their fitness for employment in factories. This suggestion was made in view of the fact that the Committee had specifically to deal with the medical records of the inspection of school children. The reply from the Home Office was that " the constitution of the Committee was the subject of very careful consideration " and that other members could not be added. It was agreed that a protest should be entered on every occasion when a departmental committee was set up to deal with public health matters without representation on the committee of those with expert knowledge of the matter under enquiry.

(2) From the Smoke Abatement League of Great Britain asking permission to include the Society in the list of patrons of a Conference and Exhibition to be held at Manchester in November, 1924. It was agreed to grant this request.

(3) From the Early Closing Association thanking the Society for supporting their campaign in favour of Summer Time legislation.

(4) From the Bread and Food Reform League inviting the Society to be represented at a conference to consider the advisability of establishing a National Food Council. It was decided to postpone consideration of this invitation pending the report of the Departmental Committee on

* Address at meeting of Yorkshire Branch held 25th April, 1924.

Preservatives in Food and subsequent consultation with the British Medical Association.

(5) From the National Council for Combating Venereal Diseases in reference to public health propaganda. Agreed that a reply be deferred until the Committee appointed to report on propaganda had completed their work.

(6) From the Association of County Medical Officers of Health forwarding the following resolution: "That this Association is of the opinion that the time has now arrived when the powers and duties of the Board of Education in relation to the Medical Inspection and Treatment of School Children should be transferred to the Ministry of Health, and requests the Secretary to forward a copy of this resolution to the Society of Medical Officers of Health with a view to further appropriate action being taken to accomplish this end." It was agreed that the British Medical Association be asked to arrange a joint deputation to bring this matter before the new Minister of Health, as the former deputation to Sir Alfred Mond in this connection had not been followed by the desired changes.

(7) From a medical officer of health drawing attention to the appointment by the Ministry of Health and the Ministry of Agriculture and Fisheries in March of this year of a Milk Advisory Committee which is to advise these two Ministries on matters relating to milk supply in the country. The terms of reference of the Committee are to advise these Ministries on "matters concerning the production, handling and distribution of milk and dairy produce, including questions relating to education and research and any legislation, orders and regulations which may be under consideration." It was noted that excluding the chairman (Lord Kenyon), the remaining nine members of the committee are farmers or otherwise connected with the milk trade, no representation being given to Local Authorities and professional bodies who would regard problems of milk supply from the public health point of view. It was agreed, in accordance with the decision under (1) to send a protest in reference to the constitution of this Advisory Committee to the Ministry of Health.

Removal of Tuberculosis Patients.—Dr. Ward gave notice that on behalf of the Tuberculosis Group he would report certain recommendations with reference to notifications to the M.O.H. when tuberculosis patients enter a home or institutions, or remove from one address to another.

Midwives' Act Committee.—This Committee reported as follows: In accordance with a suggestion of the B.M.A., we recommend that the

Memorandum of the Society on the Midwives' Act be amended as follows:

Para. 10: A midwife who acts only as a monthly nurse should be allowed freedom from supervision under the Rules of the C.M.B. if she be a fully-trained nurse.

The committee further recommended that Col. Fremantle be invited to ask a question in the House of Commons regarding the constitution of the C.M.B.

The report and recommendations were approved.

International Society of Public Health Medical Officers.—The Committee responsible for the organisation of the League of Nations' Courses for Foreign Health Officers reported an invitation to the Society to nominate a representative on the provisional committee of the International Society of Public Health Medical Officers recently founded at Geneva. The Committee recommended that the invitation be accepted, and that Dr. W. J. Howarth be nominated as the Society's representative. The recommendations of the Committee were approved.

Nomination of President for Session, 1924-25.—The following names were submitted for nomination by the Council. Yorkshire and Scottish Branches: Dr. J. R. Kaye. Home Counties' Branch: Dr. A. Greenwood. North-Western, Metropolitan and Southern Branches: Dr. R. A. Lyster. Midland Branch: Dr. T. Ridley Bailey. The voting was by ballot, and Dr. Lyster securing a clear majority on the first vote, it was agreed that his name be forwarded for approval by the general meeting to be held later in the day.

Election of Vice-Presidents.—Lt.-Col. Herbert Jones and Dr. T. W. Garstang were elected as Vice-Presidents of the Society for the Session, 1924-25.

Election of Hon. Editor.—It was referred to the Editorial Committee to report on the appointment of an editor in place of Dr. R. A. Lyster, now nominated for the presidency.

Election of Hon. Treasurer.—Dr. G. F. Buchan was unanimously re-elected as Hon. Treasurer for Session, 1924-25.

The London School of Hygiene.—A letter was received from the Ministry of Health expressing regret that the Society did not propose to appoint a representative on the Court of Governors of the London School of Hygiene, and suggesting that this decision should be reconsidered. Col. Fremantle moved that the decision be rescinded, and that a representative be nominated forthwith. After some discussion, it was agreed that representation on the Court of Governors could not be accepted

as adequate recognition of the position of the Society in relation to the development of the school.

It was further agreed to enquire whether it would be feasible for the Ministry to invite the Society to nominate one of the three representatives on the Board of Management, that are to be appointed by the Minister of Health. By such an arrangement the Society would have a real voice in the management of the school with which the future of the Public Health Service must be closely associated. It was decided to submit this suggestion for the consideration of the Ministry of Health.

Additional Members of Council.—It was referred to the Committee of officers of the Society to submit nominations for the election of members of council under Article 19(d) at the September meeting of the Council.

The Council then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the House of the Society on Friday, 16th May, 1924, the President (Dr. T. W. Naylor Barlow) in the chair.

The minutes of the last meeting having been approved and signed the following candidates were elected to the Society:—

As Fellows:

Bebb, Frances M., B.A., M.B., Ch.B., Leeds; Coates, Wm. Robt. Addison, L.R.C.P. and S., Ed., L.R.F.P.S.; Dowling, Eileen, M.B., Ch.B., Liv.; Dunscombe, Clement, M.A., M.B., B.Ch., Cantab., M.R.C.S., L.R.C.P., D.P.H.; Fraser, John Alexander, M.B., Ch.B., Ed., D.P.H.; Gray, Alice Jane, M.B., Ch.B., Ed., D.P.H.; Ross-Keyt, Fred. Dudley, M.B., Ch.B., Aberd., D.P.H.

As Associate:

Warlow, Eveline Mary, L.D.S.

A number of candidates were nominated for election at the next meeting of the Society.

Election of President for Session, 1924-25.—The President reported that the Council had nominated Dr. Robert Arthur Lyster, for election by that meeting as President of the Society for the Session, 1924-25. Dr. Barlow added that he thought the members would welcome this opportunity of honouring one who had rendered long and valuable services to the Society. Dr. Lyster's election was carried by acclamation.

Prof. J. W. H. Eyre then read a paper on "Public Health and the Oyster," illustrated by lantern slides. The paper, with a report of the discussion, will appear in an early issue of "Public Health." After a vote of thanks to Dr. Eyre, the meeting adjourned.

NORTHERN BRANCH.

A meeting was held in the Medical Institute, 7, Windser Terrace, Newcastle-upon-Tyne, on Friday, 9th May, 1924.

Present: Dr. Whitley (Chair) with 19 members and one visitor.

The minutes of the meeting held on the 22nd February, 1924, having been printed in "Public Health" for April, were taken as read and signed by the Chairman.

The Honorary Secretary reported that he had been in communication with the Executive Secretary of the Society and the Medical Secretary of the B.M.A. with regard to prescribed appointments, including S.M.O. at South Shields and Darlington.

District Joint Consultative Committee—N.A.L.G.O.—At a conference of representatives of Local Government Officers in the North Eastern District held in the Town Hall, Newcastle-upon-Tyne, on the 23rd February, 1924, it was decided to establish a District Joint Consultative Committee, and the Branch is now asked to appoint representatives.

It was moved and seconded that Drs. J. A. Hislop and T. Buckham, who attended the preliminary meeting, be appointed to represent the Branch on the Committee.

Presidency of the Society—1924-1925.—Letters had been received from the following Branches asking for the support of the Northern Branch: Yorkshire Branch respecting Dr. J. R. Kaye; Home Counties Branch respecting Dr. A. Greenwood; Midland Branch respecting Dr. T. Ridley Bailey.

The Honorary Secretary reported that he had informed the Honorary Secretaries of the Branches concerned that the Northern Branch had already decided to support the nomination of Dr. R. A. Lyster.

Annual Report of B.M.A. Council in the B.M.J. Supplement, 3rd May, 1924.—The Honorary Secretary made reference to the above, and urged members to peruse it carefully, as there were many matters in the Report affecting the Public Health Service, and that required explanation and support at their respective B.M.A. Division meetings.

Summer Meeting.—Dr. Spinks moved, and it was duly seconded, that the Summer Meeting be held at Dinsdale, as in the previous two years.

It was decided to leave the date and other arrangements in the hands of the acting President and Honorary Secretary.

The Honorary Secretary reported that the President of the Branch (Dr. A. G. R. Cameron)

had resigned his appointment as Deputy M.O.H., Durham C.C., on account of illness, and also that Dr. T. Horne (Vice-President) had retired from his post as M.O.H. of Stockton.

The Honorary Secretary was instructed to write to Drs. Cameron and Horne conveying the sympathy of the Branch in their indisposition and wishing them both a return to health and vigour.

Fever Hospital Medical Service Group.—The Honorary Secretary reported that a meeting of the above Group was held at the City Hospital for Infectious Diseases, Newcastle, on the 25th April, 1924, and that it was attended by Drs. E. W. Goodall (M.A.B., North Western Hospital), A. F. Cameron (M.A.B., Joyce Green Hospital), F. H. Thomson (M.A.B., North Eastern Hospital), Claude B. Ker and W. T. Gardiner (Edinburgh City Hospital), D. S. Sutherland (Monsall Hospital), Kerr Love (Glasgow), J. A. Hislop, S. G. Mostyn, N. Maclay, H. Kerr, T. N. V. Potts, and I. MacLachlan.

A joint paper by Drs. Potts and Maclay, entitled "Three years' specialist oto-rhinological treatment in scarlet fever: a survey and demonstration," was read and discussed.

Dr. W. H. Dickinson then gave an address upon "What the Nations of Europe are doing to fight Tuberculosis—Impressions of an extended tour."

After Dr. Dickinson had answered numerous questions Dr. Whitley moved a hearty vote of thanks to him for his interesting account. The Chairman hoped that Dr. Dickinson would soon be in a position to issue a full report upon his tour, and that it would eventually be published.

Dr. Whitley referred to the presence of Dr. R. W. Simpson, Chairman of the Newcastle-upon-Tyne Health Committee. On behalf of the Branch he gave Dr. Simpson a hearty welcome, and said that it was very gratifying to the members to have Dr. Simpson as a visitor that afternoon.

YORKSHIRE BRANCH.

A meeting was held at the Town Hall, Sheffield, on April 25th. The arrangements were in the hands of Dr. F. E. Wynne, Medical Officer of Health of Sheffield, and the members were entertained to tea by the Lord Mayor. The President (Dr. A. E. L. Wear, C.M.G.) took the chair and the address was given by Professor Fearnside, Professor of Geology in the University of Sheffield, who took as his subject "The Water Supply of the South Yorkshire Coalfield." This subject, dealt with by such an expert as Professor Fearnside, proved of exceptional interest.

* See page 230.

HOME COUNTIES BRANCH.

The seventh meeting of the Session, 1923-24, of the Home Counties Branch of the Society of Medical Officers of Health was held at the House of the Society, on Friday, 4th April, 1924, at 3.30 p.m.

The minutes of the previous meeting were read and approved.

Apologies for absence were received from Drs. C. S. Erebner and J. J. Paterson.

The Secretary reported that in accordance with the resolution of the Branch he had intimated the nomination of Dr. Greenwood for the Presidency of the Society to the Executive Secretary and had communicated with the Secretaries of other branches and groups.

Replies were received from most of the branches indicating their action. Attention was drawn to the reply from the Maternity and Child Welfare Group pointing out that the letter did not represent the attitude of the group.

The provisional arrangements for the meeting to be held at Tunbridge Wells on May 9th were also notified.

The Secretary then read his paper on "Some local problems of Public Health administration."

He pointed out the advantages that would arise from the occasional discussion of every day problems of public health work. The first point mentioned was the attitude to be adopted with regard to the isolation of infectious diseases. He believed that in the present state of our knowledge and having regard to public opinion and public convenience at the present time Medical Officers of Health should still advise their authorities to make provision for the isolation of infectious diseases with a view to preventing infection and to ensure the better treatment of infected persons.

He also discussed the attitude to be adopted in regard to the Maternity and Child Welfare Orders, 1918, in so far as they empowered local authorities to provide food for expectant and nursing mothers and children. He stated that these Orders were generously interpreted in Reading and that a considerable sum was expended in this way. With such an interpretation a useful power was given to the authority for the stimulation of a clean milk supply. He stated that both for hospital supplies and home distribution, only Grade A (Tuberculin Tested) milk was purchased.

The last point introduced was the organisation of local medical and nursing services. Although complete unification of tuberculosis, infant welfare, and school medical work had many obvious

advantages, it appeared that having regard to the varying qualifications of the staffs and the distribution of the work over various buildings the gain was not commensurate with the inconvenience arising. The Secretary was thanked for his paper and a discussion followed in which the President, Drs. Kirkhope, Jameson, McMaster, Porter, Gilmour, Scurfield, Nash, McIntosh, and Newsholme took part.

The President also introduced for discussion the attitude to be adopted with regard to medical examinations under the Superannuation Acts and the standard to be adopted.

The eighth meeting of the Session, 1923-24, was held in conjunction with the sessional meeting of the Royal Sanitary Institute, at the Town Hall, Tunbridge Wells, on Friday, 9th May, 1924, at 3.30 p.m.

The minutes of the previous meeting were read and approved.

The Secretary submitted letters from the Maternity and Child Welfare Group, the Yorkshire Branch and the Northern Branch with reference to nominations for the Presidency of the Society.

This concluded the business and the meeting adjourned to attend the Sessional meeting of the Royal Sanitary Institute.

SCHOOL MEDICAL GROUP.

The twenty-second General Meeting of the School Medical Group was held at the Society's House on Saturday, 16th February, 1924, at 3.30 p.m. The minutes were taken as read, approved and signed. Apologies for absence and correspondence were read from (1) A.S.M.O. *re* Circular to Head Teachers by the National Union of Teachers *re* allocation of duties at Medical Inspection. It was decided to refer the matter to Sub-Groups and Branches as to the necessity of taking any notice of this circular. (2) Society of M.O.H. *re* National College of Teachers of the Deaf. It was decided that the Hon. Secretary arrange an interview with a representative from the National College. (3) Southern Branch *re* Nomination of Presidency. It was decided to postpone consideration of this letter. The Northern Sub-Group Hon. Secretary reported that during the past year four meetings, with an average attendance of nine, were held. Dr. Paterson, S.M.O. Durham C.C., read a paper on Eye Work. Mr. P. Bartle, L.D.S., read a paper on School Dentistry. Visits were paid to Northern

Institute for Deaf and Dumb, Newcastle, and Messrs. Fleming, wholesale Manufacturing Opticians. Dr. James McConnell, S.M.O., Tyne-mouth, was appointed President and Dr. R. F. Lunn reappointed Hon. Secretary and Treasurer. The Metropolitan and Home Counties Sub-Group Hon. Secretary reports a meeting held on 11th January at which ten members were present. Dr. Gurney read a paper on "Medical Inspection at Cambridge," and Dr. Bernfield on "S.M. work at Reading." All joined in an interesting discussion. Dr. F. C. Shrubbsall, Mental Special Officer, L.C.C., read a paper on "Mental Deficiency: Some Aspects of Diagnosis." He pointed out that the L.C.C. and County problems were somewhat different and the classification of cases *re* education and of adults also differed, hence the definition of "M.D." by Local Education and Board of Control differed. Difficulties of various tests were explained. Practical and constructional tests introduced from America were shown and explained. An interesting discussion took place in which the President, Drs. Puddicombe, Slowan and others took part. A vote of thanks was passed by acclamation. Tea was served during an interval giving members an opportunity of becoming acquainted and comparing notes.

TUBERCULOSIS GROUP.

A Tuberculosis Group committee meeting was held on Friday, May 16th, at 10 a.m.

(1) The Secretary described negotiations on the Salaries question and was directed to ask the Executive Secretary for a more precise definition of "Senior Medical Officer in charge of Departments." The committee considered that a District T.O., responsible for diagnosis, and meeting practitioners in consultation, should clearly be included in this definition.

(2) The Winsley appointment was discussed.

(3) Dr. Herbert Jones had asked the opinion of the committee on three points:—

(a) *Change of Address of Tuberculous Patients.*—It often happens that the M.O.H. is not informed of this although the change is known to the T.O.

The committee considered that the T.O. should inform the M.O.H. of removals as soon as he becomes aware of them. This is already the custom in many districts.

(b) The M.O.H. receives a Form 'C' or 'D' Notification of a patient previously

unknown to him. On enquiry the Medical Superintendent of the institution concerned may reply that the case had been sent in by the T.O. concerned before notification.

As the T.O. may send in cases for observation, the committee considered that a Form 'C' Notification should suffice in this instance, or

(c) The Medical Superintendent may reply that he does not consider the patient tuberculous.

The committee consider that the Medical Superintendent should not then sign a Tuberculosis Notification, but write expressing his opinion.

Dr. Ward was asked to bring these matters before the Council. The Council decided that they were too important to deal with off-hand and should appear on the minutes of their next meeting, thus providing a maturer consideration.

(4) The next meeting was arranged for the late afternoon of Friday, July 4th, the exact time to be announced later.

THE DENTAL OFFICERS' GROUP.

A meeting of the Group was held at the Society's House in London, on Friday, February 22nd, 1924, the President (Mr. George Thomson, L.D.S.Eng.) occupying the chair.

In the absence of Mr. Chas. A. Clark, L.D.S., R.C.S.I., owing to recent indisposition, Mr. Edmund Rhodes, L.D.S., R.C.S. Eng., very kindly attended and read the paper on "Dental Radiology," which was followed with great interest. At the conclusion of the reading, Mr. Rhodes exhibited numerous radiographs, many being shown stereoscopically, and gave clinical details of the various cases dealt with. A keen informal discussion also took place in which all the members present participated.

The President expressed the great indebtedness of the Society to Mr. Rhodes for his most able and interesting demonstration of dental radiology, of which, he added, dentists would find it necessary to take greater advantage in the future.

Mr. Rhodes, in acknowledging the hearty vote of thanks accorded to him, gave it as his opinion that until there was a collaboration of all means of diagnosis—the bacteriologist, the dentist, and the radiologist—little further progress would be made.

THE HEALTH COMMITTEE OF THE LEAGUE OF NATIONS.

An excellent beginning has been made by the Health Committee of the League of Nations and arrangements have been made which augur well for the future career of that body. Sir George Buchanan, of the Ministry of Health, whose activities in the health work of the League of Nations have been so continuous, and who was vice-president of the provisional health committee, has been elected vice-president of the permanent committee, and associated with him in that office is Surgeon-General Cumming, of the United States Public Health Service.

One of the most important duties of the Committee is the organisation of the interchange of officers between selected countries. Valuable experience has been obtained during the past year, and it is hoped to make these interchanges a permanent feature of the work of the League.

Matters dealt with by the Committee, even at this early stage of its career include an epidemiological intelligence service, public health statistics, the intervention of the League in the event of sudden epidemic outbreaks of exceptional importance where such measures are suddenly and urgently called for in the interests of the public health of the world, the co-ordination of the campaign against malaria conducted by a number of European States, the investigation of pronounced differences in certain forms of cancer mortality in England and Wales, Holland, and Italy, the limitation of opium imports, the establishment of international units for such remedies as anti-diphtheria serum and tetanus antitoxin, the efficacy of disinfection procedures following anthrax, etc.

THE NEECH PRIZE, 1922-23.

The prize founded by Dr. J. T. Neech for the best paper read in each session before a Branch or Group of the Society of Medical Officers of Health has been awarded to

MR. C. O. STALLYBRASS, M.D. Lond., D.P.H., Assistant Medical Officer of Health, Liverpool.

His paper entitled, "Encephalitis Lethargica: Some observations on a Recent Outbreak," was read before the North Western Branch in May, 1923. The assessors for the prize were the President (Dr. T. W. Naylor Barlow), Prof. H. R. Kenwood, Dr. W. J. Howarth and Dr. R. A. Lyster.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

PARENTS' CONTRIBUTIONS TOWARDS SANATORIUM TREATMENT.

Sir,—The Editorials appearing in "Public Health" with reference to the question of contributions towards services rendered under various Public Health schemes have been read by me with much interest, though I must confess I am completely in disagreement with the views expressed.

I was personally responsible for the elaboration and inauguration of the Tuberculosis Scheme in Cheshire in 1913, and one of the fundamental principles laid down by me in advising the Cheshire County Council was that it was reasonable and morally sound to expect persons who could contribute towards the costs incurred by the public on their treatment or benefit to do so.

The principle that "Providence best helps those who help themselves" is incontrovertible, and in my opinion one of the most disturbing features of the modern application of Social and Public Health Services is the extent to which bureaucracy is undermining the self-reliance and individuality of the community. On all sides one notes the same tendency to abolish personality and to substitute for self-reliance a mechanical system of de-humanised units, organised into a huge ugly machine looking to the State for maintenance in all directions.

In Cheshire we invariably ascertain the financial position of the household without causing offence to anybody. The procedure merely consists of filling in a form giving particulars required in this respect at the time of making application for services under the provisions of the scheme. The duty of determining to what, if any, extent the applicant should contribute towards expenditure to be incurred upon him both in regard to transport, maintenance, etc., falls to the Executive Officer of the authority, for determination on an elastic scale under which complete discretion is left to myself, acting with the approval of the Chairman of the Committee. The system of collecting contributions is absolutely under my control, payments received being paid each week into the General County Fund. Whether payment of contributions is to be enforced or not is left entirely to my discretion, and in no single instance has it been necessary to take or to suggest the

institution of legal proceedings for recovery of amounts due.

Since the contributory system was got into proper order in 1919, following the full operation of the provisions of our Tuberculosis Scheme, only in 20 or 24 instances has it been found necessary to write off portions of amounts due, though in every instance contributors have expressed the greatest regret, that owing to alteration in their financial circumstances they have been unable to fulfil their obligations.

From personal knowledge of the working of the system I am satisfied that in no instance has the question of contribution interfered in even the remotest degree with the willingness of patients to seek services available under the Scheme, or to carry out the treatment considered necessary in their interests. On the contrary I am convinced that the mere making of a contribution ranging from 2s. per week up to the whole cost of treatment has introduced a spirit of good feeling and appreciation and been more morally helpful than any other element of our Cheshire Scheme.

To illustrate this point I would mention that on a recent occasion when visiting our new Cheshire Joint Sanatorium, in which Cheshire patients are treated under identical conditions with the patients from certain County Boroughs, it was brought to my notice by the Medical Superintendent that there was a certain amount of expression of opinion on the part of the Cheshire patients as to why they were asked to contribute whilst it was known to them that the County Borough patients on their part were dealt with under identical conditions without any suggestion of contribution.

In order to put the position clearly before them in regard to this and other matters, I took the opportunity to have all the Cheshire patients assembled in the dining hall. On explaining the position to them and pointing out that in Cheshire we expected men and women of all classes to help themselves where it was reasonably possible for them to do so, putting the situation clearly before them, I wound up my remarks with a request as to whether anybody in the room wished to discontinue his or her contribution. Every patient present who was contributing stated that they wished to continue the contribution. I told them that as Cheshire men and women they had behaved exactly as I expected them.

Our system of asking for contributions is strictly governed in accordance with the terms of Circular 479 of the Ministry of Health, the outcome of which is that the large majority of persons benefitting under the provisions of the

County Tuberculosis Scheme are not in a position to, and do not contribute monetarily towards what is done for them. On the other hand we expect and obtain a contribution of goodwill and thankfulness from everybody. Without this spirit anyone who is capable of thinking for himself must admit that the bulk of Public Health and Social work undertaken to-day is nothing more or less than a demoralising imposition upon the community. From the point of view of cost of collection it may be of some interest to your readers to learn that during the financial year ended 31st March, 1924, the sum of £802 was collected from patients receiving residential treatment under the Cheshire Tuberculosis Scheme at a total cost of collection of £10, inclusive of administrative, clerical, postage and receipt stamp expenses.

That our contributory system in Cheshire is not hindering the successful diminution or eradication of Tuberculosis at which we aim, is shown by the fact that from a total of 445 deaths from pulmonary Tuberculosis in 1914 attaining to a maximum of 548 in 1918, we have been able to secure constant and accelerated decline from 452 in 1919 to 344 in 1923, giving the remarkably low death rate of .54 per thousand of our population.

I am, etc.,

THOS. HENRY PEYTON,
County Tuberculosis Officer.

THE CENTRAL MIDWIVES' BOARD.

From Dr. W. F. J. Whitley, C.M.O., North-
umberland.

DEAR SIR,—A letter has been received from the Secretary of the Central Midwives' Board asking for the assistance of the Local Supervising Authority for the removal of the names of all Midwives from the Roll who have ceased to practice and do not intend to practice again, or who, never having practiced as Midwives, no longer wish to make use of their certificates. It is suggested that such should make application to the Board, sending their certificates for cancellation and voluntarily asking for their names to be removed from the Roll. It is stated that these certificates will be returned after cancellation.

One realises that the Roll of the Central Midwives' Board is becoming very unwieldy and that there are hundreds (possibly thousands) of names of women who have ceased to practice and others who have never practiced and never intend to practice. One appreciates also the desire of the Authorities to reduce the Roll to workable propor-

tions. At the same time it is open to question whether the means suggested by the Secretary of the Board is the proper way to accomplish the object desired, and it is doubtful whether the executive officer of a Local Supervising Authority is the proper person to suggest the advisability of a midwife taking steps to remove her own name from the Roll of Midwives, with all that this means and may mean in the future. The very action itself is open to misconstruction. The midwife is asked to surrender a legal right, which in many cases would be resented very strongly, and the relationship between the Local Supervising Authority and other practicing midwives would be jeopardised, the latter speculating as to when their turn would come. There is little doubt that the executive officer of the Local Supervising Authority would be blamed by many midwives who were asked to surrender their certificates.

It has to be remembered that the certificate of the Board, besides supplying a code of instruction and examination for practicing midwives, is also an academic (and in many cases a post-graduate) qualification. It is required by many Authorities as a *sine qua non* for the position of Health Visitor, and its possession is a source of natural pride to many of them after having worked hard and made considerable sacrifices to gain it and, with it, the privilege of having their names upon the Roll. It is possible that they would regard its cancellation as bearing some suggestion of penal stigma and would imagine that they had done something to incur the displeasure or disapproval of the Local Supervising Authority.

To induce many midwives to make application for the cancellation of their certificates would mean putting a good deal of direct pressure upon them and this pressure would have to be applied by the Local Supervising Authority, a most undesirable thing. To say that such an application would be "voluntary" is placing a very liberal interpretation of the meaning of this word. In many cases it would be regarded (and I think rightly) as an actual hardship.

It is beyond question that the Roll is assuming ridiculous proportions and there is no doubt that many of the names now upon it could not be found at the addresses therein given. One presumes that the Board wish to reduce the size of the present volume from several motives, not the least of which will probably be economy of money and time spent in its compilation, and it may be suggested that instead of printing the whole volume annually (as is done at present) the Board should issue an annual list of practicing midwives, and a complete list quinquennially. At the present

moment the Roll is printed annually and contains over 52,000 names.

Further, in order to reduce the actual size of the Roll itself, the same procedure could be applied as is adopted by the General Medical Council with regard to registered medical practitioners, *viz.*, by forwarding a registered letter to the last known address asking for personal verification of the fact that the recipient is still in practice, and if such is returned undelivered or is not acknowledged in any way, the name is automatically removed from the Roll of women who have ceased to practice by re-admitted to the Roll he must make a statutory declaration, which requires to be attested, and pay a fee before he can be re-admitted. I suggest therefore that in order to eliminate names from the Roll of women who have ceased to practise by reason of marriage or other circumstances, and whose names are now kept upon the Roll at addresses at which they probably could not be found, the same procedure should be adopted, *viz.*, that registered letters should be forwarded to them asking whether they wish their names to be retained upon the register, and if such are unanswered or returned to the Central Office these names should automatically be removed.

Yours faithfully,

WILLIAM F. J. WHITLEY.

TREATMENT OF TUBERCULOSIS. Circular 479 of the Ministry of Health.

SIR,—I am glad to notice your comments on the circular issued by the Ministry of Health on the subject of contributions by or on behalf of tuberculous patients towards the cost of sanatorium treatment, and I cordially agree with your view that the circular will fail to achieve its object.

Prior to the issue of Circular 257 on the 3rd November, 1921, it was the practice in many areas to invite patients, who were in a position to do so, to contribute towards the cost of their treatment, and the results were altogether good. The sums received were not large, but no expenditure was entailed in collecting them, no hardship was imposed, and the action taken did not in any way tend to obscure the view that the treatment of tuberculosis is a work of national importance, and that no considerations of petty finance should be allowed to interfere with it. Circular 257 changed the scene, and since its issue patients have not only been required to fill up forms giving exact details of their financial circumstances, but every statement made by them has been regarded with suspicion and has been subjected to inquisi-

torial investigation. The consequences have been altogether mischievous, and the extremely valuable educative results achieved during the past ten years in the direction of tuberculosis being regarded as a national obligation are being obliterated.

There has been much sentimental claptrap about the word "independence," but I have not yet been able to comprehend the mentality which can descry the propagation of a "proper spirit of independence in the working classes" in the extortion from anyone of a shilling for ten shillings' worth, when he knows very well that his neighbour who, so far as he is aware, does not obtain any benefit, has to pay the other nine shillings. In outlying rural areas more than 90 per cent. of the local children attend elementary schools, and no one has suggested that the parents are thereby "pauperised." Such facilities for education are "provided by everybody for everybody." The fact that a small minority choose to pay for something else does not alter the principle. Similarly it has never yet been suggested that the upkeep of roads at the public expense has had a pauperising effect upon the motoring classes.

At meetings of my Committee the subject is often discussed on an arithmetical basis, but I have yet to meet the working-class mother (who is in most cases the family Chancellor of the Exchequer) who balances her budget on the mathematical principle that if one of her children is away from home for a period, the expenditure will be correspondingly reduced. When the child goes to the sanatorium, there is, in practically every case, a very substantial addition to its wardrobe, and the other members of the family, at considerable sacrifice—whether rightly or wrongly—persist in sending weekly parcels of "good things." In addition, the mother, and perhaps some other relatives, pay more or less frequent visits to the Institution to learn in person of the welfare of the patient, and who can blame them? The net result is an increase in the family expenditure.

It seems to have been altogether forgotten that the treatment of tuberculosis was undertaken, not in the interests of the patient, but for the common weal and every effort should be made to encourage the idea that the work is of first class national importance. I have no reason to believe that my experience is exceptional, but I cannot help noticing the contrast between the attitude adopted with regard to the treatment of tuberculosis and other infectious diseases, as for example, diphtheria. Raiment of purple and fine linen is a fairly secure shield against tubercle, but not even

cloth of gold can be relied upon to repel diphtheria.
Verb sap.

Yours, etc.,
A. COUNTY OFFICER.

THE SOAP AND WATER SCHOOL OF DISINFECTION.

From Dr. K. Simpson, M.O.H., Barking.

Sir,—Will you permit me to again encroach upon your valuable space in reply to Professor Kenwood's letter in your last issue?

Professor Kenwood asks what evidence I have for asserting that secondary cases in scarlet fever "are practically in every instance" due to a personal as against a room surface infection. If it be "the merest conjecture," as he maintains it is, may I ask how it is that laboratory workers have so far failed to cultivate, even under laboratory conditions, bacteria having any direct bearing on the pathogeny of scarlet fever at all? If these particular bacteria have not been proved to exist apart from their natural pabulum in the human organism, is it reasonable to suppose that room surfaces can possibly play the important part assigned them in sustaining and disseminating the infection of this disease?

These facts, to my mind, adequately dispose of the contended infectivity of room surfaces in scarlet fever, and afford ample evidence in support of the purely personal transference of the disease, and if this be admitted, by Professor Kenwood and others, it follows as a natural corollary that disinfection of room surfaces can be but little better than useless as a preventive measure, which, after all, as practical sanitarians, is what principally concerns us.

I would be interested to know how Professor Kenwood explains the occurrence of secondary cases in scarlet fever at all, repudiating, as he apparently does, my suggestion of a personal transference of infection on the one hand, while excluding its existence otherwise by the efficacy of room surface disinfection on the other.

I cannot concur in his unqualified assertion that these cases "merely followed," unless he would have me accept the spontaneous origin of infection altogether, or, alternatively, the infectivity of room surfaces, assuming, of course, that his views were supported by laboratory findings, which I do not admit.

In conclusion, I think that it is Professor Kenwood who confuses the points at issue, when he construes my remarks as argued in this instance from the particular to the general! My argument deals with the question of scarlet fever and its

congeners only; consequently the arguments I have adduced are not in their entirety applicable to heterogeneous infections like diphtheria or enteric.

I am,
Yours, etc.,
K. SIMPSON.

BRACKENBURY TESTIMONIAL.

SIR,—The long and untiring devotion of Dr. H. B. Brackenbury to the interests of the medical profession, culminating in his recent presentation of the case for insurance practitioners before the Court of Inquiry, has given rise to a widespread feeling that the time is opportune for adequate acknowledgement of his unique services. In order to give material expression to this desire a Committee has been formed with the object of collecting a fund which will be applied in a manner to be decided at a later date, after consultation with Dr. Brackenbury.

Insurance practitioners, who more than all others are indebted to Dr. Brackenbury, will be approached through their Panel Committees, many of which have already taken the matter in hand and have promised contributions. The appeal, however, is a general one, and steps are being taken to bring the fund to the notice of various other professional organisations. No direct request will be made by this Committee to individuals, but the Committee will welcome contributions from any member of the profession who wishes to pay tribute to Dr. Brackenbury's immense labours.

All communications should be addressed to the Honorary Secretaries of the Fund (of which the undersigned form the Executive Committee), and cheques should be made payable to the Honorary Treasurer, Mr. H. S. Souttar, at Room 17, 429, Strand, W.C.2.—We are, etc.,

H. G. DAIN,
Chairman.
N. BISHOP HARMAN,
Deputy Chairman.
H. S. SOUTTAR,
Hon. Treasurer.
T. RIDLEY BAILEY.
R. J. FARMAN.
E. R. FOTHERGILL.
C. E. DOUGLAS,
Hon. Sec. and Treas. (Scotland).
W. E. THOMAS,
Hon. Sec. and Treas. (Wales).
HAROLD S. BEADLES,
PETER MACDONALD,
Hon. Secretaries.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 10.

JULY, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free
in advance. Single copies, 2s. 6d., post free.

CONTENTS.

EDITORIAL—

	PAGE
The Milk Problem	241
C.M.B. Rules. The Maternity Nurse	242
Infant Mortality Figures	242
Midwives and Ante-Natal Work	243
Lack of Beds in Hospitals	244
The Salaries Campaign. Barnsley and Heywood	244
National Baby Week	244
The Salaries Campaign	244, 268
Birth Control	264

SPECIAL ARTICLES—

Epidemic Encephalitis: The Outbreak in Glasgow in 1923 (By A. S. M. Macgregor, O.B.E., M.D., D.P.H., Public Health Department, Glasgow)	245
Lines of Advance in Maternity and Child Welfare Work (By Harold Scurfield, M.D., D.P.H., Late Medical Officer of Health, City of Sheffield)	248
Visit to the United States of America (By Charles Porter, M.D., B.Sc., Medical Officer of Health, St. Marylebone)	253
The Public Significance of Mental Deficiency	262

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Home Counties Branch	265
Metropolitan Branch	266
West of England Branch	267
Maternity and Child Welfare Group	267

CORRESPONDENCE—

Dearth of R.A.M.C. Candidates	267
A Misquotation	268
Whole Time Public Health Medical Officers and Consulting Fees	268

Editorial.

THE MILK PROBLEM.

Recently a joint Committee was appointed by the Ministers of Health and Agriculture to advise their departments on matters concerning the production, handling, and distribution of milk and dairy produce, including questions relating to education and research, and in legislation, orders, and regulations which may be under consideration. Considerable dissatisfaction has been expressed at the entire omission of representatives of local authorities, and also of medical officers of health from this Committee. On the 8th May Mr. Symon in the House of Commons referred to the responsibility of local authorities for safeguarding the cleanliness and purity of the Nation's milk supply and asked for an adequate number of representatives of local authorities to be added. The reply given by Mr. Greenwood appeared to indicate that the omission of representatives of local authorities, and presumably of medical officers of health as well, was deliberate. The incident serves to illustrate the extraordinary extent to which the Board of Agriculture and the Ministry of Health are in the hands of trade interests in this matter.

A short time ago the Society of Medical Officers of Health was able to demonstrate its strength and its resistance to the subordination of central government departments to trade interests by its vigorous attack upon the infamous Circular 325. The result of the very moderately organised effort by the Society was ultimately a withdrawal of the offensive Circular. We suggest that the time is now ripe for the Society to enter upon a vigorous campaign to open the eyes of the public as to the existing scandal concerning the milk supply, and the legal decisions which effectually strangle all efforts to secure a reasonable milk supply for the public. By a carefully organised campaign the public could be awakened from their apathy concerning this subject and we

are quite sure that as soon as the present position was really understood there would be a vigorous demand for an alteration. The only hope is a direct appeal to the public and every Medical Officer of Health should be urged to express himself fully, freely, and continuously upon this vitally important subject until something is done.

C.M.B. RULES.

THE MATERNITY NURSE.

In the revised rules of the Central Midwives' Board an attempt was made to improve matters by defining the circumstances under which a registered woman would be regarded respectively as a "midwife" and as a "maternity nurse." Medical Officers of Local Supervising Authorities would be well advised to call the special attention of practising midwives to these definitions as they are not well understood.

Undoubtedly these new definitions represent a great advance and indicate that the Board are really endeavouring to meet the difficulty. Some disappointment is however being expressed that these definitions, although a great advance, do not entirely remove the difficulties and dangers. A correspondent sends us the following illustration and observations.

"A recent case before the Board illustrated the fact that the old unsatisfactory condition of affairs with regard to the responsibility of a midwife for her cases still continues in spite of the attempts which have been made to improve matters by means of additions to the rules. Among other offences the midwife concerned was charged with being in attendance upon a patient and being guilty of negligence in certain serious respects. The patient's evidence was to the effect that a doctor had been engaged three months before the confinement, that she sent for the midwife at 8 a.m., and that the delivery took place at 5 p.m., the doctor arriving at 5.30. There seemed to be no doubt at all but that the midwife was guilty of serious negligence during the actual confinement and also subsequently, but the Board held that, although the midwife had acted as a midwife at the actual confinement, she reverted to her position as monthly nurse at 5.30 when the doctor arrived, and that she could not be charged for offences committed while she was a maternity nurse. The midwife's own evidence was to the effect that when the doctor was sent for (one hour before the delivery) he instructed her to go on with the delivery as he had to go to

another case. She met the doctor at the case *once* only during the lying-in period. This case seems to prove that if a doctor is previously 'engaged' and arrives at any stage of the confinement or lying-in period the midwife becomes automatically a monthly nurse, and from that time can neglect her patient and ignore the rules with perfect safety. In this case the midwife only saw the doctor half an hour after the confinement and once afterwards. Obviously this interpretation of rules and requirements constitutes a serious public danger and gives a free hand to unsatisfactory midwives. However unsatisfactory a midwife may be she can escape all official supervision if she works mainly in connection with doctors, however superficial or imaginary that connection may be, and unless the doctor goes out of his way to charge her with offences and to dismiss her from the case, she is never likely to be brought to book, as no charge to the Central Midwives' Board would be entertained, on the grounds that she is acting as a maternity nurse."

Protests are made from time to time by medical officers of local supervising authorities concerning the practice of the Central Midwives' Board in communicating direct with the midwives concerning matters relating to the work of the local supervising authority. These medical officers contend, quite rightly, that all such communications should be carried on through the local supervising authority, and not direct with the midwife. The proper practice in such circumstances would be for the C.M.B. merely to acknowledge any communication from the midwife and to send the reply to the midwife through the local supervising authority. An alternative would be for the C.M.B. to reply to the midwife enclosing a copy of the communication which they had addressed to the local supervising authority dealing with the subject of her letter.

INFANT MORTALITY FIGURES.

While throughout the country generally there is a big increase in infantile mortality, an increase that is particularly noticeable in London, where in the past quarter there were over 10,000 deaths of children under one year of age, against between 8,000 and 9,000 in the corresponding quarter of last year and between 6,000 and 7,000 in the quarter ended December 31st last, in most Lancashire towns decreases are shown. In the last quarter of 1923 the mortality among children under one year of age was lower than in any previous quarter, but in four Lancashire and Cheshire towns there were reductions from those

very low figures. In these and in six other towns there were decreases shown from the figures of the corresponding quarter of last year.

The comparative figures are as follows:—

Town.	Last quarter.	Corresponding quarter last year.	Quarter ended Dec. 31, 1923.
Stockport ...	51	55	43
Chester ...	27	25	15
Birkenhead ...	78	52	61
Wallasey ...	20	22	25
Liverpool ...	568	575	522
Bootle ...	45	45	42
St Helens ...	94	68	65
Southport ...	20	22	11
Wigan ...	77	57	53
Warrington ...	36	47	26
Bolton ...	99	89	71
Bury ...	20	34	24
Manchester ...	408	408	341

MIDWIVES AND ANTE-NATAL WORK.

Owing to the very unsatisfactory vital statistics in connection with maternal mortality, neo-natal mortality, and still-births, many towns are taking into serious consideration schemes for inducing the midwife to view this subject from an up-to-date standpoint, and through the midwife to educate the public in the need for ante-natal examination. In most areas such efforts have met with a regrettably small response and midwives have been found to be reluctant to engage actively in this work. To some extent this attitude is undoubtedly due to the well-known fact that the average expectant mother is rather resentful of what she regards as unnecessary interference. The future of this work depends entirely upon methods of education and by means of carefully thought out schemes it may be possible to hasten developments.

The most hopeful scheme that has up to the present been brought to our notice is one which is now being tried in Birmingham and in Blackburn. In those areas circulars have been issued to the midwives inviting their co-operation in the efforts to be made towards a reduction of the death rates of women and children, and pointing out that a good deal of prevention would be possible if ante-natal work of a definite character were carried out as a matter of routine practice. In order to encourage the co-operation of the midwives a certificate at the end of the year is offered to every midwife who during the year has carried out the required work. The Blackburn circular is worded as follows:—

"The Health Committee are anxious to do everything possible to improve the midwifery service of the town as they note with very much regret that the deaths of women in child-birth in Blackburn are considerably higher than in other parts of the country. As 80 per cent. of Blackburn mothers are delivered by midwives in their own homes it is primarily through the work of the midwives that preventable deaths during child-birth and preventable illnesses during or following child-birth can be avoided.

The Health Committee propose therefore to issue annually a certificate of competence to every midwife practicing in the borough who qualifies for it. This can be shown to prospective patients and should be of value to those who possess it. It will read as follows:—

"This is to certify that Certified Midwife No. Miss, or Mrs., practicing at has carried out her duties, both as regards ante-natal care and midwifery, during the year ended 31st December, 192 , to the entire satisfaction of the Health Committee.

Signed.....
Medical Officer of Health."

To qualify for the above certificate the midwife must have evidence to show (1) that she has at the time of booking or immediately afterwards interviewed each patient at her own or the patient's home and has kept a record of the patient's condition in a register which will be provided by the Health Committee.

(2) That at least one test of the urine is made in every case. Urine testing outfits are available at a cost of about 3s. They may be obtained from most chemists. The testing can be done at home by the midwife or she may send her patient to the ante-natal clinic held in the Town Hall every Saturday morning at 10 a.m., where the urine will be tested free of charge and a report sent to the midwife by the Assistant Medical Officer.

(3) That where any ante-natal condition is found which is prejudicial to the health of the mother or child the case be referred to the patient's private doctor, or where the patient's circumstances are such that she cannot pay a doctor's fee to the ante-natal clinic. Where possible the midwife should accompany her patient to either doctor or ante-natal clinic or send the form, with which you have already been supplied, duly filled in.

It is hoped that in every case where the form is used the doctor will reply to the midwife and give her the necessary instructions. If the midwife gets no reply she should call on her patient to ensure that she has seen her doctor and understands his instructions.

The doctor at the ante-natal clinic will send a report to the midwife engaged and will not recommend a patient to Hospital without consulting the midwife. If a midwife so desires, ante-natal home visits will be paid by a Health Visitor either to keep the patient under observation or to induce attendance at an ante-natal clinic."

Although the circular was not issued until February last there has been in Blackburn a most gratifying response, 18 midwives out of 41 practising midwives having intimated their intention of applying for the annual certificate. These midwives have received the ante-natal register from the Local Supervising Authority and have purchased an outfit for testing urine. The whole scheme appears to constitute a most excellent incentive to every intelligent and reasonably trained midwife, and everyone who has at heart the

improvement of the practice of midwifery in this country will welcome with open arms a proposal which, in a by no means ideal area, has within a few months induced 45 per cent. of the practising midwives in that area to keep a proper ante-natal register which they have never kept before, and to purchase and use urine testing outfits which they have never possessed before.

We commend this scheme to the consideration of every Local Supervising Authority and we hope to see it being tried extensively all over the country before long.

LACK OF BEDS IN HOSPITALS.

In reply to a recent question in the House of Commons regarding the number of persons requiring hospital treatment but unable to obtain it through lack of beds, the Minister of Health indicated that he proposed to ask the Voluntary Hospitals Commission to undertake an inquiry into the shortage of hospital accommodation. Mr. Wheatley has now remitted this question to the Commission with the following terms of reference:—

The Voluntary Hospitals Commission are requested to inquire into and to report upon the extent of the additional voluntary hospital accommodation required in England and Wales and the best means of providing and maintaining it.

The Commission will be communicating immediately with the Local Voluntary Hospital Committees in regard to the steps to be taken in pursuing the investigation, and the matter will also be the principal subject of discussion at the conference of representatives of the Local Voluntary Hospital Committees, which is to be held on June 18th at the Ministry of Health.

THE SALARIES CAMPAIGN. BARNSELY AND HEYWOOD.

At the meeting of the Barnsley Education Committee on May 19th last, the Chairman reported that the doctor who had been invited to meet a sub-committee in connection with his application for appointment as Assistant M.O.H. and Assistant S.M.O. had declined on account of the opposition of the British Medical Association to the inadequate salary of £500 per annum. This applicant was the only one with the Diploma of Public Health. Two other applicants were the son of Dr. Cretney (a late member of the committee), and the son of Mr. Percival Sharp (Director of Education in Sheffield). Neither of these applicants held the Diploma referred to, but the sub-committee had decided to recommend the

appointment of Dr. Cretney. "They could do no more," said the Chairman, "than recommend, for the appointment was entirely in the hands of the Barnsley Town Council." Alderman Holden inquired: "Is it usual to appoint to this position any one not holding the Diploma of Public Health?" "We asked the Medical Officer," replied the Chairman, "if he was satisfied that these young men could carry out the duties required of them, and he said he was." The recommendation was agreed to.

Recently the Medical Officer of Health and Schools Medical Officer at Heywood resigned his appointment, and an advertisement was issued for a successor at £700 per annum. This, however, did not bring any applications, and it was intimated that the salary was not sufficient; the standard rate of pay being regarded as £800 per annum. The Health Committee have, therefore, considered the position, and have decided again to advertise for applicants, the salary offered this time to be £800 per annum.

NATIONAL BABY WEEK.

National Baby Week is being held once more from July 1st to 7th, a week which the National Baby Week Council has earmarked for its own. One of the outstanding features of interest that week will be the English speaking Conference on Infant Welfare, which is being held at Caxton Hall, Westminster, on July 1st, 2nd and 4th, and is being followed by conducted tours to Institutions in the London area of interest to Infant Welfare workers. The programme of the Conference is an exceedingly varied and interesting one. Copies of it may be obtained from Miss J. Halford, Honorary Secretary, Conference Committee, 117, Piccadilly, W.1, or from the Secretary, National Baby Week Council, at the same address.

Local Baby Weeks are held, some of them during the National Baby Week, but some of them at other times, local organisers selecting such weeks for their celebrations as may be most advantageous in their respective districts. Many of these local propaganda weeks are being combined with Health Weeks, a conjoint arrangement which the National Baby Week Council and the Health Week Committee strongly advocate.

SMETHWICK M.O.H.—The salary of Dr. Bell Ferguson, Medical Officer of Health, Smethwick, has been increased from £900 to £1,000 a year.

EPIDEMIC ENCEPHALITIS: THE OUT- BREAK IN GLASGOW IN 1923.

BY

A. S. M. MACGREGOR, O.B.E., M.D., D.P.H.,
Public Health Department, Glasgow.

The outbreak of epidemic encephalitis which occurred in Glasgow last year began with a sharp rise towards the end of January, reached its maximum in the middle of February and had practically exhausted itself by the middle of March. It might without exaggeration be described as explosive in character. The severity of the disease rapidly increased as the outbreak proceeded, until at its height exceptionally acute types of case were encountered. Although the brunt of the attack was confined to the first quarter of the year, the incidence continued in the form of milder sporadic cases spread over the period from April onwards to September, after which it apparently ceased altogether, to be followed by a revival in epidemic form in April of the following year.

Before the general outline of an outbreak of epidemic encephalitis can be depicted with any degree of clearness, certain sources of confusion must first of all be removed. In order to obtain accurate data, it is essential to sift the cases as they are reported, accepting only such as are correctly diagnosed. There should also be reasonable grounds for assuming that the actual dimensions of the outbreak are reflected in the figures.

Notifications did not give a very correct indication of incidence. For instance, during the year under survey, out of 130 cases reported, 75, or 57 per cent. of the total, were finally accepted as correctly diagnosed. Although the experience gained during the previous attack in 1920 undoubtedly aided the prompt recognition of the earlier cases, encephalitis was still a comparatively uncommon and unfamiliar disease. It was found that a good deal of uncertainty surrounded the recognition of the severer types of case. On the other hand, the milder varieties presented even greater difficulties in diagnosis, especially during the period of descent between April and September. In the account published last year,* describing the symptomatology of the affection, emphasis was laid on the variability of the signs and symptoms referable to involvement of the central nervous system, and on the difficulty of describing concisely its onset and progress. It is not surprising, therefore, that a good many more

cases were reported as encephalitis than could ultimately be accepted as such. As an illustration of this, the following diseases which gave rise to symptoms construed as those of encephalitis and which were notified as such during the year, are quoted to show the confusion which may arise—due mostly to lack of familiarity with the disease. The original diagnosis of encephalitis in 52 notifications was altered to the following:—Tubercular meningitis 9, pneumonia 6, insanity 3, neurasthenia 2, enteritis 2, influenza 2, cerebral syphilis 2, cerebral tumour and thrombosis 2, not encephalitis 11, very doubtful cases 5, appendicitis, locomotor ataxia, chorea, neuritis, senility, cerebrospinal meningitis, toxæmia, nephritis—one each. In addition three cases were notified on account of the sequelæ of illnesses contracted during former outbreaks. These notifications, which formed 43 per cent. of the total received during the year, were accordingly deleted from the records.

During the earlier stages of the outbreak until the symptomatology became familiar, cases were missed, or their recognition delayed and the illness referred to other causes, such as, acute chorea, cerebral hæmorrhage, acute mania, meningitis, rheumatism, influenza, appendicitis. It is obvious, therefore, that the main sources of error are likely to be under-notification at the beginning of an outbreak and over-notification towards its close. For this reason and in order to assist medical practitioners in the City, an early opportunity was taken at the beginning of the outbreak to issue a circular describing the course and symptoms of the particular types of the disease then prevailing. This was based on clinical reports furnished by Dr. Leonard Findlay for cases in the Sick Children's Hospital, Dr. Ivy Mackenzie for cases in the Victoria Infirmary and Eastern District Hospital, Drs. Archibald and Elliott for cases in the Fever Hospitals, and by various other medical men in the City. Demonstrations of cases were also given at these Hospitals. The close co-operation between the Public Health Department and medical men in the City thus established, along with the large proportion of admissions to hospital of actual or suspected cases for treatment and diagnosis, combined to ensure a fair degree of accuracy. There is, therefore, reason to believe that the figures given reflect with tolerable certainty the true incidence during the year. While every effort was made to include in the survey all cases presenting definite clinical features, it is quite possible that slighter and more transient types may have been overlooked. A few of the 16 cases excluded after

* Current Cases of Encephalitis in Glasgow. (Chalmers and Macgregor.) *Lancet*, 1923, 1,610.

observation as "not encephalitis" or "very doubtful" may have been of such unobtrusive nature.

With this explanation, the figures of incidence may now be given:—

		Verified Cases Sickening.	Verified Cases Died.	Notifica- tions Received.
January	...	9	—	3
February	1-7, 4	34	7	14
	8-14, 7			
	15-21, 15			
	22-28, 8			
March	1-7, 7	15	5	54
	8-14, 5			
	15-21, 2			
	22-28, 1			
	29-4, —			
April	...	4	3	17
May	...	3	—	14
June	...	2	—	4
July	...	2	—	5
August	...	3	1	6
September	...	1	—	6
October	...	—	—	3
November	...	—	—	1
December	...	—	—	3
Total	...	73*	16	130

* Excludes two cases who sickened in November and December of the previous year.

The course of the outbreak is also illustrated in the chart on next page.

The age and sex distribution is given in the table below.

Age Groups.	Males.	Females.	Cases.	Deaths.
0-5	2	3	5	1
5-10	9	5	14	1
10-15	10	5	15	2
15-20	5	8	13	3
20-30	5	7	12	3
30-40	1	3	4	1
40-50	4	4	8	3
50-60	2	1	3	2
60-70	—	—	—	—
70-80	—	—	—	—
80-90	1	—	1	—
Total	39	36	75	16

This table of incidence shows that the outbreak was limited to the first quarter of the year. It commenced in January (most of the nine cases sickening towards the end of the month), reached its maximum in the middle of February and had practically spent its force by the middle of March. This period covers the dates of sickening of the

severer types and of practically all the fatal cases. The incidence thereafter tapered off. The curve shows that definite cases continued to occur for some months after the acuter outburst was past, and that the disease, quick to arise, was much slower to disappear. These later cases which occurred during the summer were all mild in character, except one who sickened and died in August.

This statement of incidence, which shows an equality of distribution as between the sexes, and a predilection for the younger ages of life—almost 80 per cent. of those attacked were under thirty years of age—agrees fairly closely with the general experience of this disease.

There is little to say on the question of infectivity. The disease was widely distributed throughout the city and there was no suggestion of grouping of cases in any particular locality or of its occurrence in "pockets." There was no instance of family infection, every case coming from a separate household. The definite cases had between them 397 home contacts, of whom 116 were under ten years of age, and in spite of careful enquiry, there was no evidence of the co-existence of mild abortive types among any of the direct contacts. The only instance of double infection of a household has occurred this year, where two children who occupied the same bed sickened, the first on 7th May and the second on 14th May. The former was removed to hospital on the day before the latter sickened. If this be regarded as a case of direct infection, it is the sole example which can be quoted as throwing any light on the incubation period, which would be in this case anything from one to six days.

A brief reference may be made to the social circumstances of the patients. Information in respect of 65 reported from home addresses is available for analysis.

Distribution of Cases according to Size of House.					
	1 Apt.	2 Apts.	3 Apts.	4 Apts.	Total.
	6	43	10	6	65
Percentage Distribution					
of Cases	9.2	66.2	15.4	9.2	100
Case rate per million of Population	45	84	48	42	60

These figures are too small to convey more than a suggestion of greater prevalence in the two-apartment population and an equality of distribution among the other groups. The poorest class has not been selected for attack. In this

respect it has an epidemiology quite distinct from that of diseases of the respiratory system.

The fatality rate was 21 per cent. This contrasts with the tables given by McNalty* in which the rate for 1,273 cases notified from England and Wales (including London) during the years 1919 and 1920 works out at 48.3 per cent. The inclusion in the latter figure of cases dying of the effects of late sequelae does not have much influence on the rate quoted, because, as McNalty points out in another table, 82.8 per cent. of all those who succumbed died within a month after the onset of the disease. The data at head of next column are taken from the table of mortality rates on page 116 of the report of the Ministry of Health.*

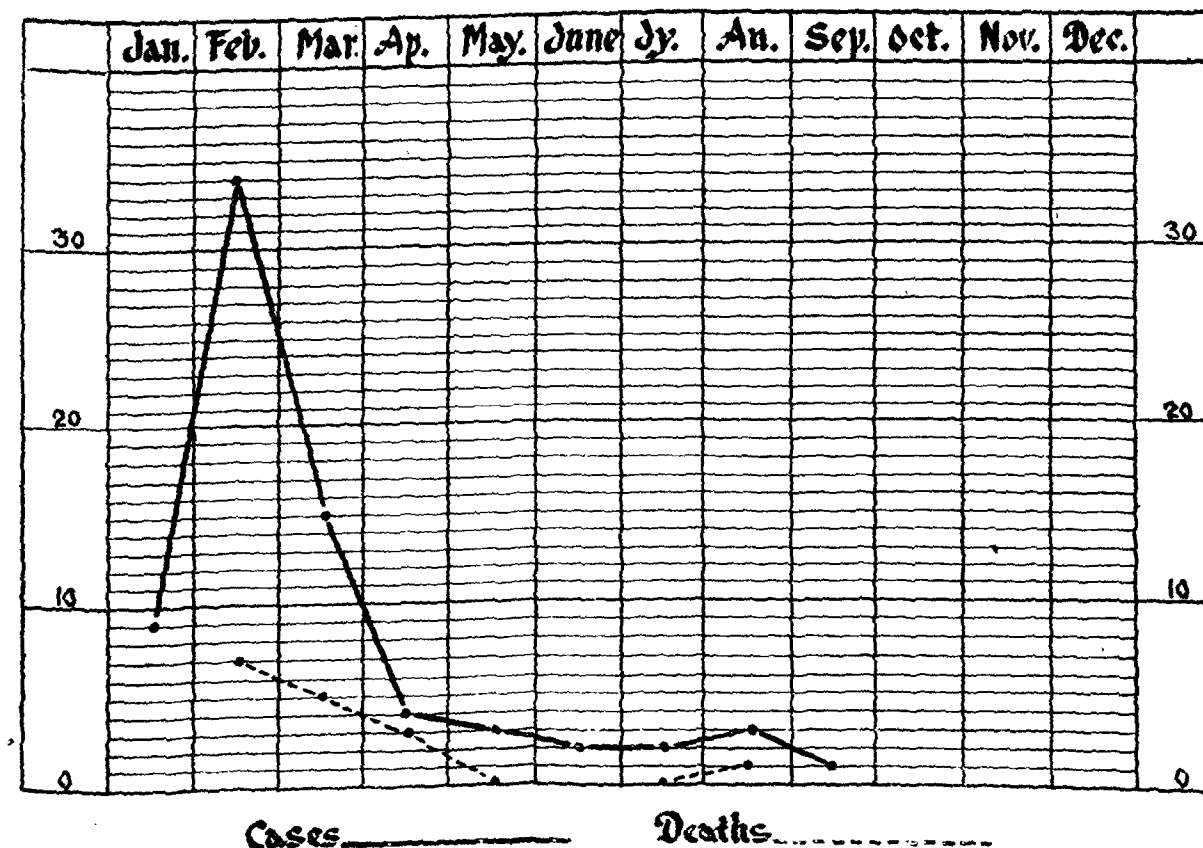
These figures of case mortality are probably inflated and quite unreal. McNalty says that "the rate of 48.3 derived from the notifications of 1919 and 1920 must certainly not be taken as a true estimate of the proportion of deaths that occur among people attacked by encephalitis lethargica." The reason for this no doubt lies chiefly in the fact that the disease was not well enough known for the returns to be acceptable as

* Report on Encephalitis Lethargica—Ministry of Health Reports, 1922.

Country or District.	Year.	Number of cases.	Number of deaths.	Case-Mortality Rate.	Remarks.
England & Wales ...	1918 Jan.-June	168	37	22.0 %	Cases investigated by McNalty.
Manchester District...	1920	32	17	53.0 %	McClure.
Edinburgh District...	1919	57	9	15.7 %	Bramwell.
Scotland ...	1919-20-21	22	11	50.0 %	Forty cases "intimated" to Scottish Board of Health.
Ireland ...	1919-20	30	10	33.0 %	Information supplied by L.G.B., Dublin.

a reliable reflex of its prevalence. The account just given of the outbreak in Glasgow indicates how readily errors of both under and over diagnosis are apt to be made. Reasons have been advanced for the belief that the data here given are reasonably accurate, and that a fatality rate of 21 per cent. is a fairly correct one for what was regarded as a moderately severe outbreak. It must be remembered, however, that epidemics appear to vary in severity within wide limits. Glasgow is at present experiencing another attack,

Glasgow 1923. Incidence of Encephalitis Lethargica.



in common with other parts of the country. Since April, when the disease first appeared in epidemic form, there have occurred 252 cases with only 22 deaths, so that there is reason for believing, and this is borne out by experience elsewhere, that encephalitis is assuming a less fatal form.

This brief description ought not to conclude without an acknowledgement of the services rendered to the Public Health Department by many medical specialists and practitioners in the City in addition to those previously mentioned, who willingly furnished information on cases as they came under notice. Without this co-operation, it would scarcely have been possible to lift the features of the outbreak from the haziness which would otherwise have surrounded them.

LINES OF ADVANCE IN MATERNITY AND CHILD WELFARE WORK.*

BY

HAROLD SCURFIELD, M.D., D.P.H., Late Medical Officer of Health, City of Sheffield.

There is, I think, almost universal agreement among Medical Officers of Health that maternity and child welfare work is one of the most promising features of the Public Health service. The improvement in the chances for the infant and young child during the last twenty years is wonderful. I think there will also be general agreement, however, that there is room for much more improvement. Little has been done to reduce the maternal mortality and damage rate from child-birth. Neonatal mortality is much as it was and there are still possibilities for great reductions in the mortality in the later months of the first year, especially from diseases of the respiratory system. There are also great opportunities for improvement in the death and damage rate in the years between infancy and the age of school-entrance. I hope I shall not be thought presumptuous if I endeavour to indicate briefly some of the lines along which I think progress may be made.

Co-ordination.—Co-ordination between the Maternity and Child Welfare and School Medical services is not complete, and the School Medical Officer does not get the benefit of the child's pre-school medical history. Would it not be better, and give greater interest to the work, if we had one medical and nursing service for both periods?

The county service is insufficiently co-ordinated with that of the urban and rural districts. In Essex and Derbyshire there appears to be in sight a successful solution, by means of whole-time medical officers of health, who act as assistant county medical officers for certain services.

It is surely an anomaly that large urban districts, which run maternity and child welfare schemes, have not control of their own midwives, who already constitute an integral part of such schemes. London is, of course, a huge problem by itself, but one would think it ought to be possible to devise a scheme by which the Metropolitan Borough Medical Officer of Health might have control of his own school children and midwives.

Midwifery.—The establishment of ante-natal and post-natal clinics is gradually leading to a system of preventive as contrasted with emergency midwifery.

Ante-natal clinics at first gave advice as to the hygiene of pregnancy but it is now clear that those who conduct them will need to be skilled obstetricians and that by their efforts many disasters to mother and child will be avoided. Operative procedure will be undertaken at the optimum time. Craniotomy and smashing of the foetus will become obsolete. Congenital syphilis will disappear. The evil effects of toxæmias of pregnancy will be averted. Ophthalmia neonatorum will be prevented. Many healthy babies now stillborn will be saved by the rectification of mal-presentations beforehand and others will be saved from intra-cranial hæmorrhage and damage. The damage-rate to the mothers will be reduced and damage done will be remedied by prompt post-natal treatment before permanent injury has resulted.

One improvement seems obviously due. An expectant mother suffering from syphilis ought to be treated at the ante-natal clinic and not sent on to a venereal disease centre.

The tendency seems to be for more and more of the births to be attended by midwives, but the local custom varies. In some districts midwives attend 90 per cent. of the births, while in others medical practitioners still attend over 60 per cent. It seems possible that in the future most of the cases will be attended by midwives, backed up by a panel of obstetricians. Here seems to be a suitable opening for women doctors.

Food.—I believe the right choice of food is the most important factor in the prevention of rickets, tuberculosis, bad teeth and many other ailments and that, in these days of restricted expenditure education of the public in this matter is an inexpensive way of gaining much progress.

I believe the distribution of safe milk from child welfare centres has been of great value in preventing surgical tuberculosis and in teaching the public the need for using more milk. I have attended three milk conferences during the last twelve months, and I hope something will come of Professor Kenwood's proposal at the last one, to have a team of experts appointed in co-operation with the trade, so that, if possible, we may speak with one voice as to the various methods to be recommended for rendering milk safe. While there are 3,000 deaths annually and a corresponding damage rate from milk-tuberculosis I cannot see that any medical man is justified in flirting with the doctrine that bovine tuberculosis may confer immunity against the human bacillus.

The teaching of the exponents of the newer nutrition is very simple, and we ought to be able to persuade the community that they need more milk, green vegetables, and fruit. Incidentally every medical officer of health should advise his authority that full use should be made of the powers which they have to encourage allotment cultivation.

My experience in Sheffield was that the child, after the first year of life, was specially liable to have a deficient dietary. In many cases white bread, margarine, jam, sugar, and tea with little or no milk, and sweets galore, formed the basis—just the kind of dietary to cause rickets in Professor Mellanby's puppies. Many of the deaths of children recorded as from bronchitis, etc., are really due to rickets. In addition to preaching the need for more milk, green vegetables and fruit, I think we can do great good by circulating the information contained in the leaflet recently drawn up by the Society on the prevention of dental decay.

About one matter I think we should not be too dogmatic in the present state of knowledge, and that is an attempt to classify foods into those which are digestible and indigestible for children. I was horrified to find, the other day, that most of the foods in a list forbidden to children under the age of seven were enjoyed by my children at the age of three without harmful results. When it comes to individual foods there seems to be much difference of medical opinion. Take the banana. Some doctors regard it as very indigestible; others as quite a good food for a child. Is it perhaps a question of the child's treatment of it? If it swallows it in lumps it will be indigestible, I fancy.

It seems to be generally agreed that an indigestible residue is desirable in order to promote

peristalsis. If a child has a gastro-intestinal upset and something undigested is found in the stools, one cannot assume that the "something found" has caused the upset. Personally I should like to read the account of a symposium of, say, twelve doctors, each of whom had brought up a large family and each of whom had an extensive practice, on this subject.

My experience is that children have better digestions than grown-ups, and after three years of age eat the same things as their parents with satisfactory results. I am speaking of families, who live on ordinary plain food. One tries to keep them off tea and coffee as long as possible and to get them to take more milk than adults. Children do not, as a rule, care about cheese, but, if they do like it, digest it quite easily. When children are upset by food it is generally by an amount of cake or sweets that no grown-up would tackle. If a child is allowed to swallow whole segments of orange or lumps of apple or banana I am not surprised if it is sick, but if a child of three has learnt to masticate its food I think it can eat raw apples, oranges, bananas, lettuces, cucumbers, celery, water-cress, spring onions, etc., just as well as a grown-up. Of course, children, like grown-ups, have their idiosyncrasies. When this question of the dieting of the weanling was first taken up we flew to the extreme of pappy food, and we are now getting back somewhat to "a bit of anything that's going!"

It seems obvious that the medical officer of health and school medical officers should be more consulted than hitherto as to the dietaries used for the feeding of mothers and school children, also as to dietaries for relief purposes or during times of distress.

The question of methods of cooking comes to be important. The U.S.A. Board of Agriculture has for long issued interesting bulletins on these matters. Thus the bulletin on Cabbages shows that when the cabbage is boiled nearly half the food value of the cabbage goes into the water. Presumably if a cabbage is steamed this does not happen.

Again the bulletin on Potatoes shows that much of what little protein there is in a potato is lost if the potato is peeled before boiling. If the potato is boiled in its skin much less is lost and presumably less still if it is steamed in its skin.

A potato does not contain much anti-scorbutic vitamin but, nevertheless, outbreaks of scurvy have occurred in Ireland when there has been a failure of the potato crop, and we may conclude that potatoes as cooked by a population who use

* Presidential Address, Maternity and Child Welfare Group, Society of Medical Officers of Health.

them as the mainstay of their diet are able to prevent scurvy. I had the curiosity to write to an Irish doctor the other day to enquire how the Irish cooked their potatoes and he assured me that everywhere in Ireland where the potato is the chief source of food it is boiled in its skin and that peeling before cooking is only practised when the potato is used merely as a vegetable, and an accessory to the rest of the meal. As the anti-scorbutic vitamin is soluble in water the skin acts as a considerable protection against its loss by solution and oxidation, and farther, steaming, wherever possible, is a better means of cooking all vegetables than boiling.

The Government of the U.S.A. seems to be bolder than our Government in issuing such bulletins.

Personal Hygiene.—It is agreed that we have neglected the beginnings of disease and perhaps we have not given enough attention to personal hygiene.

The hygiene of the orifices of the body gives rise to a good deal of difference of opinion.

Many children are allowed to become mouth breathers because their noses are not kept clean. We used to advocate cleaning the suckling's mouth to prevent thrush; now we regard this cleaning process as a bad practice and a cause of thrush.

The different opinions about the use of the tooth brush are, I suppose, partly due to the fact that in a well-shaped, roomy jaw, the teeth keep themselves clean.

The aural surgeon would prohibit that excellent exercise, swimming, on account of the risk of otitis media and meningitis. The sea-bather thinks he gets protection against catarrh by washing out his nostrils with sea-water; some aural surgeons consider the passage of any watery solution up the nose an insult to the ciliated epithelium. I think the Medical Officer of Health will have to extend his interest to the quality of the water in the swimming baths of his district, because, in the interests of physical development, we must put no obstacle in the way of the school children learning swimming. When I was about 50 I learnt that one ought not to put soap in the external meatus and a few years later I learnt to blow my nose properly, *i.e.*, by holding the bony part instead of the cartilaginous part of the nose. I do not know if children are taught these things, but most children like to make a trumpet noise when they blow their noses. There is a great difference of opinion as to the need for circumcision, and one hears on all sides of the operation being very badly done. The reasonable

view seems to be not to remove the foreskin but only to remove sufficient tissue to make the foreskin easily retractable.

I remember being struck some years ago by a sentence in a book on hygiene, "The custom of the Hindoo of washing the anus after defaecation is an excellent one." I believe if the custom was observed we should hear less of pruritus ani, fissures, perianal abscess, external hæmorrhoids, and perhaps more serious troubles in this region, and that absolute cleanliness in this particular can hardly be insisted upon too early. It is an unpleasant thought but, I presume, a fact, that a cleanly typhoid carrier could be no danger to other people. Children cannot be taught too soon, to wash their hands after attending to these wants of nature.

Lastly, in view of the much greater importance attached nowadays to intestinal stasis or constipation, as a cause of disease, the need for regular daily evacuations can hardly be drummed into children at too early an age.

I have touched on various other points of personal hygiene under other headings. I feel that this subject, like that of beginnings of disease, has not received adequate attention, and that it would be a great gain if it were possible to standardise our teaching and principles.

Children below the poverty line.—There are three classes of children who have not a fair chance, by proper maintenance, of becoming healthy citizens:—the children of destitute widows, the children of large families supported by a labourer's wage, and illegitimate children. A destitute widow should be paid sufficient to maintain her child, or children, at home. If she has only one child, she might be fairly asked to act as a foster-mother to other stranded children as is done in the United States of America. No woman can keep a house going and go out to work at the same time. The journal of the widows who try to do so, and dump their children at a day-nursery is a heart-breaking document to read.

Widows' pensions will, to some extent, take the place of inadequate poor-law allowances, and the estimates made of the cost are not alarming. When there is an expansion of expenditure I hope this is one of the first matters that will receive attention.

Allowances to the families of labourers when there are more than four children simultaneously under the school age is also not a very costly affair. Such families cannot be healthily fed, clothed, and housed at present and no doubt cost the country a great deal in institutional treatment. I have never heard it suggested that such families

will be even larger than at present, if State assistance is given. At present, in such cases, the community puts its trust in a distortion of the theory of the survival of the fittest. The death-rate of illegitimate infants is still double that of legitimate. With Maternity and Child Welfare Committees in every district and many voluntary workers we ought to do better and it should not be necessary for a Voluntary Committee in London to attempt to deal with individual cases of illegitimate children throughout the country.

Medical Officers of Health are in a position to warn the public of the evil effects of these failures of social policy.

Clean air and sunlight and country life.—I think we shall learn before long from heliotherapy how to apply helio-prophylaxis and it may lead to some modification of our ideas about clothing. Smoke prevention has hardly got past the talking stage. Observations are made, it is true, of factory chimneys, and there, as a rule, the matter ends, although it is recognised that chimneys serving boiler furnaces, as in the mill towns of Lancashire and the West Riding, need not emit black smoke. It is not necessary to put off tackling the factory chimneys until the open fire in the dwelling house is obsolete. The coal strike showed what the air of our towns might be and we could soon have much cleaner town air if public opinion was educated and determined.

There can be little doubt that the larger fatality of the diseases of the respiratory system in industrial towns is largely due to dirty air and loss of sunlight.

In the meantime we might make much more use than we do of the country. I wish to support what was said by our President in his address as to the importance of securing complete convalescence after the ailments of childhood. Many medical officers of health are now pressing this point. A week or two in country surroundings at the critical time may save months of treatment in an expensive institution later on.

We could, I believe, make much greater use of the restorative effects of country air than we do, if we imitated the example of the United Services Guild, without building any new institutions.

The Guild boards out over 2,000 children in the villages of England. The country is divided into 10 areas. Each area has a clearing home and each clearing home has the required number of village colonies attached to it.

A colony consists of enough foster-homes to receive, say, 40 or 50 children. Each colony has a resident visitor, preferably a child welfare worker. A would-be foster-mother fills in an

application form showing the accommodation she has to offer and the conditions of the home from the health point of view. There must be a school easy of access. The resident visitor inspects the homes of applicants, helps the foster-mothers in emergencies, and acts as local agent for the Guild. Each child is sent to the village with a good outfit of clothes. The allowance paid is 15s. per week for the first child, 14s. for the second, and 13s. for the third. Out of this the foster-mother provides board and clothes. The Guild provides medical attention on the report of the resident visitor. The children attend the village school and become part of the village life. There are plenty of foster-mothers to be had and the system works admirably.

The "boarding-out" system is undoubtedly the best if properly carried out. Each child finds a home. When boarding-out has failed in the past it was because we did not pay enough to get good foster-mothers and good homes and had not the right kind of supervision. The resident visitor must be a sympathetic woman with knowledge of child welfare. Such a system might easily be adapted for several classes of children, as a temporary measure for convalescents, and as a more permanent measure for town children who are orphans, or, for some reason derelict. Of course, when widows are paid to make homes for their own children there will be no need to handicap their children by a town environment. We have Maternity and Child Welfare Committees and voluntary workers everywhere. It ought to be easy for the Committee of each industrial town to secure a ring of village colonies within a radius of twenty miles or so, with a voluntary resident child welfare worker in charge of each.

Discussion.

The President expressed the great indebtedness of the Society to Dr. Scurfield for raising so many points in his paper. He was especially interested in the allusion to the need of complete convalescence for children after minor ailments and the suggested means of bringing that about by a boarding-out scheme. The question of destitute widows and the payment they received from the boards of guardians was also a matter of concern. If there was one class of person who ought to be relieved properly it was the widow. It was obvious that she must have a sufficient amount of money to feed and clothe the boarded-out children entrusted to her care, and the expenditure in that direction would be saved later on because the children would not then become a charge on the rates by suffering from chronic diseases of all

kinds. Speaking of faddism in children's food, the President said it was not so much a matter of what a child should or should not eat but of ensuring complete mastication. The question of co-ordination between the school medical service and maternity and child welfare work was a very important one. He did not think co-ordination would be completely secured until they had obtained what the Society had been pressing for—the taking out from the education committee and the placing in the hands of one committee of a corporation of all matters that concerned the health either of the child or of the adult. It was not sufficient for the medical officer of health to be the connecting link.

Dr. C. S. Thomson (Deptford) remarked that some might say that Dr. Scurfield was an idealist, but the idealist of to-day was the practical man of to-morrow. People would ask where were they to get the money for the payment of widows' pensions, but somehow he thought it ought to be found. At one of his own clinics in East Deptford, where forty to fifty mothers and children attended weekly, it was heartrending to see the conditions. He welcomed the suggestion that in London the schools and the midwives might be handed over to the local authorities. Dr. Scurfield had said that medical officers of health should advise statesmen of the failure of social policies. How was one to do it? Looking at many of the annual reports of medical officers of health he felt they did not take full advantage of the opportunities they already had. In his last report he had been privileged to write of a number of the matters referred to by Dr. Scurfield, and had been requested to increase the size of the next report and to circulate a greater number of copies. The reports of medical officers should be sent to prominent people in various positions, thus keeping them informed of the needs of all branches of public health work. Referring to correct breathing, Dr. Thomson mentioned the Soho clinic conducted by Dr. Octavia Lewin, where children were taught to blow the nose properly. With regard to typhoid carriers he strongly advocated action on the lines laid down by Dr. Scurfield. In conclusion, he hoped the paper would be published as he intended distributing copies amongst many people intensely interested in maternity and child welfare.

Mr. George Thomson (President, Dental Officers' Group) said he was greatly interested in the whole progress of maternity and child welfare work, and particularly in the feeding of children and its influence upon their teeth. Diet had a distinct bearing upon dental caries, a con-

dition which with its consequences had much to do in checking a child's development. Regarding the reference in the paper to the tooth brush, he had been asked why a child with dirty teeth should not use a tooth brush and had replied that if a child were given the right kind of food it would not require one; a change of diet produced the same effect.

Dr. R. H. Wilshaw (Worthing) commented upon the sum allowed by the board of guardians in regard to boarded-out children, and was able to say that in the particular instance referred to by Dr. Scurfield the amount had not been underestimated. In addition, there was a payment of £2 or £3 per quarter for the children's clothing, and the people in the neighbourhood appeared to be quite contented with the conditions and terms. Dr. Wilshaw made appreciative reference to visits he had paid to the Alton and Hayling Island establishments for children, where he had been struck by the amount of good, even in diseased conditions, that could be done. Since being on the south coast he had seen less rickets than he had encountered in the north of England, and no doubt the atmospheric conditions were factors to be taken into account in that connection. Hard water, in his view, was a good thing to take; the calcium contained in the water, in addition to that found in various articles of diet, would help to diminish the amount of rickets met with in industrial centres.

Dr. W. McConnell Wanklyn (London County Council) asked if Dr. Scurfield could give any information bearing upon the question of male infantile mortality: why it was that starting with something like 1,039 to 1,000 in favour of the male at birth there should be at the end the deplorable deficiency of males which was a feature of everyday life and a matter of marked importance to the community?

Dr. R. Woolsey Stocks (West Bromwich), as Secretary of the Maternity and Child Welfare Group of the Society, desired to add his thanks for Dr. Scurfield's paper. It had been urged that politicians required to be educated, and Dr. Thomson had suggested how this might be done. In his view, however, it was the members of the community that needed educating; that having been achieved the politicians would have to carry out their wishes. They as medical officers of health did not make full use of propaganda. Every opportunity of addressing men's and women's meetings and other assemblies should be taken; of talking to the people in terms they could readily understand of the things it was

known they wanted but did not know how to express.

The President, in moving a vote of thanks to Dr. Scurfield for his paper, said that medical officers of health ought first of all to educate their own committees and then get down to the fathers and mothers. The expression of appreciation was carried with acclamation.

Dr. Scurfield, replying to questions, said we do not yet know whether lime in the form of bicarbonate of calcium in hard water is of any use to children's teeth and bones. The School Dentist of Bradford, Mr. B. Norton, who has had much experience of the teeth of children in hard-water districts, does not think the soft water of Bradford is bad for the teeth. The Dental Committee appointed by the Ministry is making some enquiries into this matter. In any case, if children get a proper amount of milk and green vegetables, they will not need to rely upon water for their lime. With regard to boarded-out children, it occurred to him that while it cost approximately 25s. a week to keep a child in an institution, 15s. a week would secure a good home in the clean air and sunshine of the country, providing the child with the next best thing to a real mother and lessening very considerably the risk of infection that existed where there was an aggregation of children. On the question of male infantile mortality, Dr. Scurfield drew attention to the prize essay by Dr. F. E. Wynne, the present Medical Officer of Health of Sheffield, published under the auspices of the National Baby Week Council. In that paper Dr. Wynne had dealt somewhat fully with the subject, and had held that the male was always a kind of katabolic adventurer as compared with the anabolic characteristics of the female. In referring to propaganda, Dr. Scurfield explained that he really had in mind the education of the community, which would cost little and could be tried at a time when no money is available. As regards cost of widows' pensions and subsidies to large families, an estimate had been put before a recent Child Welfare Conference, that the former might cost six millions and the latter three millions per annum, but there would be many savings to put against this expenditure.

DURHAM COUNTY COUNCIL.—Dr. A. G. R. Cameron, Deputy County Medical Officer, will receive a pension of £300 a year from the Durham County Council, on his resignation owing to ill-health.

VISIT TO THE UNITED STATES OF AMERICA.

BY

CHARLES PORTER, M.D., B.Sc., Medical Officer of Health, St. Marylebone.

V.

The journey from Norfolk to Baltimore by water was the most comfortable night journey I made, those by train in the Pullman cars of which American friends had always seemed to be so proud being in general most unpleasant. The reason for shortening the period of stay in Virginia was, as already explained, to give an opportunity of accepting the invitation of Dr. Welch, the director of the School of Hygiene and Public Health in John Hopkins University, to inspect the school and see something of the work done there.

As I have elsewhere given a description of the various laboratories and departments visited here, and have also outlined the courses of study available for students and the degrees to which they lead, it is probably unnecessary to say much with regard to them here. One point that struck me about the classes in the school was the variety of nationalities represented by the students. Regularly, large numbers come from Central and South America and from Canada, Japan and other countries in the east sending also a few. In this school, as in others, the foreign students appeared to outnumber those from the United States, the number of American students with medical qualifications seeking diplomas or degrees in public health being extraordinarily small. Indeed the number of medically qualified men willing to take up public health appointments in the States does not appear to be large, so small, as a matter of fact, that quite a number of posts, between thirty and forty, I believe, remain unfilled for this amongst other reasons. Of health officers actually holding appointments an appreciable percentage are non-medical; and of these medically qualified comparatively few have any public health qualification, there being no law limiting appointments to persons possessing special diplomas or degrees. While I am on this point I may say that in this connection what is true of the health officer is true also of other ordinary members of the health service; the sanitary inspector and the so-called "public health nurse."

So far as I could make out, there are no schools for the training of the former and no specific qualification. In some states the men must pass some sort of examination held by a "civil service commission," but in the main they

are chosen on general personal grounds, and on such special grounds as the trade they followed prior to the time they apply for, or are invited, and in some places even pressed, to take the appointment.

The public health nurse in law does not seem to be required to be the holder of a special diploma, but the nurses themselves, I gathered, are trying to make and keep the standard high and will probably succeed, partly because there is a larger supply of women for the work, and competition is a little more keen. In some of the larger cities in certain of the states also provision is made for giving some training in public health nursing. In the Yale School of Nursing, opened this year, the curriculum of twenty-eight months proposes to take in "public health and community work as well as hospital service," and to fit the nurse for public health as well as, presumably, other forms of nursing.

While in Baltimore, in addition to going over the university buildings and the hospital, we had an opportunity of visiting the city public health department, and hearing something of the organisation and the work done from the Health Commissioner—Dr. Jones, a graduate in medicine of Edinburgh University—and some of the departmental heads. Also we had the honour of being received by the Mayor and of inspecting certain works of public health interest in the city. Baltimore is a large city with a population of about 800,000, and the public health field seems to be fairly well covered, there being a special division with a divisional head and a staff for practically every branch of work. This, as I was to learn later, is the usual practice in the large cities, and works well, and has many advantages, though it must be very expensive.

In a very interesting talk which he gave us, Dr. Jones told us something of the efforts now being made to deal with diphtheria, of which they have a large number of cases annually; the number notified in 1922 being 1,531, with a case mortality of 12.9 per cent. In dealing with the disease great reliance appeared to be placed upon swabbing, and daily vast numbers of swabs are examined, all the children found to be positive being isolated at home until a negative virulence test is obtained. A considerable amount of schick-ing and immunisation is also being done, and in due course no doubt will be extended. In this connection assistance is being obtained from the Johns Hopkins School of Public Health, and from the members of the staff concerned in this I learned that there appeared to be little reason for doubting the value of toxin and antitoxin immunisation

as a preventive. In Baltimore, as elsewhere, hospital isolation of infectious cases is little practised; indeed, it cannot well be otherwise, since the available accommodation at the moment amounts only to 47 beds. I was rather pleased to learn in a country where so many appear to be satisfied with "quarantining and placarding" that the people of Baltimore are anxious to have more beds, that the health officer would also be glad to have a proper supply, and that, in fact, a hospital is now under construction that will bring the total beds up to over 150. In the short time at our disposal we were able to learn a good deal with regard to the public health organisation in Baltimore and the work done there, but as it was not officially on our programme for visitation for this purpose and most of the matters were not fully gone into, I do not propose to say more about the city than that I, like all the others in the interchange, was very glad to have the opportunity of visiting it and the university, seeing so many interesting things and meeting so many pleasant and kindly people. After two days in Baltimore the groups were re-formed and each set out for the northern state allotted to it for investigation. That chosen for group 1 was Massachusetts, and to Boston therefore we travelled, by train, and, unfortunately, at night, arriving dishevelled, and in a most melancholy frame of mind all of us at 8 a.m. on a cold, damp and rather raw morning.

The programme set for Massachusetts included a study of the health activities of the state itself, and in a small city—New Bedford—and a large one—Boston. The study of the state activities was timed to begin at 10 a.m. on the morning of our arrival, and Dr. Kelly, the State Commissioner of Health, was there ready to start us off, dishevelled and uncomfortable as we were, and even though none of us had found or had an idea as to where to find a lodging for the night. Largely for these reasons the first day's programme was not much of a success, and the afternoon portion, which included a visit to a refrigerating plant, was abandoned in order to give us an opportunity of finding hotel accommodation, and myself to obtain exact information from a number of enthusiastic people as to the location of Bunker's Hill, and to note, exhibiting proper signs of discomfort, the exact spot where a certain cargo of tea was disposed of.

During the forenoon and before we set out to do the things referred to, Dr. Kelly took us through the programme that the state department had prepared for us, and also told us something of the health organisation of the state and of the work done.

Speaking generally with regard to the programme here it may be said that it was very sketchy and much more of a series of excursions to places of sanitary interest than that provided for us in Virginia. There was not here, as there had been in the South and there should be in every interchange, a sitting down to hear about what requires to be done in each particular direction, of what is being done and the arrangements for doing it, and this followed by one or more visits designed to show not only the arrangements in operation but the places in which they should be in operation. Than such a method there is none, I believe, better designed for ensuring that the host officers and the visiting officers shall become properly acquainted, for making certain that each side shall recognise fellow craftsmen in the other, and for having properly attained one of the most important objects of the interchanges the forming of bonds of friendship between health officers and through them between the health organisations in the countries represented. In Belgium I noted that the local health people addressed one as *cher confrère*, and though it is not an expression that I, or any of us here, probably, could or would use, I am bound to say I liked it, largely because it seemed to express exactly the spirit that the interchanges should, and undoubtedly will produce.

The state department programme for Massachusetts I should say was not designed on the lines indicated. Opportunities such as those described of getting to know, as one desired to get to know, most of the people, were few. The Commissioner himself after the first afternoon we did not see again, either during the time we were supposed to be attached to his department or later, when, on our return from our "small city" study, we spent ten days or so with the health staff of the City of Boston.

The only member of the State staff we really did get to know, and with whom we spent any time, was Dr. Remick, the head of the Tuberculosis Division. Tuberculosis, as a matter of fact, was the chief item on the programme, and of the ten days devoted to the State Health Department, three were spent in visiting sanatoria, travelling considerable distances by train or automobile, or both, in order to reach them. As excursions these visits proved exceedingly interesting, and were not without value, affording opportunity of becoming better acquainted with Dr. Remick and hearing from him something of the hopes, based on a scheme of examining all underweight school children and providing appropriate advice and treatment for those found to be in need of it, of dealing with

the tuberculosis problem in the State. Also we saw many of the beauty spots of the State, which were indeed beautiful, in spite of the lateness of the season; noted the cider mills, and drank sweet cider, and received our first introduction to the "MacIntosh Red," one of the most delightful apples I have tasted. Of the sanatoria visited, one was intended only for children, and although not particularly attractive, is doing splendid work under Dr. Chadwick, the superintendent, and a recognised authority on tuberculosis. The form of treatment greatly favoured here in the case of the younger children, is that involving running about in a condition of more or less complete nudity. The children appear to like it, and good results are claimed. Another of the sanatoria (Essex County) is one of the most expensive I have seen. Everything is of the latest and most elaborate, and the cost was enormous, working out at about 0,000 dollars per bed. The actual number of beds is 200, but at the time of our visit there were only 120 occupied, and never more than 176 patients can be taken, and that number only if 50 per cent. are bed cases.

This was one of the few sanatoria in the north where the cafeteria system of feeding the patients, already described, has not been introduced.

Of the remaining six or seven of our days with the State Board, two were spent in the division concerned with water and sewage examinations and the engineering division. All the officers of these two divisions received us most courteously, showed the greatest willingness to be helpful to us, and took an immense amount of trouble to make the time spent with them interesting and informative.

With them we visited the Metropolitan Water Works, which are under the State, and from which Boston and the satellite towns around it are supplied, and paid a visit also to the experimental station at Lawrence, some few miles outside the city. Much of the great reputation enjoyed by Massachusetts, so far as health matters are concerned, has been built up on the work of the engineering and water laboratory departments of the Board, and to all of us it appeared infinitely pathetic that no less than other divisions these appeared to be sorely hit by the economy wave that is sweeping the State at present, and to be suffering from a lack of appreciation of the value of the work they have done and are doing. The Lawrence station, which, of course, is known to water and sewerage engineers all over the world on account of the researches and discoveries made there in connection with sewage disposal, seems

to have been particularly hard hit, and presented rather the appearance of a place whose glory has departed.

Another division from which we went visiting was that concerned with food and drugs, the visits paid being the first to a cold storage plant and the second to a large packing house, where we saw the usual wholesale slaughter of pigs, following them through till we saw them packed as slices of bacon in artistically decorated boxes. Here, as in other places of this type, I was greatly impressed by the thoroughness of the examination carried out by the United States food inspectors attached to the premises.

The State food and drugs department is concerned with the examination of foods of various kinds and also examines materials submitted by the police, e.g., narcotics and alcohol. Last year, we were informed, the total number of liquor samples submitted by the police, following seizures, was 6,111 as against an average of 10-15 per month in pre-prohibition times.

Two other laboratories under the State department to which we paid visits were the Biologic Laboratories, which are under the charge of Dr. White, and the bacteriological laboratory, at which specimens submitted from all over the State are examined free for diagnostic purposes. At the Biologic Laboratories all the antitoxin and vaccines are made for Boards of Health throughout the State, as well as the materials for Schick-testing and toxin-antitoxin immunisation. The time spent here was most interesting, and we were gratified to learn that it was entirely as a result of Dr. White's efforts that any arrangements at all had been made to receive us in Massachusetts, other officers being averse to having us, and anxious to suggest to the Surgeon-General that we be sent to some other state. This, as a matter of fact, we had quite early suspected, and often we had the feeling that we were rather a nuisance, more particularly as not only were things rather busy at the time of our visit, but everybody at the State House was very much worried by threats of curtailment of expenditure and fears of reductions in salaries and allowances. Apropos of economy waves and retrenchments it was in the state health department in Boston that I encountered one of the most novel and striking economy methods in my experience. This I found in the staff lavatories in the building in which, with the object of reducing expense, the only material allowed for hand-drying purposes was ordinary toilet paper. From experience, I may say that it does not make a good substitute for towels, and must therefore considerably irritate the staff. This, no doubt,

affords the ardent economiser a great amount of satisfaction.

The laboratory at which ordinary bacteriological diagnosis work is done is in the State House. It is under the direction of a woman, and is staffed entirely by women, none of whom, including the director, has a medical qualification. Speaking broadly, in this, as in other branches of public health work, medical training and qualifications appear to be regarded as superfluities, and in few of the laboratories visited did we find either the director or the staff to be medically qualified. Several, of course, possessed or used the title "Doctor," but as the doctorate is a recognised degree conferred in a multitude of subjects by American universities and teaching institutions, it came to mean very little to us. If one desired to know if an individual were medically qualified, one asked if he were a physician; it was useless asking if he or she was a "doctor," as the reply was almost invariably in the affirmative. Doctors are almost as numerous in the States as professors are alleged to be in Scotland. The work done in this laboratory is of specimens from all over the State, and very considerable advantage is taken of the provision made. This, apart from the making and supplying of antitoxins, vaccines, etc., appeared to be one of the few purely medical health works done by the state department on behalf of the local health departments throughout the States; the bulk of the work being more or less advisory, and with a view to stimulating the smaller authorities to carry out their health functions. The independence of these bodies, we were informed, was very great, and the State Board possessed nothing in the shape of compulsory powers.

In this regard, Massachusetts resembles more or less Virginia and probably other states, and indeed the United States, in its relation to the individual states in the union. In other respects the differences between the organisation in Massachusetts and that in Virginia appeared to be quite marked. The area of this state is 12,000 square miles, and though it is divided into counties, as in Virginia, none of the thirteen is administrative, at least so far as health is concerned. In Massachusetts it is the towns and cities that are important from this point of view, and of these there are 355 with populations varying from 50 up to 800,000, as in the case of Boston proper. The total population of the state is 4,000,000, and of this number nearly half (1,200,000) live in Boston or the smaller townships, such as Cambridge, which are continuous with it. The independence of these various towns, even the smallest,

is practically complete and seems to be most carefully guarded, even to the extent, in some cases, of resenting interference by, or suggestions from the state department. Though this department has, as explained, no power of dictation or interference, it nevertheless has divided the State into seven areas, and has put a medical officer in charge of each, with duties mainly in connection with infectious diseases, but apparently no power to do anything except offer to co-operate with the local boards and officers, if any.

The State department itself is in charge of the Health Commissioner, appointed by the Governor, who appoints also the Health Council, which consists of six members. None of these are apparently required to hold any special qualification. Unlike other Boards, this body has no power to make regulations, this being the function of the local authorities.

The staff of the State Health Department, including those in the State Sanatoria and other institutions, numbers about 700. Actually in the department there are 200. Of these, 100 are technical, and of this number 30 are medically qualified. The divisions, including that of sanitary engineering, are seven in number, and sufficient reference has already been made to these and the work they do. The total expenditure of the department in 1922, it may be noted, was 1,000,000 dollars.

During the times we were the guest of the State Health Department in Boston, we had the privilege of visiting Harvard University Medical School and of being shown over the Hygiene Department by Professor Rosenau and the Bacteriology Department by Professor Zinsser. The former took us over his department, and we had a few minutes' talk from various members of the staff who were engaged on special investigations of one kind or another. Rosenau himself told us something of the courses given in the department and the degrees and qualifications the university is prepared to grant in public health. In essentials these differ little from those of which I have already spoken when referring to the department of hygiene in Johns Hopkins, and there are several that may be taken without the necessity of holding a medical qualification. In the course provided for the medical students quite a good deal of attention appears to be given at Harvard to public health, each student being required at some period or other after completing the course to submit a report in the form of a sanitary survey of some town or district, e.g., that in which he resides. Some of the reports I saw were extraordinarily well got up and well done, and the plan would seem to be a good

one for interesting medical students in public health and public health work. So far as the course of study for students for public health qualifications are concerned I must confess that I did not find them at all clear. In the announcement of the courses a number of courses in a variety of subjects are referred to and the student apparently is required to make a choice of a programme and to submit it to the school. No minimum is laid down and, indeed, in a note to the syllabus it is stated that "the University believes that education in public health in its present state of development will be better served by placing before the prospective students not so much the detail of special courses, curricula or tabular views, as a general suggestion as to the manifold opportunities which the University offers to those who desire to enter this field." The courses offered include Bacteriology and Research under Professor Zinsser; Parasitology (two courses and research); Preventive Medicine and Epidemiology, Communicable Diseases; Tropical Medicine; Public Health Administration (in which Dr. Kelly, the Health Commissioner and some eight or ten others, including Dr. Chapin, all take part, giving from two to ten lectures each); and Applied Physiology. Industrial hygiene, it would appear, the school is rather anxious to specialize in, and courses are offered in Industrial Medicine by a number of lecturers. Also a special department and laboratory for the carrying out of studies in ventilation and illumination has been set up, and students will be offered an opportunity of carrying out research. The fees for one year are 300 dollars.

At this visit, in addition to meeting Rosenau and Zinsser and others of the staff, we had the great privilege of meeting also the Dean of the Faculty, Dr. Ensaul. The pleasure experienced by all of us at that meeting was repeated on a number of occasions later in Boston, New York and elsewhere, and if for no other reason than that his interest in the School of Hygiene was so intense one feels bound to wish it all the success possible.

Our period of attachment to the Staff Board of Health concluded, we proceeded to New Bedford, which had been chosen as the place in which the public health administrative methods in a small city might be studied. New Bedford, with a population of 130,000, is the third largest city in Massachusetts, and was formerly a great whaling centre, but is now almost entirely industrial, its cotton mills providing employment for thousands. The mixture of races in the population is extraordinary, there being in addition to many English—

from Lancashire mainly—a great number of Portuguese, Poles and French Canadians. I have elsewhere made some reference to the health work I saw in New Bedford, and more particularly that in relation to school children. As a matter of fact, I was greatly impressed by the completeness and activity of the health organisation of the city. The Board of Health and the Health Officer, or "Agent," as he is called, are appointed by the Mayor. The Board consists of three members, one of them a medical practitioner, each receiving 700 dollars per annum. They meet generally once a week. The present holder of the office of Agent is a Mr. Kirschbaum, who was at one time himself a member and chairman of the Board of Health. He has no medical qualification; indeed, no member of the directorate of the department is medically qualified or holds a special degree or certificate in public health, part-time doctors carrying out such duties as must be done by a medical practitioner. These officers, like the dentists and nurses employed by the Board, are all under lay direction, that of the Agent or the so-called "Director of Field Work," a gentleman formerly a Unitarian minister and a well-known social worker in the city.

In New Bedford we were received with the utmost kindness, and during the period of our stay were taken through the whole of the work having any public health bearing. As a matter of fact, from the moment of our arrival till the train that carried us back to Boston steamed out of the station, the city claimed us, and there was practically no time we could call our own.

At an astonishingly early hour each morning we were taken in hand, generally by Mr. Kirschbaum, the Agent, who would explain to us the arrangements connected with some one or other branch of the work, and would then whisk us off to inspect the items he had explained.

Very clearly it was revealed to us that there was practically no branch of health, even the most modern, for which some sort of provision had not been made in this exceedingly progressive city. We saw, I believe, everything, and by very much of the work we were very greatly impressed. That done on behalf of the children and for the tuberculous perhaps struck us most. Elsewhere I have said something of school medical work and of what is being done in New Bedford in regard to dental care amongst the school children. In respect of tuberculosis the scheme in operation is more or less on the lines of that in operation here, and the tuberculosis dispensary and sanatorium provided by the authority seemed to be very well

equipped and run, and to be doing excellent service.

Infant welfare work largely also follows general lines, and in connection with it much assistance is received from voluntary associations. On account of the fact that the population includes so many different peoples, most of them foreign born and apparently unwilling or unable to grasp new ideas, the difficulties in the way of the infant welfare scheme are tremendous.

Nevertheless there is progress, the number of attendances at clinics steadily increasing and the infantile mortality rate falling. In relation to diarrhoea the improvement has been very marked, the number of deaths having decreased from 370 in 1918 to 80 in 1922, the number in August, 1923, was 37.

The midwifery situation in New Bedford is regarded as unsatisfactory by the authorities, though it would appear that conditions are improving, the number of births reported by midwives becoming smaller year by year; the total number of midwives on a roll kept by the City Clerk is 26, most of the women being, we were informed, Portuguese and not too well educated. Attempts have been made to insist upon licensing of midwives after examination, but without success. With the object of assisting the maternity work the local hospital has provided a certain amount of lying-in accommodation, several of the beds being free. These, curiously enough, are not at all popular, the women apparently preferring to remain at home and receive attention from one or other of the midwives. As generally, I imagine, throughout Massachusetts, the Mothers' Pension Act is in operation in New Bedford. This provides for the payment of certain weekly sums to a widowed or deserted mother, for each child. The amount in this city is estimated scientifically by a special officer, who goes into the question of the number of calories to be provided, and bases the grant on these. Roughly, a mother with five children received fifteen or sixteen dollars per week, though a resurvey of the allotment is made every two or three weeks.

The method of dealing with the communicable diseases in New Bedford is much the same as in other places visited. In all, some 34 diseases are reportable, and no fee is paid. There is one isolation hospital, but it is very rarely used, reliance being placed upon home isolation, placarding and quarantining. Disinfection is only done after smallpox.

The question of milk supply is regarded as a difficult one, and to me, personally, it appeared very interesting, since the problem presented what I thought to be features not unlike

those seen here, inasmuch as the great bulk of the supply comes from small farms where general farming is done, milk production being only more or less of a side line. Many of the farmers are Portuguese, few of whom, I gathered, hold their farms for more than a few years at a time. Though there are some, the number of individuals willing or able to specialise in milk production is small, and the difficulty in New Bedford is complicated by the fact that, as here, the licensing and supervision of the farms is in the hands not of the City Board of Health, but of the local boards. The pasteurized milk sold in the city is produced in the main by distributing firms.

The programme prepared for us provided opportunities for the inspection of water supply and sewage disposal plants. As usual, the engineers with whom the visits were paid were amongst the most courteous and well-informed men with whom we came in contact, and the time spent with them full of interest.

In regard to these two provisions we were struck, as we had been struck when considering other municipal activities here, by the amount of foresight that had been shown by those who devised the schemes in the first instance. Clearly it was revealed that those responsible recognised that a long view must be taken and provision made for the future development of the city. No doubt, indeed, we were so informed, the author of the scheme was violently criticised at the time for his extravagance, but that he was justified, if it has not been revealed already, will abundantly be revealed as the years go on and the city progresses, as she shows every indication of doing.

In addition to being shown a tremendous amount of work in New Bedford, we were shown a most wonderful hospitality, both public and private. Citizens entertained us in their homes with the utmost kindness; the Rotary Club gave us a lunch and the City Council provided a banquet on the eve of our departure, at which all our national anthems were played and our countries' flags displayed, and we all made speeches and shook hands with some hundreds of people.

This was of course a great honour, but not the only one we received, amongst which I must count that I was invited to deliver an address on Armistice Day in one of the churches, and that we were all made to play a part in the local publicity on behalf of public health.

Publicity in the States, as is well known, is a special thing, not, as here, dreaded, but actually courted. Anything and anybody that or who can be used in connection with publicity

is so used, and no bones whatever made about it. We were in New Bedford for public health purposes; the fact that we were coming to see public health was widely advertised, and was never allowed to be forgotten during the whole of our stay. To me, as a public health man, it appeared the most delicate compliment that could be paid us, to count us, our coming and our presence, as things that could be made use of by the Council, and more particularly the Board of Health, in their efforts on behalf of the public health of the city.

From what has been said, it will be understood that it was with considerable regret we took our departure from New Bedford, though the fact that the regret was obviously shared by many of the friends we made there to some extent modified the feeling.

After New Bedford our next destination was Boston, where we were to devote some ten days to a study of the administrative methods followed in that city. Like the majority of large cities in the States, the public health department here is under the charge of a Health Commissioner who is appointed by the Mayor and holds office during the tenure of the Mayoralty by the person appointing him. The reasons behind the appointment of any particular individual appear to vary considerably: sometimes they are personal, sometimes, no doubt, political. The present incumbent of the post in Boston is Dr. Mahoney, who, at the time of our visit, had only been in office about a year, though I understand he has held office previously under another administration. During the period of our stay we were so unfortunate as to see very little of him, though he was very pleasant and kind on the two occasions when we did come in contact with him, presenting us to the Mayor and arranging that we should have tickets for the opera at any time we felt like it.

The members of the staff with whom we came mainly in contact were the Deputy Commissioners in charge of the laboratories, bacteriological and chemical (Dr. Castleman and Professor Jordan), and of the medical division (Dr. Safford, formerly a member of the United States Public Health Service), and certain of the medical inspectors. The Deputy Commissioners are full time officers, and are appointed after examination and approval by the State Civil Service Commission. The medical inspectors are part time only, and are mainly concerned with the investigation and quarantining of reported cases of communicable disease, though, at the moment, most appear to be engaged in carrying out Schick tests in the

parochial schools. One of the inspectors, Dr. Wilinsky, is greatly interested in the work of a "Health Centre," which he was instrumental in having established in one of the poorer districts of the city. This has been exceedingly successful in bringing together official, voluntary and other work—nursing associations, infant and dental clinics, etc.—not only under one roof but under one scheme of co-operation. The morning spent with Dr. Wilinsky at this centre was most interesting and informative, the arrangement reminding me more of our centres here than anything I saw in the states and cities visited.

Two mornings spent with another of the medical inspectors, Dr. Cecconi, while he Schick-tested and immunised a number of children in one of the parochial (Catholic) day schools, also proved interesting. So far as I could gather, the fact that testing and immunising had been taken up in Boston was largely the result of the efforts of Cecconi himself, who worked for some time with Park in New York, and is firmly convinced of the efficacy of the toxin-antitoxin mixture and not at all inclined to believe, as are so many here, that it is only in residential institutions for children that the process can be satisfactorily carried out. At the time of our visit, as a result of active propaganda, the health department had been given free access to the parochial schools, and, assisted by the clergy and the teachers, had succeeded in inducing practically all the parents to agree to accept testing and immunisation for their children. The scheme impressed me as exceedingly well organised, and Cecconi, particularly, as an expert. The number of children immunised at the time of our visit was about 45,000; by now, judging from the rapidity with which the work is done, it must be over 60,000. The various materials used in the testing and immunising process are prepared at the State Laboratory, and the syringes used are fitted with a special shoulder designed by Dr. Cecconi in order to permit the needle to be turned over after it has been inserted, without the necessity of changing the position of the hand in any degree. It will be noted that it is, up to the present, only in the parochial schools that work of this kind has been done by the department. The reason for this is that it is only in such schools that the public health staff can and does operate, the school medical service in the case of other schools, those comparable to our council schools, being entirely separate and arranged for by the School Committee. In medical charge of the school medical work there is a Director of Hygiene, a full time officer, and under him a number of part-

time medical inspectors, each of whom is required to visit daily each school in the area allotted to him, and also to examine each child at least once a year. In addition there is a large staff of school nurses who also visit the schools regularly and do follow up work in the homes. It did not seem to me that the work of school medical inspection was so completely organised as it is in general here. So far as regards treatment of defects, this, I imagine, is left to the parents and guardians to obtain under pressure from the school nursing branch of the service, which appeared to me to be particularly well organised with a personnel very capable and enthusiastic.

For treatment of dental defects amongst the school children reliance is placed upon the Forsyth Dental Infirmary, an institution provided and endowed by the gentleman whose name it bears, purely for the purpose of affording curative and preventive treatment for children, though provision is also made for the carrying out of a certain amount of throat work also. Well known to everybody throughout the world concerned in any way with dentistry, this dental infirmary is probably unique. The dental department contains some hundred chairs, and in association with each all the instruments and apparatus the dentist in charge of it may require. To the infirmary children come from schools all over the city to receive at a nominal charge all treatment considered necessary. This is provided by dentists if need be, but also by "mouth hygienists," women specially trained to carry out all types of dental work except extractions, fillings, etc. In connection with this institution there is a school for the training of these women, and considerable numbers appear to be taking advantage of the facilities provided in anticipation of taking up appointments as school dental hygienists or with dental surgeons in practice.

The arrangements for carrying out bacteriological work in Boston and the facilities provided for bacteriological diagnosis appear to be very complete. Dr. Castleman, who is in charge, is medically qualified, and has a large staff of assistants. In addition to the, in general, large numbers of diphtheria swabs, specimens of sputum and of blood, for Widal and Wasserman tests, samples of milk are continually being taken and submitted to examination. Chemical analyses of this and other foods are made in a separate laboratory presided over by another of the assistant commissioners, Professor Jordan, who is charged also with the duty of arranging for all sampling, with registration of milk dealers, etc. In connection with food, we had an opportunity of visiting one or

two farms with a veterinary officer in charge of this branch of food work, and with another inspected certain food premises, including a very high-class restaurant of the cafeteria—self-service-type. In Boston, as in Baltimore, I was much less impressed by the control obtained over the milk supply than I had been in Richmond, though it should be noted that the problem in places of the size of these two is bound to be tremendously difficult. The number of farms from which supplies are drawn in the case of Boston is something like 20,000, many of them at a considerable distance from the city, nevertheless an attempt is made to inspect them, and all, I believe, are seen from time to time. Grading of milk is not required by law, nor is the tuberculin test. About 92 per cent. of the supply is pasteurized.

The amount of infant welfare work done in Boston appeared to be very considerable, much of it being carried out by voluntary organisations. The public health department, as a matter of fact, has no welfare centres, though a certain number of visits are made by the public health nursing staff. As elsewhere, there is the usual difficulty with the midwife question, eyes being shut to the fact of their existence and the law requiring that only medical practitioners shall report births. Midwives are not registered and are not supervised, and probably attend a very large proportion of the births that occur in the city. With the recently appointed director of the child welfare division we had an opportunity of visiting a number of institutions in Boston, including the lying-in hospital and the children's hospital. Both of these are quite modern and are most beautifully constructed and equipped, and admirably run. Though we did not board her, we saw also the ship which during the summer months provides accommodation for numbers of sick babies and children.

The work in regard to tuberculosis is not carried out from the public health department, nor apparently under the Board of Health, a special committee set up by the Mayor being responsible for the conduct of the clinics and the hospital for consumptives. There is no full time tuberculosis officer in Boston, the work at the dispensaries being in the hands of a number of part time officers. The follow up work is well done by a good staff of nurses, who appear to do a good deal of medical work at the dispensary, e.g., giving injections, taking blood for Wasserman tests, etc. The hospital for consumption is intended for advanced cases only, and many of the patients have been inmates for long periods. I was interested to learn that since the introduction of prohibition

and the abolition of the saloon, the patients had been much more content to remain, though it was also stated that not uncommonly those who were allowed out for the day came back intoxicated, or forgot to come back at the end of the period of leave. It was by the nurses attached to the tuberculosis dispensary that it was alleged that since the introduction of prohibition, conditions in the homes they were called upon to visit had greatly improved. Further, apropos of prohibition, I might add that it was in Boston I heard one of the famous brothers Mayo make the astounding statement that the reason why the older European countries had failed to adopt prohibition was because the water supplies were in general bad. This statement followed a description by the same authority of the educational system in operation in England. In the system as described there were so many features that were new to me, that I was forced to conclude that it must have been altered during my absence. The enlightenment afforded by Dr. Mayo was given at the opening of a new department at the Boston City Hospital which we had been invited to attend by his Worship the Mayor, who himself delivered an address that went far to prove that the stories we had heard of his powers as an orator were not exaggerations. The City Hospital, like most of the institutions of this kind we visited in Boston, we found to be admirably equipped, and in the building set aside for infectious disease were greatly impressed by the rigour of the technique imposed in the cubicle wards and by the precautions we were compelled to adopt before entering the wards and leaving the building. The contrast between the stringency accompanying the isolation in the hospital and the laxity in infected homes under the placarding and quarantining scheme was extraordinarily marked.

The time spent in Boston was, in general, very much less strenuous than that in any of the other places we had visited, and most days we had quite a number of hours for ourselves which allowed opportunity for seeing the sights and going into any branches of work in which we were particularly interested. The weather beginning to get cold—it was then late in November—heating appliances in hotels and elsewhere were well under way. Personally, I found the heat indoors unbearable, and never really became acclimatised or learned that it was impossible to form any opinion as to what the temperature outside might be until one was actually out of doors.

The course in Boston ended on the 24th November, and the following day we set out for New York to join members of the other groups

of the interchange back from other Northern States. In a future article it is hoped to give a short description of the matters studied in New York and also of experiences in Geneva and during a short intensive study of health work in Belgium, which a few of us were fortunate enough to be invited to undertake.

Previous articles in this series appeared in the issues of November and December, 1923, January and March, 1924.

THE PUBLIC SIGNIFICANCE OF MENTAL DEFICIENCY.

At the meeting of the Society held on Friday, January 18th, 1924, Dr. Meredith Young read a paper on "The Public Significance of Mental Deficiency," which was published in the last issue of "Public Health" (June, 1924, p. 226).

By inadvertence we omitted the following report of the subsequent discussion:—

Dr. G. F. Buchan (M.O.H., Willesden) said it was not often they had a lecturer who kept strictly to the title of his paper, and Dr. Young was to be congratulated upon having done so in his extremely interesting paper, in which had been put forward the various possible methods of dealing with mentally defectives from the point of view of the public. He had advocated strongly that for low-grade defectives the only means of dealing effectively with them was the lethal chamber. On the other hand, for the high-grade he had carefully put out for consideration the pros and cons of sterilisation or segregation, and the weight of opinion, in his view, appeared to be in favour of segregation. He had been somewhat disappointed with the medical report from the committee of experts on the question of sterilisation. However it might re-act it seemed to him that there was little doubt but that sterilisation was bound to reduce the amount of feeble-mindedness in this country. Greater knowledge of the relationship of crime to mental deficiency was required, but when it came to the practical fact of whether a man who was a danger to society should be put into prison or dealt with elsewhere it did not matter much where he went. The only advantage was that by segregating him as a feeble minded he could be treated under better conditions for a longer period. It had been pleasing to hear of the reference to organotherapy and it was to be hoped that Dr. Young's prophecy in that respect would prove to be correct.

Dr. R. Veitch Clark (M.O.H., Manchester) held that apart from the question of principle there was a very strong case for sterilisation, particularly for the reason that the Mental Deficiency Act did not provide adequate powers for the segregation of high-grade defectives, who constituted the type most likely to propagate. In regard to the point that sterilisation would not prevent mental deficiency because the supply was derived largely from people affected with neurosis, it was to be remembered that there were really two groups of origin of mentally defectives. He believed, firstly, that high-grades were begotten only by neurotics, and low-grades begotten largely by high-grade defectives. So far as the working of the Acts was concerned there was no doubt that Dr. Young had put his finger on one vital point, that a mentally defective required control throughout the whole of his or her life. Apart from sterilisation the only thing to be done was segregation and in many cases segregation would be needed for other reasons. Dr. Clark did not think that the removal of the fear of procreation would have any effect at all upon the sexual relations of mentally defectives nor did he consider that it would make any difference to the general mortality or incidence of venereal disease.

Dr. R. Woolsey Stocks (M.O.H., West Bromwich) endorsed the statement that local authorities had not done what they had been called upon to do under the 1913 Act, owing to financial stringency. Accommodation for the normal child being insufficient it was impossible to obtain authority for building institutions for mentally defectives or making costly arrangements for their care. For his own personal protection he certainly did not seek out the high-grade mentally defective. A census of the schools, for example, resulted in applications pouring in as to what was going to be done with the children, though in these cases one might be able to deal with them satisfactorily in special day schools.

Dr. W. J. M. Slowan, O.B.E. (Assistant M.O., London County Council), speaking in regard to school children, only said he had been rather alarmed on hearing that the Board of Education would hold school doctors responsible for any mentally defective child found in the school. They had not suggested how these children were to be found. At the present moment there was a general tendency to hide the mentally defective children, for in these days no teacher wanted to lose any children from his department. It was very difficult for school medical officers to act, and they relied upon teachers to bring forward children who they thought should be in special

schools; otherwise they had no means of finding them. He was strongly in favour of sterilisation. Children presented to them for statutory examination with a view to being transferred from elementary schools to special schools were so often found to have parents who were mentally certainly very much below the average, and in his view the only way possible to prevent the procreation of mentally defective children was to sterilise.

Dr. Charles Sanders (M.O.H., West Ham) regretted the recommendation that more conferences on this subject should be held. Of such meetings during recent times there had been more than enough, and he did not see that any immediate advantage was to be derived from them. Unfortunately, the Mental Deficiency Act was passed and placed on the Statute Book before they were in any way in a position to carry it out effectually. One of the gravest defects of the Act was that though a great deal of trouble might, at the request of the parents, be taken to get the child into an institution arrangements could not be made for them to see the child and they immediately endeavoured to obtain its discharge from the institution. If instead of sending representatives to look after an institution which was thoroughly well maintained, there was authority to pay the fares of parents to visit occasionally, they would be able to retain in institutions the children sent there. Referring to another point, the paucity of guardianship, mentioned by Dr. Young in the paper, Dr. Sanders looked upon the power to appoint guardians as applying to families of the wealthy classes. The guardian was hedged round with all sorts of liabilities if he did not carry out many regulations which were also applied to an institution where, for something like 27s. per week, a mentally defective could receive training under the best conditions. In his view £5 a week would not be too much for private guardianship and this was very different from the ordinary fee chargeable at an institution. He was not prepared to discuss the question of sterilisation but quite agreed with Dr. Young and Dr. Buchan that if there could be any extension of endocrine treatment, from that point of view it was the most hopeful outlook they had.

The President, in offering to Dr. Young the thanks of the Society for his admirable paper, apologised for the poorness of the attendance at the meeting. He greatly deplored the paucity of the attendances at the ordinary meetings, and personally thought that if a man of importance were asked to come a long distance to read a

paper before the Society it would be expected that more members would be present to hear it. It was no encouragement to those who tried to get good papers from men well qualified to deal with special subjects to get them there to such small audiences.

Dr. Meredith Young, in replying, said there was not a great deal to criticise in the remarks which had been made. He had been glad to note pretty general agreement on the question of sterilisation. Dr. Buchan had hit on the weak spot of the committee's report in regard to sterilisation and the reduction of the number of mentally defectives. The Act certainly was not strong enough to enable one to deal as one would like with the high-grades, whose potential power for mischief was even greater than that of the low-grade. This was due to the manner in which the Bill had been mauled in the House of Commons; in fact, after the way it had been dealt with they were fortunate in having an Act at all. Dr. Veitch Clark had agreed on the question of the continuous control of mentally defectives. In that connection it was rather astonishing to find that in the report of one authority it had been stated that 28 per cent. of the inmates could be left to fight their battles on an equal with normal people. Had the percentage been 2·8 it might have been understood. He agreed with Dr. Stocks that the provision of adequate institutional facilities was an impossible thing to hope for at the present time. He had tried to get his authority to move in the matter and only after six years hard work had they been able to arrange for the setting aside in a poor law infirmary of a special block for the purpose of dealing with mentally defectives, principally low-grade. The question of those leaving school was certainly another problem. If they were already in a residential school the matter was quite simple. Though they might be technically discharged and re-admitted, they need never leave the institution at all. He quite agreed with Dr. Sanders respecting the difficulty of inducing people to send their children to an institution at a distance. The great trouble was that they could not afford to visit them except very occasionally and it did stand as a serious block in obtaining their sanction. He would like to be able to pay their fares once a year in order that they might see their children. The question of guardianship was also a big problem, and in that matter the Board of Control was the obstacle. Owing to the totally inadequate fee there was only one such case in all Cheshire. The Board had suggested 5s. a week for guardianship, including food,

lodging, etc., but eventually had sanctioned 7s. 6d. As to the ultimate development of the question of dealing with mentally defectives he was very hopeful indeed in regard to endocrine treatment. He had looked up many authorities and as a result of the investigations was more sanguine about it than any other treatment, and certain that if they worked on those lines for some years they would get something of real value in dealing with mental deficiency cases.

Apropos the President's remarks on the smallness of the attendance at the meeting, Colonel Herbert Jones again suggested a reversion to the practice of having papers set up beforehand and galley slips distributed to the members, and Dr. F. G. Buchan considered that the Society might begin its sessions at 10 a.m., so that the ordinary meetings could take place at 3.30 p.m. instead of at 5 p.m. After further discussion it was resolved that the Council of the Society be asked to take into consideration any suggestions that would lead to an increase in attendances at the meetings.

BIRTH CONTROL.

Mr. H. G. Wells and Miss Dorothy Jewson, M.P., were members of a deputation which waited on Mr. Wheatley, Minister of Health, yesterday afternoon, on the subject of birth control. The deputation, which was organised by the Hon. Mrs. Bertrand Russell's Birth Control Committee, included members of the medical profession, representatives of Dr. Stope's Constructive Birth Control Society, the New Generation League, and Birth Control Clinics. The Press were not admitted, but the following official statement was subsequently issued:

"The Minister of Health received a deputation, introduced by Mr. F. A. Broad, M.P., on the subject of birth control. The speakers for the deputation included also Mr. H. G. Wells, the Hon. Mrs. Bertrand Russell, Dr. Frances Huxley, and Mrs. Jenny Baker; and a statement was read from Dr. Sloan Chesser. The deputation urged that the Minister should remove the embargo on the giving of information with regard to methods of birth control at maternity centres. In their opinion it was contrary to the whole policy of the Labour Party to deny working women access to knowledge which was readily available to people who can afford to pay for it. They also requested that the Minister should make it quite clear that doctors in the public health service were free in their public capacity to give this information when they considered it medically advisable.

"The Minister, in reply, said that a clear distinction must be drawn between allowing access to knowledge and actually distributing knowledge. No one would seriously maintain that access to knowledge should be forbidden, but public opinion on this question was not so definite that it would allow State and rate-aided institutions to do more than direct people in need of advice as to where it should be obtainable. The decision in fact must be with Parliament, and not be assumed by administrative action."

What actually occurred at the Deputation may be inferred from the following extracts from a powerful article by Mr. H. G. Wells in the "Westminster Gazette" of Saturday, June 7th.

"The British Labour Movement is being agitated at present by one of the most important questions in the world, the question whether a woman has a right to clear and complete knowledge about her own body and the fundamental facts of her life. It is a searching and dividing question that may very well split the party into two discordant sections. The old-fashioned politicians who haven't yet observed that women have now got votes, consider the question ought to be left outside politics. It is too real a question for the old Parliamentary game. But the Labour Women's Conference believe that women really are responsible citizens, that democracy does mean treating adults with respect instead of concealing anything that matters most to them from them; that women ought to know what marriage means for them and how motherhood may be undertaken or declined before diseases and children and suchlike intense and overwhelming things blot out their youth and health.

"The demand the younger, more intelligent women in the Labour movement are making is that knowledge should be freely, easily, and honourably accessible to all British women. It is well to get this precisely clear. No one purposes to force this knowledge upon anyone. Mr. Wheatley, the Labour Minister of Health, pretends obstinately that that is so. But no woman who likes to be coyly ignorant, and to be overtaken by illness and offspring before she understands anything about them, need seek such knowledge. All that the innovators ask is that it should be there available for those women who want to know what they may do and what they can do with their lives, who want to go into motherhood or refuse or delay going into motherhood with their eyes open. Personally, I think that innocence is a charm confined to immaturity, and that every adult of eighteen ought to know clearly all that is of vital importance to conduct in married

life before marriage, but in this I go far beyond the modest ambitions of the advanced section of the Labour Party. They want this knowledge to be available only to the married. They want the medical men engaged at such public institutions as child-welfare centres and the like to be free—subject only to their interpretation of their professional honour—to give such information as may be asked for upon these matters. They want doctors in receipt of public money to have the same liberty of advice that every doctor paid by an upper-class woman has. They do not want poor women living in crowded homes to be obliged to bear offspring just as cows bear offspring, whether they want to or not, out of sheer ignorance and helplessness.

"Now let the reader note that in this paper I have said not a word for or against the practices known as birth-control nor about anticipatory sexual hygiene. I have my own very definite opinions on these matters, but the question under discussion here is not, what should or may be done, but about *what may be known*. It is the far profounder question of whether common poor people are to be treated as worthy of understanding and knowing about the things that concern their most intimate lives or whether in the interests of cheap labour, the Roman Catholic, population statistics, army recruiting, racial jealousy, or out of regard to the unpleasant feelings and imaginations of priests and elderly spinsters, they are to be left and imprisoned in black ignorance even when they want to know. Here I find in myself a streak of surprisingly passionate democracy. I hold that every man and woman should be the conscious and instructed master of his or her own fate. It is amazing, it is dismaying, to find a Labour Minister as ready to consider the common people a breeding herd of human beasts and as ready to keep them helplessly in the dark as the extremist Tory could be. I am convinced that even as a politician he has blundered. When women fought for votes they fought for a symbol; the reality was the possession of themselves. And that is impossible without this, if not forbidden, at least impeded knowledge. Sexual questions are coming into politics, and they are coming to stay. Before the next election every Parliamentary candidate will have to make up his mind whether he stands for knowledge or ignorance in this matter."

There is a striking similarity in the methods adopted by those people who oppose the dissemination of knowledge concerning the prevention of venereal diseases and those who oppose the publication of scientific facts concerning birth

control. The two parties include a large number of members in common although they are by no means identical. They share, however, the common desire of trying to prevent the spread of knowledge of which they disapprove and owing to that common desire they will sooner or later most certainly fail. All efforts in the past to prevent the spread of scientific knowledge have failed ignominiously and we have no doubt at all in the near future scientific facts concerning these two subjects will be widely known. No one suggests, and no one has ever suggested, the publication of these details upon the house-tops or the education of young people in matters in which they are not at all interested. On the other hand, every person should have free access to this knowledge and it should not be obtainable by the wealthy and at the same time forbidden to the poor owing to their lack of means.

With regard to venereal diseases, the fact that they can be easily prevented should be published far and wide and it should be easily possible for anyone and everyone interested in the subject to be able to obtain the very simple and easily carried out instructions relating to the prevention, and also to be able to purchase the materials necessary thereto. Similarly with regard to birth control, it should be common knowledge that this is a physiological process easily controlled and the methods of carrying out such control should be made available to everyone interested, on application. It is impossible to believe that the perpetuation of ignorance upon these vital subjects is likely to be of any benefit either to the morals or the mental or physical developments of the nation.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

HOME COUNTIES BRANCH.

The Ninth Meeting of the Session 1923-24 was held at the House of the Society on Friday, 6th June, at 3.30 p.m.

The Minutes of the previous meeting were read and approved.

The Secretary submitted a letter from the Executive Secretary in which the branch was asked to consider the desirability of the Society making a pronouncement in regard to the risk of conveyance of infection by library books. It was resolved that such a pronouncement was desirable; that the branch had no knowledge that infection was actually so conveyed but that in the light of uncertainty measures should still be taken

for the treatment of books in order to prevent the possibility of such infection.

The Secretary submitted circular No. 496 from the Ministry of Health dealing with the subject of cancer.

The report of the representative on the Council was received.

Dr. Cates then read his paper on "What shall we do with the late cases of pulmonary tuberculosis?"

He discussed the question of the virulence of the infection in chronic pulmonary tuberculosis and expressed the view that the infection was of considerable potency and consequently measures should be taken to prevent its ill-effects by the segregation of chronic infectious cases. He further discussed whether all cases should be segregated or only those in which the home circumstances were unsatisfactory. The manner of segregation, whether in wards for chronic cases which would become homes for the dying, or mixed cases—some with a more hopeful prognosis was considered and the view expressed that the latter was a more satisfactory method.

The advisability of obtaining compulsory powers for the removal of these cases to hospital and whether such powers should be general or local, presented many difficulties, especially in county areas. The lecturer favoured the adoption of compulsory powers.

The treatment of chronic cases in hospital and the amount of liberty to be given to patients to mitigate their confinement was a matter that those administering homes should carefully consider, as was the maintenance of dependants of persons who would be segregated for long periods.

A discussion followed to which the President, Drs. Kirkhope, Newsholme, Kerr Simpson, and the Honorary Secretary contributed.

Dr. Cates suitably replied.

METROPOLITAN BRANCH.

A most interesting and enjoyable afternoon was spent by the Branch on Friday, 30th May, 1924, when, at the invitation of the President (Dr. Frederic Thomson) a visit was paid to the North Eastern Hospital, Tottenham. Members were conducted over the various departments of the hospital by the President, and in a number of the wards special attention was paid to Schick reactions. Afterwards a walk through the extensive grounds brought the visitors to the President's house, where tea was served on the lawn. Prior to the departure of their guests both Dr.

and Mrs. Thomson were warmly thanked for their kindness in arranging so pleasant a function.

Preceding the tour of the hospital an ordinary meeting of the Branch was held at which the following business was transacted:

On the question of a proposal that appointments of tuberculosis officers who have had no previous experience of tuberculosis work should be on probation for the first year, the Branch concurred in the view that probationary appointments of such officers were undesirable.

No observations were offered in regard to certain suggestions proposed to be made to the London County Council by the Metropolitan Tuberculosis Sub-Group on the question of post-graduate study for tuberculosis officers.

It was decided to refer to the Council of the Society a communication from the Metropolitan Boroughs' Standing Joint Committee, forwarding a report from the Hackney Borough Council containing a resolution "That the Minister of Health be requested to issue an Order empowering the local authorities responsible for administering the Tuberculosis Regulations to prevent infectious tuberculous persons from engaging in any occupation connected with the milk trade that would be likely to result in the milk becoming infected."

Consideration was given to a letter from the London Retail Dairymen's Association protesting (a) against the sale of sterilised milk in bottles by keepers of chandlers and kindred shops; and (b) against the granting of licenses for the sale of milk to dairymen who have no shops, but who use a shed or yard as their depot. With regard to (a) the Branch were of opinion that purveyors of sterilised milk, like purveyors of all other foods, should be registered; and as to (b) that each case must be considered on its merits.

An invitation from the United Dairies, Limited, for members to visit several types of modern pasteurizing plant installed by the company was accepted, and the hope was expressed that the Metropolitan and Home Counties Branches would form a joint party to attend the demonstrations, which it was arranged should take place in the autumn.

Consideration of a letter from Dr. Annis, regarding (a) the possibility of obtaining from the Registrar-General's office earlier information on estimated populations; and (b) the devising of a scheme for securing the active support of general practitioners in connection with various preventive measures and organizations operating in a district, was postponed.

WEST OF ENGLAND BRANCH.

Progress in Orthopaedics.—A ceremony of great interest took place at Combe Park, near Bath, on May 16th, when H.R.H. the Duke of Connaught formally opened the recently erected Children's Orthopaedic Hospital.

The generosity of a few public spirited subscribers has enabled the large open-air ward to be built, and the combined efforts of many interested people have assisted in making it thoroughly up-to-date in every way. The Committee have had the benefit of Miss Hunt's experience at Baschurch and Oswestry, and Miss Hunt was herself present at the opening. The new Matron, too, was one of her ward Sisters. Sir Robert Jones and Mr. Girdlestone have also been actively interested in the scheme.

So far there is accommodation for 33 patients, and 15 were already under treatment on this occasion.

It is proposed to have the usual out-stations in the surrounding counties for following up cases, since patients will be drawn from a large area. There is reason to think that the Hospital will be officially recognised by the Board of Education as a Special School and by the Ministry of Health as an approved institution, in the immediate future. All types of crippling defects are to be treated, whether tuberculous or non-tuberculous.

The Chairman stated that any medical officer who is interested will be gladly shewn over the Hospital, or given full particulars at any time if application is made to the Secretary.

MATERNITY AND CHILD WELFARE GROUP.

The Annual Meeting of the Maternity and Child Welfare Group of the Society of Medical Officers of Health will be held at Caxton Hall, Westminster, S.W.1, on July 3rd, 1924, at 5 p.m.

The subject for discussion is "The Treatment of babies suffering from Mal-nutrition and the results obtained by Ward provision, whether Municipal or Voluntary for such babies."

The subject will be opened by Professor Mellanby who will speak as to his experience at the Royal Infirmary, Sheffield. Dr. Donald Patterson, of the Infants Hospital, London, will follow. Dr. Janet Campbell, of the Ministry of Health, hopes to be present.

In the subsequent discussion it is hoped to hear the experience of the Medical Officers of Babies' Hospitals and Wards throughout the country.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

DEARTH OF R.A.M.C. CANDIDATES.

From Colonel McNaught.

Sir,—In a note on this subject which appeared in the June issue of "Public Health," the dearth of candidates is said to be due to the underpayment of army doctors.

That there is something wrong with the present conditions of the Army Medical Service is evidenced not only by the dearth of candidates, but by the extraordinary number of officers, chiefly captains and majors, who have resigned their commissions. I do not think, however, that underpayment is the cause. A reference to the table showing the comparative pay of medical officers of the army and medical officers employed in Public Health Services will show that, even having pensions out of account, the Army Medical Officer is far better paid than the Public Health Officer.

The causes of the dearth of candidates are, I think, chiefly the following:—

(a) War weariness and a disinclination to submit to the restraints on personal independence which are inevitable in any public service:

(b) an excessive amount of foreign service, especially in India. Foreign service in tropical climates entails considerable hardship and additional expense in the case of married officers. The recent decision to replace a portion of the I.M.S. by R.A.M.C. officers will still further add to the amount of foreign service in the R.A.M.C.:

(c) a block in promotion which results in officers having to retire at an age when they are still fit for work, but at which work is very difficult to get, while their pensions are quite inadequate to their family responsibilities:

(d) an inadequate scale of pensions. Under the new Pay Warrant of 13th September, 1919, all officers, no matter what branch of the Service they belong to, get the same rate of pension. The pensions of medical officers are now very little higher—in some cases no higher—than they were before the war, although the cost of living is 70 per cent. higher:

(e) the ridiculously small increases of pay given to officers who qualify as specialists.

Comparatively junior officers are retiring in numbers because they see very uncertain prospects of promotion and fear that, if they stay on, they may be compulsorily retired on an inadequate

pension at an age when they will find it difficult to make a fresh start in civil life.

Officers who have gone through the post-graduate course and specialised retire because they think they will be able to turn their skill and knowledge to better account in civil practice than in a service which rewards their special attainments at a net rate of about 8d. a day extra pay.

I am, etc.,

J. G. McNAUGHT,
Lt.-Col., R.A.M.C. (retired).

A MISQUOTATION.

From Dr. T. F. Dewar, C.B.

Sir,—

CIRCUMCISION FROM THE SURGICAL ASPECT.

By H. TYRELL GRAY, F.R.C.S., L.R.C.P.

"There's a providence that shapes our ends, rough hew them as we may."

Reference above cutting from the March issue of "Public Health," it may be permissible to point out that the quotation *should* be:—

"There's a divinity that shapes our ends,
Rough-hew them how we will."

(Hamlet V, 2.)

Yours, etc.,

T. F. DEWAR.

WHOLE TIME PUBLIC HEALTH MEDICAL OFFICERS AND CONSULTING FEES.

From Dr. H. Vallow.

Dear Sir,—My attention has been drawn to para. 162, under the above heading, which appears on page 198 of the Supplement of the "British Medical Journal," published on the 3rd ult. This paragraph contains a recommendation that these consulting fees should not be accepted, and the argument is adduced that "such a practice should not be allowed and that it would seem to be undesirable, for it would subject the private practitioner to competition from officers who were, in effect, subsidised to be his competitors, and it would lead to much friction between the two sections of practitioners."

Surely the Association will not pass this recommendation on this argument, for, if they do, they should preclude any private practitioner from accepting a paid post on a hospital staff, either under the auspices of the municipalities or of the voluntary associations, for the same reason.

If any whole time medical officer becomes exceptionally proficient at his work, the public and his professional colleagues should have the opportunity of benefiting by his experience and ability under conditions which they desire.

As the majority of public health medical officers are badly paid compared with the consultants and the successful panel practitioners, it would be an additional inducement for them to remain at the work for which they are highly trained and eminently suited, instead of having to migrate into general practice in order to maintain the standard in life their training entitles them to expect.

I am, etc.,

HAROLD VALLOW, M.D., D.P.H.

THE SALARIES CAMPAIGN.

Continued evidence is to hand as to the success of the salaries campaign. The Heywood Town Council, having received no applications for the post of Medical Officer of Health at a salary of £700 a year, decided to raise the amount to £800, thus conforming with the scale of the B.M.A. and the M.O.H. Society. Similarly, the Corporation of Smethwick have decided to pay the recognised minimum commencing salary of £600 for their new Assistant Medical Officer of Health.

TO FOCUS PUBLIC ATTENTION ON INFANT MORTALITY.

The deaths of "toddlers" aged from one to five are far too many in spite of the huge elimination in the first twelve months of life; and largely through the same preventable causes eight or nine out of ten children arrive at school age handicapped by avoidable physical defects.

To call public attention to this matter the "Daily News," with the approval and assistance of the National Baby Week Council, has decided to follow up the policy successfully pursued in the case of Infant Boy Mortality. It, therefore, offers three awards of £25, and three second awards of £10 for districts which reduce their death rates of children aged one to five this year (1924) to the greatest extent as compared with the previous three years.

The awards are respectively for districts between 5,000 and 20,000 population, 20,000 and 50,000, and towns over 50,000. The adjudication will be undertaken by the National Baby Week Council.

Full details will be sent to anyone enclosing stamped addressed envelope to "Death Rate," The "Daily News," Bouverie Street, London, E.C.4.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 11.

AUGUST, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free in advance. Single copies, 2s. 6d., post free.

Editorial.

HEALTH IN FACTORIES.

Possibly the most important of the meetings of the Royal Sanitary Institute at Liverpool was the one relating to Industrial Hygiene, at which an excellent paper was presented by Colonel Fremantle, M.P., entitled "Why are Factories closed to the Medical Officer of Health." In introducing his paper Colonel Fremantle referred to "the infernal muddle into which the medical supervision of health in factories has drifted," and he went on to point out that in spite of the Ministry of Health Act which was expected to produce a unification of health work, there were now in active existence three Ministries of Health, namely, the Ministry of Health which had most of the general work; the Board of Education, which had never relaxed its grip upon the health work in connection with children of school age; and the Home Office, which still had entire supervision of health in factories. Every experienced Medical Officer of Health will agree with Colonel Fremantle in these statements.

Other speakers afforded valuable evidence that there is in the public health service a strong feeling of resentment against the continued subdivision of health matters among the different Ministries, and the opinion was freely expressed that it is essential in the public interest that not only early and practical unification should be brought about, but that the larger Health Authorities should have entire charge of all health matters. Dr. Kerr, Medical Officer of Health for Newcastle, in his remarks, said "We ought now to have come to an end of petty blind-alley specialisms," and he went on to point out that our experience in connection with the milk supply and its control by the Board of Agriculture ought to warn us as to the results we might expect if the Home Office continued to have entire control of health in factories. Another opinion that found

CONTENTS.

EDITORIAL—

Health in Factories	269
Expensive Houses	270
Teeth and Insurance	270
Women in Medicine	270
Health Visitors and C.M.B. Renal Cases	271
Preservatives in Food	271
The Cancer Problem	271

SPECIAL ARTICLES—

Propaganda with Special Reference to Dental Propaganda (By James Wheatley, M.D., B.S., D.P.H., M.O.H., Shropshire)	272
The Signs and Symptoms of Tuberculosis of the Respiratory System in Children under Five (By J. Walter Carr, C.B.E., M.D., F.R.C.P., Consulting Physician to the Royal Free Hospital and to the Victoria Hospital for Children, Chelsea)	280
Preservatives and Colouring Matter in Food (By James Fenton, M.D., D.P.H., Medical Officer of Health, the Royal Borough of Kensington)	284
The Need for Closer Co-operation between Medical Inspection and Public Health Work (By J. E. Spence, M.B., D.P.H., Medical Officer of Health, Eccles)	288

SOCIETY OF MEDICAL OFFICERS OF HEALTH—

Proceedings—	
Annual Provincial Meeting	294
Eastern Branch	295
Midland Branch	295
Northern Branch	295
North Western Branch	296
Metropolitan Branch	297
Home Counties Branch	297
Tuberculosis Group	297
Midland Tuberculosis Group	298

CORRESPONDENCE—

Central Midwives' Board	299
The Soap and Water School of Disinfection	299
Sir Malcolm Morris Memorial Fund	300

NOTES—

The London School of Hygiene and Tropical Medicine	300
--	-----

general expression was that Government Departments were much more amenable to big trade influences and interests than are the Health Authorities of this country, and that by transferring the whole subject of health in factories to the larger Health Authorities of the country a very important advance would be made.

The result of the meeting was that a communication was sent to the Society of Medical Officers of Health about the Factories Bill now before Parliament recording a strong protest against the proposal that the powers regarding the sanitary condition of workshops should be taken out of the hands of Local Sanitary Authorities and expressing the opinion that all the sanitary provisions relating to factories should be enforced by the Local Sanitary Authorities.

EXPENSIVE HOUSES.

During a recent debate in the House of Commons upon the Housing Bill, a practical and useful exchange of opinions occurred on the subject of bathrooms, and during the discussion Colonel Fremantle intervened not only in the interests of public health but of common sense. It was being suggested that a separate bathroom should be regarded as indispensable in all houses, but Colonel Fremantle repudiated that contention and ridiculed the idea that separate bathrooms had any obvious influence on the public health.

This seems to be an illustration of the way in which public health matters are allowed to drift into a ridiculous position. If there were the slightest possibility of all the occupants of new houses being able to use the bath regularly every day then there would be some advantage in increasing the cost of the houses sufficiently to include a separate bathroom. Every practical Medical Officer of Health, however, knows that a large proportion of such people will not have the means whereby such a continuous supply of hot water can be made available, and that if the bath is to be only an occasional affair then it certainly is not of sufficient importance for it to have a room reserved for it entirely. For the occasional or weekly bath, a bath provided in the scullery fulfils all reasonable requirements, and as was pointed out in the discussion at the House of Commons, such an arrangement sets free valuable space which could be utilised for a bedroom or increasing the size of other rooms. Even as it is, it is very doubtful whether the water supply of many towns would stand the necessary strain if all families occupying houses with separate bathrooms were to indulge in the daily bath.

The general opinion among Medical Officers of Health appears to be that the daily bath is a matter of habit and luxury but has very little relationship to either the health of the individual or the public health.

TEETH AND INSURANCE.

Three years ago, certain Approved Societies, lucky enough to possess a surplus, found themselves in a position enabling them to grant dental benefit under the National Insurance Act. The period covered has been long enough to constitute a reasonable test of the scheme, and the reports of the societies make interesting reading. Applications from members who were desirous of obtaining additional benefit for dental treatment have been more common than any others. The money earmarked for this purpose has proved inadequate to the demands made on it, and additional sums have had to be diverted to it from funds which were not so much called upon. One society is credited with having spent no less than £50,000 on dental treatment. Statistics show that in general the money has been wisely expended. According to the return of another society over a period during which dental treatment was in practice, it was found that the incidence of sickness claims in ailments that usually have their origin in dental faults fell by 46 per cent.

WOMEN IN MEDICINE.

Our former remarks with regard to the overwhelming evidence that is forthcoming as to the serious difficulties that qualified women are experiencing in making a living in the medical profession unfortunately continue to receive substantial support from later news. The Moray Education Authority at its meeting in May considered the applications of four selected lady doctors who had applied for a position as Assistant School Medical Officer at the utterly inadequate salary of £400 per annum. The four candidates for the post were P. L. Mitchell, M.B., Aberdeen; B. M. Sellar, M.B., Aberlour; M. M. Stewart, M.B., Aberdeen; and A. E. Webster, M.B., Galashiels.

An Assistant School Medical Officer has also just been appointed by the Stoke-on-Trent Education Committee at a salary of £500 per annum. Nine women applied for the post, of whom seven hailed from Scotland. The successful candidate was Ethel E. M. Gray, Aberdeen, who is at present Assistant to a general practitioner.

Scottish women graduates seem particularly ready to accept underpayment, and the result is that local authorities in Scotland are now feeling themselves encouraged to offer salaries as low as £400 for Assistant Medical Officers. The candidature of these women practitioners will undoubtedly serve to lower the standard of professional remuneration very seriously, and we can only assume that they are compelled by sheer and urgent necessity, owing to lack of opportunity of earning a livelihood in any other way, to degrade the profession which they have selected for their life's work.

HEALTH VISITORS AND C.M.B. RENAL CASES.

A recent case giving obvious and considerable difficulty to the Board was one where a midwife was charged with neglecting inflammation of and discharge from the eyes without calling in a medical practitioner. The local supervising authority produced a terrible record of incapacity and unsuitability for practice regarding this midwife and yet the health visitor did not call to visit the case in question until the 13th day. The evidence with regard to the condition of the child was of a most meagre and unsatisfactory character and consisted simply of an alleged conversation between the midwife and the inspector of midwives. The condition was denied entirely by the midwife. Such cases will continue to be difficult to adjudicate on and will always be entirely unsatisfactory until whole time health visitors make these visits and begin their inspections not later than the 7th day.

PRESERVATIVES IN FOOD.

The Minister of Health has extended the terms of reference of the Departmental Committee on the use of preservatives and colouring matters in food so as to include the question:—

"Whether and to what extent the practice of treating flour with chemical substances is objectionable on grounds of health, and whether it is desirable in the interest of the public health that the practice should be prohibited or restricted, and in the latter case what restrictions should be imposed."

This question will be considered by the Committee after they have completed the inquiry and presented their report upon the subjects for which they were originally appointed.

The Secretary of the Committee is Mr. A. M.

Legge, of the Ministry of Health, Whitehall, S.W., to whom all communications should be addressed.

THE CANCER PROBLEM.

In spite of the vast amount of attention which is being given in civilised communities all over the world, it is an undoubted fact that Cancer remains the most mysterious, as well as the most implacable of human afflictions. The campaign against that fell disease is fraught with greater difficulties than any other similar enterprise, and at the present time there is no reason to believe that we are much nearer the solution of the problem than we were 20 years ago. The rapid increase in the number of deaths caused by this disease every year is now arresting public attention to a considerable degree and the Ministry of Health is therefore well advised in devoting a considerable amount of official attention to the matter. Recently the Ministry has published the third of its series of memoranda on Cancer, dealing with cancer of the breast. The Memorandum contains little that has not been published widely before, but the facts are stated in simple language and are excellently arranged, and the Local Authorities, for whose benefit these memoranda are published, will probably appreciate the information supplied in this form. It is laid down emphatically that, "At the present time early surgical operation affords the one chance for a patient suffering from cancer of the breast." This is plain language, and states the case in the way in which it must be presented to the public. It is true that such a statement reveals our entire lack of knowledge with regard to a real cure, but there must be no hesitation in advising the public that internal medicines, external applications, dietetic methods, etc., cannot be at the present time regarded as being in any way effective forms of treatment. Later it may well be that increasing knowledge will enable us to dispense with the surgical method, but at present it is quite certain that none other holds so sure a prospect of cure or alleviation provided only—and this is of the extremest importance—that there has been no temporising and unnecessary delay.

WILTSHIRE COUNTY COUNCIL.—Dr. Clement Dunscombe, Resident Medical Officer, Brighton Borough Sanatorium, has been appointed Assistant Medical Officer of Health and Assistant School Medical Inspector to the Wiltshire County Council (Salisbury area).

PROPAGANDA WITH SPECIAL REFERENCE TO DENTAL PROPAGANDA.

BY

JAMES WHEATLEY, M.D., B.S., D.P.H., M.O.H.
Shropshire.

Read before the Dental Officers' Group of the
Society of Medical Officers of Health, 10th
April, 1924.

I would define propaganda as education for the specific purpose of influencing conduct, and include under this term not only the more sensational and public methods, such as large public meetings with lantern slides and cinema films, newspaper articles, public notices, etc., but also the more detailed teaching given from day to day by the staff of the public health department. This latter is capable of great development if encouraged by the Ministry of Health and local authorities, but is apt to be almost entirely neglected owing to the allotment of all the time available to other routine duties.

To be really successful, health propaganda must be dealt with as whole and as little as possible in separate compartments. By far the most important part of propaganda is teaching the laws of healthy living, in other words, physiological teaching. Infant Welfare propaganda is this teaching applied to an early age. The most valuable part even of the propaganda directed against specific diseases is that which deals with healthy living, whether the disease is tuberculosis, or infectious disease generally or dental caries. If the disease is one, the cause of which is very imperfectly understood, propaganda may have to concern itself principally with very second-rate methods, viz., early detection and early preventive treatment. Cancer is the principal example of this class of disease, but even cancer can be prevented to some extent on physiological lines and there is reason for thinking that in the near future possibilities in this direction will be much extended.

We have in our dental propaganda to consider the two methods—physiological or radical prevention and early detection and treatment, and we should constantly bear in mind that the second method, valuable as it is, is only a patchwork method and leaves the causes quite undealt with and continuing to give rise to ill-health in many directions.

The great factors governing health appear to be food, exercise, fresh air and sunlight.

The two first—food and exercise are intimately associated with the growth of the teeth and the prevention of dental caries and consequently a few words with regard to the

prevention of decay of teeth may well be introduced into most general health lectures.

It is, however, more especially one quality of the food and one kind of exercise that are so essential for the regular eruption and preservation of the teeth. It is therefore necessary to have teaching directed to this specific purpose. It, moreover, appears to me that propaganda for this purpose is more likely to be immediately successful than similar work for the prevention of other diseases, because the cause is so clear and effect follows fairly quickly, and the results of efforts can be shown. The cause of most disease is very complex and often dates from the remote past. For these and other reasons I look upon dental propaganda as likely to yield better results than any other form of propaganda work.

General health education is, however, extremely difficult, and the difficulty appears to me to be due mainly to two facts—the poorly developed intelligence of the mass of the people, and the lack of interest of the young in health matters. The former will disappear with improvement of methods of education. For the young it is necessary to stimulate their interest by showing them that upon health depends "fitness," "success," "beauty," and the "joy of life."

We must all agree, I think, that unless there is serious deprivation, health depends almost altogether upon individual knowledge and conduct. Our knowledge of healthy living depends upon research. Such knowledge, if it remains locked up in the reports of learned societies is of little use to the world. There is a great band of research workers on health problems at the present time throughout the world, but so far we have not sufficiently awakened to the fact that the problem of education is perhaps as difficult and as laborious as that of research. For this purpose we have to use every means at our disposal and continually press for greater facilities.

It is very essential in any health campaign to create a "proper atmosphere." This has been done fairly successfully in "child welfare," and in the campaign against tuberculosis. It is only possible, however, to do this effectively if the movement is a general one throughout the country and is supported vigorously by the central authorities—such as, for instance, the Ministry of Health, and the Society of Medical Officers of Health, and other influential national bodies.

The "proper atmosphere" or "receptive condition" is best brought about by frequent public meetings, made attractive by lantern slides and cinema films, by newspaper articles, travelling caravans and broadcasting. By these

means, not only do we sow seed in the minds of the public, but we also educate members of local authorities to a wider sense of their duties, so that they become much more helpful.

So far we have dealt only with the measures that will create a general interest in the work. How is the detailed teaching to be given? My opinion is that we must rely principally upon the teaching of the health visitors in the homes of the people, and of the teachers in the schools. Of these, the former is, I think, likely to be the more effective. In order to fit health visitors for this work it is necessary to give frequent lectures to them and also to give instruction and supervision that will result in continued attention being given to this particular work. It is absolutely essential that the main facts should be summarised in a short leaflet similar to that drawn up by the Society of Medical Officers of Health, and that this should be left and thoroughly explained by the health visitor at each house where a baby has reached seven months old. The leaflets should be gone over thoroughly again with the mother after three months and at intervals of not less than six months. Entries to this effect should be made on the visiting card. The health visitor should also see the food given and should correct and explain where necessary.

Lectures should be given to all school teachers and for the sake of convenience the classes may, I think, be large, say up to a hundred or more. The lectures may well include demonstrations showing the acidity of carbo-hydrate food when masticated and incubated at the temperature of the body, the action of the acids on calcium salts; and casts of teeth showing good and bad development of jaws and arrangement of teeth may be shown with advantage. The crevices of the teeth and recesses between the teeth can be illustrated by casts or charts. The teachers will then be in a position to give short practical talks to the children. These should be illustrated as much as possible by everyday school incidents. The mid-day meal in a school is an excellent opportunity for teaching with regard to the right foods, the order of eating, the importance of mastication and of not drinking with food. A crust left over or thrown away should be made use of to show the value of crusts for mastication. The apple season is a good opportunity for speaking of the value of the apple—that it should be stored carefully and eaten at the proper time. A schoolmaster of whom I asked the question "Can you teach the children not to drink at meal times?" said "Oh yes, I lock up the pump at lunch time and explain why." A short talk of this kind is very valuable because it is not looked upon

as a school lesson. A school lesson is unfortunately considered as something that has no relation to everyday life.

So far we have dealt with measures to create interest and measures to educate those who are going to teach. We medical officers and dentists must, however, do a certain amount of direct and detailed teaching to the public. This includes talks at the child welfare centres (also given by health visitors), individual instruction to parents at centres and at schools at the time of medical and dental inspections, and talks at the schools to classes of children. In Shropshire we also have a County Council health lecturer who frequently gives talks to school children on dental caries. These talks are generally followed by essays written by the children.

Whose business should it be to give this instruction? I think all the medical officers and dentists, including the school and child welfare medical officers and tuberculosis medical officers should make a study of this question and be ready to do their share of prevention. Who will do the most depends upon the bent of mind and capability of the individual and the time available. It is more especially the work of medical officers, as their work is primarily preventive.

Dental propaganda is concerned with prevention and preventive treatment, and as regards the latter, the problem is to persuade parents that treatment is necessary when defects are found. It is I think a serious indictment of our educational system, although it has brought about great changes for the better, that after fifty years of universal education we should find a considerable percentage of the people ranging in different parts from twenty per cent. to sixty per cent. refusing dental treatment for their children, when skilled treatment is provided free of cost. We know that in the more highly educated classes dental treatment is sought after and obtained at much cost and inconvenience, and we may infer that the large majority of parents who refuse dental treatment do so because of a lack of development of their intelligence and their consequent inability to form a correct judgment on the serious problems of life. I would suggest seriously that the acceptance of dental treatment should be looked upon as a test of intelligence and consequently of success or failure of education in a district. A recognition of the value of such tests by education authorities as an indication of the quality of education in a district would help us much in our work.

This is always on the supposition that the treatment provided is good, and gives no unnecessary pain, and that the scheme and the

danger of dental neglect has been sufficiently explained. To deal with this matter I have recently drawn up for distribution to parents and for use at meetings to popularise treatment, the following statement:

ADVICE TO PARENTS.

The preservation of the teeth of the school children in a sound state is of the greatest importance to their health.

The Government Committee, after inquiring into this question, said that "dentistry was one of the chief, if not the chief, means of preventing ill-health."

Not only does decay cause toothache and abscesses of the jaw and inability to masticate food and consequent indigestion, ulcer of the stomach, etc., but it also causes many other serious illnesses, including blood poisoning, anæmia and crippling rheumatism. The jagged edges of the teeth may cause cancer of the lips and tongue. Decayed teeth also destroy good looks and are the cause of much suffering and much expense.

One great physician has said that decay of teeth causes more ill health than alcohol, and another has said that "it is the most urgent and gravest of all diseases of our time, and is the main cause of unfitness and disease in general."

Sound teeth are absolutely essential for good health. Well-to-do people have recognised this, and take their children to the Dentist every three or four months.

The County Council seeing the great disadvantages that Elementary School children have suffered from and the great danger to their health in consequence, have provided fully qualified and highly skilled dentists to visit the schools to inspect and treat the children.

This is one of the greatest benefits that has been conferred upon school children in recent years, and a child that is not allowed to have treatment will have cause to regret this throughout life.

The treatment is principally filling teeth so as to keep them as good useful teeth and prevent them having to be removed. By this means a decayed tooth may be preserved in good condition for 30 or 40 years or even longer. If the child is seen each year and treated, if required, it should rarely be necessary to extract any of the second teeth.

The second teeth commence to appear about the 6th year. The earliest come at the back of the jaws and are often taken for first teeth, but if lost they will not be replaced.

Decayed first teeth often have to be removed because they are causing ill health, but this can be done with very little pain. In all treatment the best methods are taken to prevent pain.

Parents should never refuse to have their children treated, but if in doubt they should see the Dentist and talk the matter over with him. To refuse treatment, is to cause the child unnecessary suffering, illness and disability throughout life.

The prevention of decay of teeth is even more important than the treatment. Decay can be prevented by attention to simple rules. (See special leaflet.)

Meetings are being held in my county for the specific purpose of educating the public as to the necessity for dental treatment and generally to popularise the school dental scheme.

We may now consider the general lines on which we should proceed in teaching prevention as distinct from preventive treatment. A clear indication is given in the leaflet drawn up by a committee of the Society of Medical Officers of Health, composed of members of this and other groups and of the Council of the Society. The leaflet originated from a resolution of this group, and consequently the group must not only feel responsibility, but also take the principal credit. The leaflet received very careful and prolonged consideration and after modification was finally adopted by the Council. I may say that I entirely agree with the general ideas underlying these directions and with the relative importance of the various directions as indicated by the prominence given, and I think that this leaflet may be used as a basis for our preventive teaching.

I should like to urge very strongly that our teaching should be on physiological lines, and when we depart from such teaching and suggest a short cut—such as the use of the tooth brush, we should qualify it by pointing out very forcibly what are the really important matters. If we are not extraordinarily careful the use of the tooth brush will be the only thing remembered. A principle of great importance extending right throughout preventive medicine is here involved.

Suppose that we could by inoculation abolish tuberculosis and that in consequence we ceased in our efforts to improve our overcrowding and the conditions of fresh air, sunshine and food, should we be better or worse off?

Dental caries is simply a sign of wrong living which produces innumerable bad results, and as public health workers we are not justified in attempting to get rid of it and leaving the causes still operative for harm.

The specific teaching for the prevention of caries may with advantage be confined to those matters which are primarily concerned with teeth; and those which act upon teeth through the promotion of general health can best be dealt with through general health teaching, e.g., the provision of a well-balanced diet for expectant and nursing mother and child, the protection of the mother and child from infectious disease and the complications arising out of them, and the free exposure to sunlight. These are certainly the most important part of our teaching under the Maternity and Child Welfare Scheme.

If it is a fact that by exposure to sunlight or ultra-violet rays the phosphorus and calcium in the blood can be increased on a constant diet, a sufficiency of sunlight may not only be a most important matter for general health, but also for the production of well-formed teeth.

Is it necessary to teach the structure of the teeth in some detail? I think not—it diverts the mind from the really important matters—such as (1) that food is apt to stick in the crevices of the teeth, (2) that certain foods if remaining in the mouth will form acid, (3) that the acid formed will eat holes into the teeth, (4) how nature keeps the teeth clean—friction, saliva, movements of lips and tongue, (5) how exercise is necessary for the development of the jaws and teeth, (6) the necessity for formation of good habits of mastication at an early age, (7) the special danger of food the last thing at night and the reasons, (8) harm in eating food between meals, particularly sweets, (9) harm from drinking large quantities of liquid at meal times.

I have found that where the address is to a great extent occupied by a description of structure, these really essential points which can be understood without a knowledge of structure are apt to be missed. This is a matter that has to be considered in all health propaganda, and I am personally convinced that much effort is wasted in attempting to teach anatomical detail. My experience is that intelligent persons can understand the principles underlying the effects of exercise, food and feeding, fresh air, and sunlight, without any detailed knowledge of anatomy, e.g., a person can sufficiently understand the value of exercise on the heart if he knows it is a muscular pump, without any precise knowledge of the circulatory system.

Under what conditions should we accept the help of trading firms who wish to give addresses to school children on dental decay and its prevention. Their object, of course, is to advertise their firms and push their goods. With safeguards, I think, perhaps, the services of such people might be utilised. They usually are prepared to go to considerable expense in organising meetings and providing lantern slides, etc. As a test I have arranged to attend one such meeting, reserving to myself the right to address the meeting afterwards. I shall thus be able to put forward my ideas and correct anything previously said that I do not approve of. I shall then be in a better position to judge whether or not it will be desirable to utilise these efforts on the part of business firms in the future.

The utilisation of travelling caravans is a method worthy of consideration for rural districts. We have had experience of travelling caravans for tuberculosis and venereal disease propaganda, and they have been found useful. No doubt many of you have had much more experience than I have in the utilisation of lantern slides, cinemas, etc., in dental propaganda, and I hope we shall have the benefit of your individual experiences.

I am quite convinced that propaganda can only be really successful if it is a national effort. It should be made an important duty of local authorities and adequate grants should be paid to them for this purpose out of the national exchequer. The Ministry of Health should urge local authorities to do this work thoroughly and should require periodic reports showing how the work is being carried out. There should be a central body for organising the work generally and for carrying out such part as can well be done centrally. Under such conditions public health lecturing would become a profession of itself and instead of the present dearth of competent lecturers, we should get our wants properly supplied.

It would be a function of the central body to encourage the production of cinema films and lantern slides and to arrange for an adequate supply to local authorities, and in numerous other ways to facilitate the work of these authorities.

In conclusion I must express the hope that dental propaganda will occupy a prominent place in the national scheme of health propaganda which cannot be much longer delayed.

DISCUSSION.

The President, in inviting discussion, said the subject of Dr. Wheatley's admirable paper was one brimming over with interest, and it seemed that some steps in the direction of effective propaganda were to be taken at last.

Mr. R. Denison Pedley, F.R.C.S., Edin., M.R.C.S., Eng., L.S.A., L.D.S., expressed his thanks to Dr. Wheatley for taking up the question of propaganda, and for dealing with it especially from a dental point of view, and agreed that their efforts should be directed towards influencing conduct in regard to health as a whole. With the references to dental matters he was also in agreement, but asked Dr. Wheatley not to be discouraged at the fact that there were so many dental refusals. In giving evidence as President of the School Dental Group before the Royal Commission, he had been asked if he would force a child to have

anything done, and had replied that he certainly would not. Their object was to try to place before the people the fact that treatment was available, and to appeal to their intelligence. Of course, the reason for dental refusals was not far to seek. He asked any practitioner present whether any child entering his consulting room was not first pre-possessed by fear. What lay at the basis of all their work—dental or medical—was the question of liberty. Let the child choose for itself. The question of refusal was a very small thing. The child had to be influenced by its parents, and it was just as well that the child should be taught that its refusal and the parents refusal were going to bring suffering. Examine a class of one hundred children; it would be found that eighty of those children had defective teeth, and it was first of all necessary to clear their mouths. Could it be wondered that the children or parents refused, knowing that before anything in the way of preservation was possible the mouths had to be cleared, involving a deal of pain. In time to come they would have the children as they had the parents, believing that the best that could be done was prevention of decay. So far as general treatment was concerned, the counter to the tooth brush was to teach the people to take the proper kind of food, and in that connection the question of bread was important. His own experience during the War was that in those schools where war bread had been used it had been beneficial to the children's teeth, though perhaps not of benefit to the people generally, because they had not been used to it. If the doctrine of using proper kinds of food, especially bread, were initiated there would not be the necessity of children always using the tooth brush. Every meal should cleanse a child's teeth, but when there was no proper food to do so it became necessary to resort to the tooth brush. If there could be introduced as a suitable food a bread that should have in it a material capable of cleaning the teeth, then they could step outside the question of constantly telling children they must use a tooth brush every morning and night. He could quite understand that there were many people, particularly amongst rural populations who had a plentiful supply of vegetables, apples, and so on, who had never used a tooth brush in their lives. In conclusion, Mr. Pedley said that the first thing that had to be done was to teach the men who joined their ranks as surgeon dentists. They must be taught to teach the teachers, and then when the teachers could be induced to take an intelligent interest in those matters they in their turn would be taught to teach the scholars.

Mr. J. Sim Wallace, D.Sc., M.D., C.M., Glas., L.D.S., Eng., said that Dr. Wheatley had brought out many points with regard to propaganda in a way that would bring the subject home to many people as it had never been done before. One of the difficulties that perhaps had not been dealt with was the necessity for knowing what to teach in propaganda work. It would be remembered that not so very long ago there was a certain general teaching of the public by various authorities. One of the main contentions at that time was that children required an ample supply of sugar. Another was that milk was the best food for children—not only suckling infants—but children of all ages. If he remembered rightly, Dr. Wheatley had brought out this point some years ago and indicated that the people who had followed these old instructions most carefully had the children with the worst teeth. The important point about this is the necessity first of all to make sure with regard to recommendations, and if there is anything doubtful at the present moment as little as possible should be said about it by official propagandists. He had a pamphlet before him, issued with the authority of the British Dental Association. It was more pretentious, complicated and erroneous than many another, and if comparison were made with the simple and trustworthy leaflet brought forward by the Society of Medical Officers of Health it would be found that some of the points were not only indifferent but in his view actually bad. There was a passage saying: "Many diseases such, for example, as rickets and scurvy have had effects on the teeth and gums. These diseases are largely due to improper food. Therefore the food should be of the type to prevent such diseases." He thought the British Dental Association might have left out any reference to rickets and scurvy, as the cause of rickets is at present a highly debatable subject and with regard to scurvy it is a disease practically unknown in this country after the teeth are present. Then a list of the foods was given, and he only wanted to mention that milk headed the list and was printed in capital letters. He had read some articles in dental papers, and the majority of them had indicated that milk was a rather virulent cause of dental caries. If, however, there was any distinct difference of opinion with regard to the taking of milk a little investigation ought to have been made before putting it down in a leaflet for propaganda work. On reference to the leaflet of the Society of Medical Officers of Health it would be noted that milk had been dexterously dealt with. It stated that "milk is a food," but, of course, milk was a liquid

also, and at the beginning of the sentence it said that "it is not advisable to drink at meal times." As a food should not be taken between meals because that was bad, it was a little difficult to see how milk came in. Rule 4 was well worded, and it indicated that if children should occasionally break the rule by drinking at meal times the method of getting over the trouble associated with drinking milk was to follow it with a cleansing food. The issuing of a pamphlet of a propaganda type was a most objectionable thing if the instructions were wrong, and he felt fairly certain that the wholesale feeding of children with a full set of teeth with milk was one of the things that accounted for a very great amount of caries. The question of vitamins he considered had been stressed far, far too much. If the dietary included what it had been said it should include, amongst other things: butter, wholemeal bread, oatmeal, unpolished rice, salads, green vegetables, eggs, carrots, tomatoes and raw fruit, there would be a superabundance of vitamins without bothering with milk. The difficulty could have been overcome quite easily by the putting in a rule to the effect that children who were not allowed fresh air, sunlight or exercise, should be given cod liver oil, failing which butter, or even milk might be risked, if butter were not available. Further if the latest views of some vitamin enthusiasts are to be recognised with regard to rickets, it is difficult to see why whole-meal bread and oatmeal should be included in the list. An important paper like the present one should not only appear in the British Journal of Dental Science, which was almost exclusively read by dentists, but should be published in "Public Health." The general teaching with regard to food should certainly come from the medical profession, and not from the British Dental Association, dabbling with rickets and scurvy, or from any dentist dabbling with the general question of feeding. There was one other point in the B.D.A. pamphlet, it said, "The food for expectant and nursing mothers must contain enough vitamin and bone and tooth forming substances." That was a very misleading platitude, which on that account was most objectionable. There was the insinuation that the ordinary foods that expectant and nursing mothers had did not contain those things in sufficient quantities. All sane people that could afford to buy food at all in reasonable amount got all the vitamins that were necessary or in any way desirable. Vitamin "B" could be disregarded altogether, as there was scarcely if ever a single case of beri beri originating in the kingdom. Bone and tooth forming substances were always in the foods generally consumed

in this country by rich or poor alike, if moreover, children had fresh air, sunlight and exercise, mothers need not be bothered by search for vitamins. On the other hand they knew, for example, that however good the food was for puppies of a certain type—the quick growing type—deprivation of light exercise and fresh air led to the development of rickets. In his view it was utterly unnecessary for dentists to go out of their way to teach expectant and nursing mothers what to eat, because in this there was nothing different from what other people should eat. They might require a trifle more, but in a varied diet such as practically all people in Britain had if they could gratify appetite at all there was ample and abundant supplies of all bone and tooth forming substances required, provided they had in other ways a fairly healthy atmosphere and surroundings to live in.

Mr. H. W. Breese, M.R.C.S., L.R.C.P., L.D.S., stated that as regards publication he would do his utmost to see that Dr. Wheatley's very valuable contribution appeared in the organ of the Society. The paper itself would be the strongest recommendation. Propaganda work would vary according to the conditions under which it had to be carried out, and he proposed to reflect briefly on the actual conditions that obtained in a densely populated area of South London. Of the adverse factors to be contended with in Southwark, overcrowding, unemployment, and a shifting population, were perhaps the most important. They rendered more difficult that intimate touch with the people which was so desirable in dental propaganda. Then there were the many varieties of elementary schools, including those in which no dental inspections had yet been carried out. One had also to consider the attitude of the various persons with whom one came into contact towards school dental work, and in London particularly it was of paramount importance to have the sympathy of the teaching staff, especially of the head teacher, because the bulk of the care committee work was done by the teachers. Again, the attitude of parents towards the work varied very considerably. In some schools it was favourably disposed, in others the parental attitude was indifferent, and in a third class—now happily diminishing as a footing in the school was obtained—there was open hostility. As an inspecting dentist it was his aim to draw the children to the clinic to have treatment, and to attempt to make them think of their teeth. The first aim was very difficult in some cases and could only be accomplished slowly when, for instance, one was inspecting a school for the first time. In

other instances it might be impossible to achieve, as was the case on one school visited on many occasions, where the head teacher had made no attempt to conceal her hostility, but in general, by means of talks to the teachers and parents, one could make them realise the importance of the subject, and he personally had found little difficulty in arousing interest. As to the second aim, that perhaps was the most amusing and instructive part of the work in the schools. Only that week for the first time in four years' experience he had found a boy who was able to tell the full number of adult teeth. He usually confined his remarks with regard to oral hygiene to the children themselves, although there again when faces were dirty it seemed almost a waste of time to talk of cleaning teeth. The attitude of parent, teacher and child towards the work had been mentioned, and he next would like to refer to the attitude of the dentist himself. Firstly, it had to be remembered that one was only an incident in the school life; secondly, that although the importance of one's work seemed to oneself very great, to others the dentist was a nuisance—sometimes necessary, sometimes unnecessary. Therefore it was essential to walk warily. Children actually under treatment must never be surprised unpleasantly, and one must never lie to them. Little children had not the fear that they used to have. Much of it was transferred fear that the mother brought into the clinic, though, of course, with a large number of children the herd psychology came into question. Parents had to be dealt with similarly. Lastly, a word with regard to propaganda by persons who were quite unacquainted with actual working conditions. So far as London was concerned, "don't" was the last word that should be used, for there the attitude of the moral reformer with the unpleasant compulsion of his big stick did not go down. Where persuasion failed, oftentimes with the Cockney an assumed indifference on the part of the dentist as to what was done resulted in acceptance of the dentist's suggestions. Some armchair critics would appear to regard propaganda work as comparable to batting on a plumb wicket: after some years' experience the conditions seemed to him to be more aptly compared to batting on a sticky one.

Mr. Harold Chapman, L.D.S., R.C.S., Eng., referring to the four essentials for health, which Dr. Wheatley had enumerated, said that exercise struck him as being especially valuable, and whilst it apparently had been applied in a general sense, exercise for the teeth was a

thing to be advocated, for they needed exercise just as much as the rest of the body if they were to be kept in perfect health. Mr. Chapman spoke of an incident related to him by a man who was not only a careful dentist but a careful observer. He had had a patient of about fifty years of age, whose teeth had been examined and had been found to be in quite good order. Some three or four months later caries appeared, developing more rapidly in the succeeding three months, and so on. This had seemed incredible, but on enquiry it was learned that subsequent to the examination the patient had been in the habit of going to bed with a thermos bottle of hot milk, which he had taken for insomnia. It seemed therefore that not only was milk bad for the teeth of the young but for the aged. There were other instances of a similar character. He agreed with the last speaker on the question of fear, which was really a psychological problem and quite apart from any dental treatment. He endorsed Mr. Pedley's remarks that one way in which propaganda could be helped was by educating the young dentist on the need for that work.

Mr. Grantley Smith, H.D.D. Edin., L.D.S. Eng., thought that Dr. Wheatley had hit the right nail on the head when he carried propaganda to the child of pre-school age. If the dentist could get in touch with the child and the parents at maternity and child welfare centres, a considerable amount of good would follow, because by the time the child reached school the temporary dentition was usually damaged beyond repair. In his own borough health visitors had attended at the dental surgery and had with him examined the mouths of certain children. Each health visitor was now provided with a mirror and probe, and she was desired each time she visited a home to look at the children's mouths, give out pamphlets, talk to the parents about teeth, and invite them to bring the children to the centre. With regard to propaganda and the question of the correct kind of food that the expectant mother and child should receive, it seemed desirable that it should go further to food adulteration, though in that matter they were somewhat up against the manufacturers. The question of fear in children was greatly the fault of the parents.

Mr. S. J. Smith, L.D.S. Edin., commenting on the anatomical study of teeth, said that he had given lectures, with simple diagrams showing sections of teeth and the effect of caries. These had interested the children tremendously, as shown by the essays they had written afterwards, and had helped to break down a lot of prejudices.

Miss M. M. Loretz, L.D.S., R.C.S., Eng., expressed agreement with the last speaker. When it had been explained that a small hole in the tooth could be treated without pain, the children themselves had looked for small holes in their teeth. At the maternity and child welfare centres it was found that the children were very valuable in giving confidence to those who had not attended before, and one way of giving a child courage was to commence treatment by giving it a small filling.

Mr. Leslie F. Fouraker, L.D.S., R.C.S., Eng., found it a good plan to suggest to children that the treatment would not hurt; that, in fact, the drill might tickle them. They would often turn round and say that it did tickle, and if the idea that it could be made more or less a game were instilled in a child's mind the work could be done much more easily.

The President said that with children he had had very little trouble on account of fear, but was probably fortunately placed because he had been attending their mothers for so many years that both the mothers and the children believed in him. Early detection of small cavities and pin holes was one of the most important things. One part of propaganda that appeared to have been lost sight of in this country, though practised largely in America, was the use of the press. Articles on the prevention of dental caries, in the Sunday press particularly, could not but have good results. Referring to the pamphlet of the British Dental Association, the President said that one of the reasons given to him for copyrighting it was that the proprietors of a tooth paste desired to put their names on the back of it and circulate it. That seemed to him a very excellent thing, for instead of copyrighting such publications they should be broadcast. Their own literature, with diagrams and coloured pictures, ought to be in every school where there was a chance of teaching dental hygiene.

Dr. Wheatley, speaking on the various points raised, desired first to convey thanks for the very kind way in which his paper had been received. A question had been asked as to the value of the teaching of school children or of children before school age. He had formed a very definite opinion that school teaching should, so far as possible, take the form of practical training. Little can be expected from formal lessons to children up to the age of fourteen. If something like an intelligent state of mind can be produced by education at school the work of the health visitors in teaching the young mothers will be comparatively easy. The teaching of the school would only prepare the

mind to some extent, and he looked upon universal continuation classes as one of the greatest of public health services ever brought forward. They will give opportunity for efficient public health teaching, and physical training—the two most important matters for the improvement of health. He had found in schools where the master had given great care to the anatomy of the tooth that there had been no real understanding of how caries was produced. In all teaching there was need to be very careful not to obscure, what it was desired should be remembered, by something which was not of very great importance. Education of dentists was important, and the education of medical students equally so, for they had the upbringing of young children. Referring to consents, Dr. Wheatley said that when a written consent of the parents was obtained in his area, the case was always treated, though occasionally there might be some little trouble. He had purposely omitted going into details as to what should be taught. There were doubtless considerable differences of opinion on this matter. To take the right course in the advocacy of milk was most important. Milk was extremely dangerous to the teeth, and yet an extraordinarily good food for growing children and for the poorer people, and the two things had to be taught together. It was necessary to teach that when milk was taken it should be taken with precautions, and be followed by substances requiring vigorous mastication. Referring to the remarks of Dr. Sim Wallace, Dr. Wheatley said the minor degrees of scurvy were not uncommon, but were perhaps not a very serious matter. With regard to the President's suggestion of use being made of the press in the scheme of propaganda, he thought the press should be utilised largely. Short articles, generally speaking, would have to be paid for, especially if it were desired that they should appear regularly or at particular times.

A cordial vote of thanks was accorded to Dr. Wheatley for his excellent paper.

A FREE post-graduate course on tuberculosis, organised by the Davos Medical Club, will be held at Davos from 17th to 24th August. Names and addresses of those desiring to attend the course should be sent to the Kommission des Aerztlichen Ferienkurses Davos before 1st August.

PROFESSOR R. T. HEWLETT and Dr. F. J. Stevens, late medical officer of health for Camberwell, have been appointed by the Royal College of Surgeons of England as examiners for the Diploma in Public Health.

THE SIGNS AND SYMPTOMS OF TUBERCULOSIS OF THE RESPIRATORY SYSTEM IN CHILDREN UNDER FIVE.*

BY

J. WALTER CARR, C.B.E., M.D., F.R.C.P.,
Consulting Physician to the Royal Free Hospital
and to the Victoria Hospital for Children, Chelsea.

Tuberculosis is by far the commonest cause of death in early childhood. Statistics based on the results of post-mortem examinations at the Children's Hospitals in London show that, if we exclude the first six months of life, nearly 30 % of all the deaths of children under five years old are due to tubercle. After this age the number rapidly falls. In about two-thirds of the fatal cases the disease has its starting point in the chest.

It is, however, of the utmost importance to realise that the commencement and progress of tuberculous disease in the chest are entirely different during the early years of life from what they are in adults. In the latter we are only too familiar with the course of ordinary pulmonary tuberculosis, a disease beginning near the apex of one lung and spreading gradually downwards, presently affecting the upper part of the opposite lung, then extending to the apices of the lower lobes, and so gradually towards the bases, until the greater part of both lungs is involved. If the disease is not arrested, softening and excavation start at the apices and, like the consolidation, steadily extend downwards. Now this extremely common type of disease is never met with in young children and only rarely before puberty. The youngest child in whom I have seen it was eight years old.

TUBERCULOUS DISEASE OF THE BRONCHIAL GLANDS.

Tuberculous disease affecting the chest in childhood practically always begins in the tracheal or bronchial glands, and in those on the right side rather more frequently than in those on the left. The gland which is perhaps most frequently involved is that situated at the bifurcation of the trachea.

In a child, whenever there is any tuberculous disease in the lungs, the bronchial glands are almost invariably affected also, whereas it is not uncommon to meet with caseation of the glands without any recognisable lesion in the lungs.

PATHS OF INFECTION.—Realising then the frequency and importance of tuberculous disease

of these glands let us consider next in what ways they may be infected. 1. The most obvious and certainly the most likely explanation is that tubercle bacilli pass directly from the inspired air, through the lymphatics of the lung tissue into the bronchial glands. It used to be thought that the lung itself was unaffected by the process, but there is a growing belief that the bacilli in their passage through the organ produce a small lesion, which tends to heal and may pass entirely unnoticed, and yet is sufficient to give rise to an infection of the glands. Similarly it would seem that tubercle bacilli are able to pass through the mucous membrane of the intestine, enter the lymphatics and reach the mesenteric glands without producing any recognisable naked-eye lesion in the bowel, and also that they can pass through the tonsils and cause caseation in the cervical glands, although no tuberculous lesion can be detected at the point of entry.

2. The view just set forth is not, however, universally accepted; Calmette of Lille and others of his School are of opinion that the bronchial glands are usually affected via the intestine and the mesenteric glands—in other words that ingestion is more important than inhalation. It would take far too long to discuss here the arguments and experiments for and against this view. It must suffice to say that although infection by this route is doubtless possible, it is most likely not of frequent occurrence.

3. It has been suggested that the tracheal and bronchial glands may be infected by a process of extension from tuberculous cervical glands. The evidence for this is derived mainly from experiments on pigs, and in these animals the anatomical conditions are so different from those which obtain in man, that it is hardly justifiable to reason from one to the other. Moreover, as Dr. Still has pointed out, the mediastinal glands commonly shew a much more advanced stage of disease than those in the lower part of the neck, when both happen to be affected in the same patient. This would hardly be the case if the disease had spread down from the neck glands.

On the whole it would seem we are justified in assuming that certainly in the great majority of cases, tuberculosis of the bronchial glands is due to tubercle bacilli inhaled directly from the respiratory passages.

Let us turn now to the clinical aspects of tuberculous disease of these glands, always bearing in mind that it is important to recognise the condition as early as possible.

SYMPTOMS.—1. *General.* These are most indefinite; doubtless whilst the disease in the glands

is active there must be some general malaise, with slight fever, wasting and pallor, but nothing which might not be due to other and possibly quite minor ailments.

2. *Pressure Symptoms.* In the great majority of cases there are none, as the affected glands are rarely sufficiently large to give rise to any material pressure upon surrounding structures; quite different from the conditions present when the enlargement is due to lymphadenoma or to malignant disease. Occasionally there is a cough, which may be so paroxysmal in character as to suggest whooping cough. Very exceptionally there is inspiratory stridor from pressure on the trachea.

PHYSICAL SIGNS.—Unfortunately these give little more help than do the symptoms. A number of physical signs have been described by different observers, but I cannot regard any of them as of much value. Let us briefly consider the more important.

1. *Enlargement of cutaneous veins over the upper part of the front of the chest* is sometimes present, but is met with also in pale, thin children in whom there may be no suspicion of enlarged glands.

2. *Dulness on percussion over the manubrium or to the right of it* should lead to a suspicion of the presence of enlarged glands. Dulness to the left of the sternum has no pathological significance, for it is often present in perfectly healthy children, being due to the great vessels. An enlarged thymus may also cause dulness over the upper part of the sternum. Dulness in the interscapular region cannot be due to enlargement of the glands themselves, but only to a secondary consolidation about the roots of the lungs.

3. *Eustace Smith's murmur*—a venous hum heard below the inner end of the clavicles when the head is fully extended, supposed to be due to enlarged mediastinal glands pressing on the left innominate vein. It is, however, quite unreliable, as it may be absent when the glands are undoubtedly enlarged and present in children in whom there is no reason to suspect that they are diseased.

Other physical signs have also been described, but as I think they are of even less value than those above mentioned I will not refer to them further.

X-RAY APPEARANCES.—Undoubtedly enlarged mediastinal glands can be recognised by X-ray examination and probably rather more easily when they are caseous. Calcareous glands shew up well, but are comparatively rarely met with. Because, however, the glands are enlarged, it by no means necessarily follows that they are tuberculous.

Measles, whooping cough, broncho-pneumonia and even simple chronic bronchitis may cause an enlargement which may persist for months. It must be remembered that such glands are undoubtedly more prone than healthy ones to become infected by the tubercle bacillus, and also that an attack of measles or of whooping cough is very apt to stir into activity a pre-existent latent tuberculous focus in one of these glands. Hence the frequency with which acute tuberculous lung mischief or even miliary tuberculosis is observed to follow these diseases.

To sum up in regard to the diagnosis of tuberculous bronchial glands all we can say is that their presence can often be regarded as possible, occasionally as probable and very rarely as certain.

RESULTS OF TUBERCULOUS DISEASE OF THE BRONCHIAL GLANDS.—1. *Spontaneous cure by fibrosis.* This undoubtedly may occur in the early stage, just as is the case with tuberculous disease in any other part of the body.

2. *Cure after caseation*, the gland drying up and undergoing more or less calcareous change. This is a less satisfactory cure, as some tubercle bacilli often remain alive and are capable of being started into fresh activity, especially, as already explained by a disease like measles or whooping cough which lowers the general resistive power and at the same time directly attacks the lungs. In a series of 120 autopsies which I performed on children suffering from tuberculous disease in some form or another, I found seven cases in which it was limited to the bronchial glands, in each case they were calcareous and the child had died from some non-tuberculous trouble.

3. *Softening.* This is probably the commonest change and the following consequences may ensue.

(a) A gland may rupture into the lower end of the trachea or the right bronchus. Occasionally sudden death results from a large caseous mass getting lodged in the glottis. Under any circumstances sudden death is rare in children, for the conditions which ordinarily give rise to it in adults (aortic disease, fatty heart, ruptured aneurism, etc.) are not met with in early life. Therefore in a case of sudden death in a child the possibility of a caseous gland having become impacted in the larynx should always be considered (another possible cause is laryngismus stridulus). As a rule, however, when one of these glands ruptures into the air passages, the softening material is sucked into the smaller tubes of one or both lungs and sets up a process of diffuse, rapid caseation, which proves fatal in

* An address given to the London and Home Counties Sub-Group for Maternity and Child Welfare, on December 7th, 1923.

a few weeks. Very occasionally one of these glands ulcerates through into the cesophagus.

(b) Not uncommonly the softened gland gives rise to a general blood infection and the child dies in a few weeks from what is clinically tuberculous meningitis, for, although as a rule the autopsy reveals a general miliary tuberculosis, during life the cerebral symptoms completely overshadow all others. Certainly in London Hospitals softening caseous bronchial and tracheal glands are by far the commonest focus from which in young children a generalised miliary tuberculosis starts.

(c) Another frequent development is a progressive invasion of the lungs from the caseous bronchial glands. In such cases at the autopsy irregular areas of caseation are found throughout one or both lungs, most advanced at the root, where softening and cavitation may have occurred, whilst at the periphery only small and comparatively widely separated tuberculous foci are present. In a series of autopsies all stages of the process may be seen, for at any time the development of miliary tuberculosis may bring the case to an abrupt termination. This is the usual course of tuberculous disease of the lungs in children under five years of age.

Hitherto we have been dealing mainly with tuberculous disease of the bronchial glands, a condition as we have seen of the utmost gravity and responsible, directly or indirectly, in early childhood for an enormous number of deaths, yet one which rarely calls for consideration after puberty. Let us turn now to the consideration of

TUBERCULOUS DISEASE OF THE LUNGS.

SPECIAL FEATURES IN EARLY CHILDHOOD.

1. As just explained the disease commonly spreads from caseous bronchial glands at the root of the lung outwards towards the periphery, both to the apex and the base, instead of as in adults from the apex to the base. This can be well shewn by X-ray examination.

2. The distribution of the lesions in the lungs is extraordinarily irregular.

3. The disease nearly always runs an exceedingly rapid course, its duration being measured by weeks rather than by months. The pathological process is one of caseation and softening, with but little tendency to fibrosis and repair.

4. It is often said that pulmonary cavities are rarely met with in children; it would be more correct to say that they are rarely diagnosed or diagnosable. This is partly due to the fact that, though they are by no means uncommon, the child usually dies before they have reached any con-

siderable size, and partly because they are as a rule situated near the root of the lung, where the disease starts and remains most advanced, and where they are much more difficult of recognition by physical signs than they are at the apex.

5. A blood infection, followed by general miliary tuberculosis, is very liable to occur at any stage of the disease and bring the case to a rapid termination.

6. In fatal cases it is found on post-mortem examination that the disease is rarely limited to the lungs, but is widely disseminated throughout the body.

7. Both haemoptysis and tuberculous laryngitis are seldom met with in the first few years of life.

CLINICAL VARIETIES.

1. *Miliary tuberculosis of the lungs.* This usually occurs as part of a general infection of the body, and, as already explained, the clinical picture is predominantly that of tuberculous meningitis, but in certain cases the infection falls mainly upon the lungs, and the symptoms and signs are almost exclusively pulmonary. In these cases the disease invariably proves fatal in a few weeks and during this time the child is obviously extremely ill, with great prostration and a markedly hectic temperature. The respiration rate is much increased, and there is generally some cough, but as a rule physical examination of the chest is negative except for signs of slight bronchitis; in fact the combination of severe illness, marked dyspnoea and very few signs in the lungs is highly suggestive of the condition. In addition we may note that the spleen is often somewhat enlarged, miliary tubercles may be present in the choroid, and tubercles scattered more or less uniformly through the whole of both lungs may be distinctly visible on X-ray examination.

2. *Caseation spreading from the bronchial glands.*—In this condition, as in the previous one, the general symptoms are very marked, the child being exceedingly ill, with a high and irregular temperature. There is more or less cough and a good deal of dyspnoea. Any sputum which there may be is, of course, swallowed by such young patients, and haemoptysis is hardly ever met with.

The physical signs, even up to a very late stage, are often remarkably obscure. Disease at the root of the lung is most difficult to recognise, even when it has gone on to excavation. X-ray examination may give a definite picture when clinical investigation is quite negative, but the changes seen are not necessarily due to tubercle, and even if they are, the X-ray plate gives no information as to whether they are active or quiescent.

Even when large areas of caseation are scattered through the lungs the physical signs may be surprisingly slight. In a child's chest particularly, even when a large part of the lung is caseous, the percussion note may still be but little impaired, provided that the consolidation is not uniform and that a certain amount of air is diffused more or less uniformly through the diseased lung. Occasionally, however, large areas of consolidation at the base of the lung may suggest the presence of fluid. Until the caseous material begins to break down there may be but few adventitious sounds, and death may ensue before much softening has occurred.

3. *Tuberculous broncho-pneumonia.*—I need not describe this condition for the reason that the physical signs, the symptoms and the X-ray appearances are identical with those of simple broncho-pneumonia. Both diseases occur usually at the same age period and in both there is a prolonged irregular fever of precisely the same type. If any sputum could be obtained the discovery in it of tubercle bacilli would of course settle the diagnosis, but young children do not expectorate. Under these circumstances it is worth noting that it may be possible to obtain some sputum by tickling the back of the child's pharynx with a piece of gauze held in a pair of sinus forceps; any sputum then coughed up can be caught on the gauze before it is swallowed. Apart from this method of investigation it is I believe quite impossible in a large proportion of the cases to distinguish between a simple and a tuberculous broncho-pneumonia, at any rate until a late stage of the disease. In a doubtful case it is always desirable to treat the patient as though he were suffering from the simple disease; if it is really tuberculous he will certainly die within a few weeks, but no harm will have been done. If, on the other hand, a case of the simple disease is mistaken for a tuberculous one it is regarded by doctor, nurses and friends alike as necessarily hopeless and treatment therefore as entirely useless. Now as even simple broncho-pneumonia is always a most serious disease the patient's recovery will often depend upon the strictest care and attention to the smallest details of treatment, whether by food, drugs, stimulants, external applications, the temperature of the air of the sick-room, etc., so that the slightest relaxation of care and watchfulness may easily turn the scale against the patient.

A broncho-pneumonic consolidation, especially after measles or whooping cough in a previously feeble or unhealthy child, may never completely

clear up, but pass into a chronic condition and give rise eventually to more or less extensive pulmonary fibrosis and finally perhaps bronchiectasis, sometimes with great displacement of the heart. It not uncommonly happens that for periods of some years very marked physical signs may be present, but without any fever or other indication of active disease. It is well to remember that these cases are never tuberculous, although often erroneously regarded as such on account of physical signs suggestive of breaking down lung. It cannot be too strongly emphasized that pulmonary tuberculosis in young children is never a chronic condition and does not give rise to fibrosis or any form of fibroid phthisis. Consequently it never leads to displacement of the heart towards the affected side.

TREATMENT.

1. *PREVENTIVE.*—This is of course infinitely more satisfactory and important than attempts at curative treatment, and should be carried out as energetically and thoroughly as possible along two lines.

(a) *Avoid exposure to infection.*—There is no doubt that children during the first two or three years of life are far more susceptible to infection than at any later period. Consequently the presence of any one in the home suffering from open pulmonary tuberculosis constitutes a very real danger to them, the greatest risk of all being naturally from the mother. In a series of 100 post-mortem examinations upon children suffering from tuberculosis I obtained evidence of probable phthisis in one or other parent in 20 cases, 9 in the father and 11 in the mother, whereas in another series of post-mortems upon 100 children in whom there was no sign of tubercle, only seven parents were suffering from phthisis. Even more suggestive is the history of those of the 100 tuberculous patients who died during the first six months of life; they were seven in number. In one case the mother had advanced phthisis; in a second the mother had died of phthisis three months before; in a third the mother died of phthisis on the same day as the child. All these three infants had advanced pulmonary tuberculosis and, therefore, presumably had contracted the disease by inhalation. In the other four babies there was no evidence of parental tubercle, and it is significant that only one of them had local pulmonary disease. Obviously a child should be taken away from a tuberculous mother without delay, as even a quite short exposure is dangerous. The evidence seems almost conclusive that the disease in these children was contracted after

birth. I have never met with a fatal case during the first three months of life and Dr. Still only records one, at the age of ten weeks. Three months allow ample time for a baby to become infected with and to die from tubercle, seeing how rapid may be the progress of the disease in the earliest months of life. That intra-uterine infection may occur is doubtless possible, but as a matter of fact it would seem to be so rare as to be practically negligible; were it at all frequent an appreciable number of infants would certainly die from tubercle during the first three months after birth.

(b) *Increase resistance to infection.*—This is essentially a social and economic problem and depends upon adequate housing accommodation, with avoidance of over-crowding, abundant and suitable food, fresh air, sunshine, etc. Undoubtedly improved hygienic conditions have greatly diminished the incidence of tubercle, not only in children, but at all ages. Special care is called for after measles and whooping cough.

It is particularly important during childhood to keep the respiratory and gastro-intestinal mucous membranes healthy, as very possibly tubercle bacilli may then be unable to penetrate them. It is a significant fact that tuberculosis of the respiratory organs occurs most commonly at the age when bronchitis and broncho-pneumonia are especially frequent in children, and abdominal tuberculosis at or soon after the age when intestinal catarrh is most prevalent.

2. *CURATIVE.*—Very little need be said under this heading. When the presence of tuberculous bronchial glands is suspected the ordinary general constitutional treatment for tubercle in any part of the body should at once be adopted. Place the child under the best available conditions of climate and environment, and give an abundant diet of fresh food, with cod-liver oil. So long as there is any fever the patient should be kept at rest. If the glands have become caseous the ultimate prognosis is always doubtful, but undoubtedly in a certain number of patients calcareous changes occur and the disease remains arrested for an indefinite period, possibly throughout life. Out of 120 autopsies on tuberculous children I found the disease limited to the bronchial glands in seven, to the mesenteric in five, and to the two sets of glands in one patient. In every case death had resulted from some cause entirely different.

In young children when the lungs are definitely attacked the prognosis is probably hopeless, particularly if the bronchial glands are already extensively caseous.

PRESERVATIVES AND COLOURING MATTER IN FOOD.

BY

JAMES FENTON, M.D., D.P.H., Medical Officer of Health, the Royal Borough of Kensington.

For many years the Council of the Royal Borough of Kensington have given particular attention to the enforcement of the law for ensuring food purity, especially in connection with the addition of chemical preservatives and colouring matter to foodstuffs, and, as may be expected in the case of a high-class residential borough such as Kensington, an attempt has been made to obtain the highest possible degree of food purity consistent with modern facilities for production, storage and transport.

In several directions the Council have adopted a standard of purity, as regards the addition of preservatives and colouring matter, more stringent than that in use by many other local authorities, but in no case have they required dealers to comply with a standard which is not reasonably attainable.

The Need of Fixed Standards of Purity.

The main difficulty experienced by local authorities in dealing with the addition of preservatives to foodstuffs lies in the absence of reliable and authoritative standards of purity for their guidance.

Section 3 of the Sale of Food and Drugs Act of 1875 makes it an offence to mix any article of food with any material so as to render it injurious to health; it is also illegal to sell any article so mixed. Section 6 prohibits the sale to the prejudice of the purchaser of any article of food which is not of the nature, substance and quality demanded. It is, however, left to the local authority in each case to determine whether any particular article of food purchased by the Inspector under the Act is sufficiently injurious to health as to warrant a prosecution under Section 3, or whether the purchaser is prejudiced to such an extent as to justify proceedings under Section 6.

The decision of the local authority to issue a summons in any particular case depends on various considerations, but mainly on the advice of their Medical Officer of Health and on the expert knowledge and experience of individual members of the Public Health Committee. As Councillors of local authorities and Medical Officers of Health vary widely in their views on the use of preservatives and colouring matter in food, the action taken against retailers differs considerably throughout the country.

Also, magistrates give decisions which vary in different courts. For instance, several retailers

were convicted during 1923 at the Kensington Petty Sessional Court for selling tinned peas containing less than two grains per pound of copper sulphate, whereas a prosecution against a Woolwich retailer for selling tinned peas containing over three grains per pound was dismissed a few months ago at the Magistrate's Court in that district.

The magistrates are not responsible for these conflicting decisions because they have to decide on the evidence which comes before them.

This great difference in the practice of local authorities and in the decisions of magistrates is unsatisfactory alike to (a) local authorities, (b) producers, (c) retailers and (d) consumers.

It is recognised that it is not practicable that statutes such as the Sale of Food and Drugs Act, 1875, which must of necessity be couched in general terms, should go into details in regard to each kind of preservative and preserved foodstuff in use, but, nevertheless, definite legal standards of purity should be laid down.

The Public Health Act, 1875, the Public Health (London) Act, 1891, the Public Health Act, 1896, and the Public Health (Regulations as to Food) Act, 1907, give all the power necessary to the Minister of Health to lay down standards, and he has availed himself of such power in regard to milk and cream in the Regulations of 1912 and 1917 and condensed milk in the Regulations of 1923. It is desirable that the Minister should make Regulations defining the maximum amounts of each preservative and colouring agent which may be added to the various foodstuffs usually preserved or coloured.

The Regulations so far made are not binding on local authorities, and an amendment of the law is needed so as to secure that when the addition of any preservative or colouring matter to any particular foodstuff is controlled by Regulation, the dealer should not be exposed to the risk of prosecution under the Sale of Food and Drugs Act, 1875, in regard to the addition of that preservative or colouring matter, provided that there is no breach of the Regulations; in other words, any article of food conforming to the standards laid down by the Regulations should be regarded as genuine for the purposes of Sections 3 and 6 of the Sale of Food and Drugs Act, 1875, in so far as the addition of preservatives or colouring matter is concerned.

In stating that legal standards of purity should be fixed, I am not admitting the necessity of adding preservatives to any foodstuffs; indeed, I believe that by the adoption of more cleanly

methods of production, rapid transport and a more extended use of cold storage, preservatives could be dispensed with entirely, or, at least, the amounts now commonly used could be very considerably reduced.

In this connection, it is interesting to note the change which has taken place in recent years in regard to the addition of preservatives to milk.

In 1901, chemists, producers and retailers in milk stated before a Departmental Committee that it was absolutely essential to have preservative in milk and that it was almost impossible for poor people in London to get good fresh milk without the use of preservative. It was estimated that at that time about fifty per cent. of the dairymen in London used preservative.

Experience in Kensington shows that in a very few years following the labours of the Departmental Committee in 1901, it was found possible to supply a central area of the Metropolis with milk completely free from preservative. Since 1906, 4,954 samples of milk taken in Kensington have been examined and not one was found to contain boric acid. On one occasion, namely in 1915, formalin was found in a sample of milk. No other preservative has been found in milk since 1906.

On reviewing the evidence placed before the Departmental Committee in 1901, the state of the milk trade in regard to preservatives at that time, and the change which took place within the next few years, I consider it is justifiable to take the view that it should be possible to eliminate or reduce the amount of preservative in other articles of food, many of which do not deteriorate so rapidly as milk.

Since 1900, 205 samples of cream have been taken in Kensington for analysis under the Sale of Food and Drugs Act, and 102, or 49.7 per cent. of these were free from preservative.

In view of the fact that practically half the samples of cream taken in Kensington for many years past have been free from preservative, it must be possible to carry on a cream trade without the use of preservative. Cold storage is now in use in almost every butcher's shop, and if retailers in dairy produce adopted some system of refrigeration, the need for preservative would not be felt.

In addition to finding boric acid in cream, the Kensington Public Analyst has found this chemical present, either as such, or as a mixture with borax, in sausages, meat extracts, meat juices, potted meats, potted fish, potted caviare, cheese, butter, margarine, wine, Devonshire cream, mincemeat, sponge cakes and liquid

eggs. He has found salicylic acid in meat juices, syrups, jams, lager beer, wines, British wines and lime juice; and benzoic acid, probably present as benzoate of soda, in non-alcoholic and medicated wines. Copper has been found in peas, beans, capers, spinach and gherkins.

It may be useful to consider the extent to which preservatives and colouring matter have been found in some of the more commonly adulterated articles during the present century.

TABLE showing the extent to which boric acid has been found in some of the more commonly adulterated articles which have been taken in Kensington since 1900 for analysis under the Sale of Food and Drugs Act, 1875.

Name of article sampled.	No. of samples taken for analysis since 1900.	No. found to contain boric acid.	Percentage free from preservative.	Highest amount of boric acid found in any one sample. (grains per pound.)	Lowest amount of boric acid found in any one sample.
Cream	205	103	49.7	37.08	2.97
Sausages	382	90	76.96	31.48	4.95
Potted meat, potted fish, meat pastes and fish pastes	322	38	88.21	49.58	4.21
Brawn	56	10	82.14	12.14	6.06
Butter	2264	1669	26.2	*	*
Margarine	150	142	5.33	*	*

* In no case did the amount of boric acid found in butter or margarine exceed .5 per cent., or 35 grains per lb., the amount recommended as a maximum by the Departmental Committee in 1901, and as a rule, the quantity was much smaller.

It will be seen that in a considerable percentage of samples taken the analyst has reported the absence of boric acid and, in these circumstances, it is considered that there should be no difficulty in eliminating this drug altogether if the methods of production, transport and storage were clean and satisfactory.

Since 1900, 136 samples of tinned peas have been taken for analysis under the Sale of Food and Drugs Act, 1875, and 95 of these contained copper, the highest amount found in any one sample being equivalent to 4.87 grains of copper sulphate per pound. Fifty samples of other tinned vegetables (beans, capers, spinach, gherkins) have been examined since 1900, and 18 of these have been found to contain copper, the highest amount found in any one sample being equivalent to 7.17 grains of copper sulphate per pound.

The practice of adding copper sulphate to tinned vegetables is prohibited in America, and all samples of tinned vegetables of American origin taken in Kensington have been found to be free from copper.

Copper sulphate does not improve the food value or taste of the vegetables; it is not added as a preservative but merely to give the article a bright green colour. This seems an insufficient reason for adding this irritant and poisonous drug to foodstuff intended for human consumption, and it is unfortunate that effect has not been given so far to the recommendation of the Departmental Committee in 1901 that the use of copper sulphate for the greening of preserved foods should be prohibited.

Since 1900, 24 samples of ginger, raisin, orange and elder wine have been taken, and 5 were found to contain salicylic acid, the highest quantity present being 1.75 grains per pint. Ten samples of lime juice cordial have been taken since 1900, 4 of these being found to contain salicylic acid, the highest amount being 6.13 grains per pint.

The experience in Kensington in regard to the addition of preservative to butter is interesting when compared with the experience in milk, for whilst the practice of adding preservative to milk, an article that deteriorates rapidly, has entirely disappeared, it is increasing in the case of butter, which in its natural state keeps longer. In 1900, 95 per cent. of the samples of butter were free from preservative. In 1923, only 23 per cent. of the samples taken were free.

The following is a list of the samples of sponge cake taken in Kensington during the year 1923, and found to contain boric acid:—

Date of Purchase of sample.	Amount of boric acid found present.
February 22nd	18.46 grains per lb.
" "	18.71 " "
" "	15.49 " "
April 20th	7.38 " "
July 13th	16.73 " "
July 27th	19.58 " "
August 10th	5.95 " "
August 15th	5.13 " "

It is true that there is some difference of opinion on the question of the addition of boric acid to cream, but I cannot see any justification for the quite unnecessary practice of adding this drug to such an article as sponge cake, which already keeps well and is mainly intended for invalids and children.

As pointed out in the Ministry of Health Circular No. 381, dated March 20th, 1923, the Bakers' Allied Trade Association passed a resolution on February 1st, 1923, to the effect that the sale of liquid whole egg (from which the boric acid in sponge cakes originates) would be made on the understanding that this preparation should not be used in the manufacture of sponge fingers, sponge biscuits and small plain sponge cakes, and that invoices should bear a statement accordingly, but it does not appear from the analyses of samples taken in Kensington since the resolution was passed that it has had the desired effect.

Owing to the wide range of foodstuffs being treated with preservative to-day, it is possible that as much as 40 grains of boric acid, or even more, may be consumed daily by an individual through the medium of various articles of diet. In these circumstances, the desirability of control by prescription of limits must be recognised, and it is to be hoped that standards of purity will be fixed before long.

Declarations.

If preservatives and colouring matters are to be allowed in foodstuffs there should be a full and clear declaration made at the time of purchase as to the nature and amount of the adulterant added in order that the consumer may know exactly what he is buying.

The declaration should preferably be printed, and should be fixed on the container, if the article be sold in one. Printed or other declarations should be prescribed in each case by Regulation, and care should be taken that they cannot be made ambiguous or misleading.

In illustration of the need of this precaution, attention may be called to the following declarations which have appeared on samples of tinned vegetables taken recently in Kensington:—

1. The colour of these peas is preserved by sulphate of copper, the smallest quantity possible being used to ensure Finest Quality and is not injurious to health.

(Copper equivalent to 1.4 grains of copper sulphate per lb. was found by the Public Analyst.)

2. In accordance with the method which has been followed for many years past and approved by the highest authorities, the contents of this package have been prepared with a small quantity of copper.

(Copper equivalent to 1.3 grains of copper sulphate per lb. was found by the Public Analyst.)

3. The colour of these beans is preserved by sulphate of copper, the smallest quantity

of copper being used to ensure finest quality and is not injurious to health.

(Copper equivalent to 2.1 grains of copper sulphate per lb. was found by the Public Analyst.)

4.

SUPPORT HOME INDUSTRIES.

The colour of these Peas is preserved by Sulphate of Copper, the smallest quantity possible being used to ensure finest quality.

(The above example is an exact reproduction giving the size of the type used in the declaration; it is interesting to note that the words "Support Home Industries" in large type have been used as a heading to the declaration of the presence of copper, which is in very small type.)

(Copper equivalent to 1.5 grains of copper sulphate per lb. was found by the Public Analyst.)

Power to take proceedings against persons adding preservatives or colouring matter.

As far back as 1890, the Vestry of Kensington urged the Local Government Board to introduce a Bill for the amendment of the Sale of Food and Drugs Act, 1875, so that the manufacturers of, and wholesale dealers in, adulterated articles may be rendered liable to penalties as well as retailers. No fewer than 15 of the other local authorities in the Metropolis expressed concurrence with the views of the Kensington Vestry, and communicated with the Local Government Board in favour of the Act being amended in the direction indicated.

In 1892, the Vestry again invited the Local Government Board's attention to this matter. In 1894, a conference of local authorities of London, convened by the Vestry of St. George's, Hanover Square, passed resolutions in favour of bringing the manufacturers of, and wholesalers in, adulterated articles within the scope of the Sale of Food and Drugs Act.

Under the law as it now stands, the person selling an article to an Inspector of a local authority is responsible under the Sale of Food and Drugs Act, 1875, and it is not uncommon to hear a retailer inform the magistrates that he was unaware of the presence of a preservative in respect of which the prosecution had been taken, until he received the summons. The magistrates sometimes reply that the defendant could have protected himself by obtaining a report from a private analyst. Such a course is possible, and, indeed, probably profitable in the case of a large firm, but it seems unreasonable to expect a small retailer to consult an analyst at a cost of several guineas in respect of each consignment of goods which may contain preservative. The retailer is frequently innocent and he should be afforded some protection in this matter.

In the case of articles in bottles, tins, cartons, packets, etc., in which the container is unopened by the retailer and sold exactly as received by him, the law should require a printed label stating, not only the kind and amount of preservative or colouring matter added, but also the name and address of the person responsible for the adulteration. In the case of foreign articles, the name and address should be that of the importer.

When a label does not conform with the Regulations made in respect thereof, the local authority should be empowered to take proceedings at a Court having jurisdiction within their own area against the person who is responsible for the issue of the declaration, namely, the person whose name and address is on the label, and they should not be required to proceed against the retailer.

If a sample be found to contain preservative (1) not allowed by regulation, (2) not mentioned on the label, (3) in excess of that allowed by regulation, or (4) in excess of that stated on the label, and such sample was sold by the retailer in an unopened container, the person whose name and address appear on the label, and not the retailer, should be made responsible at law.

In this way the small retailer, who cannot afford the services of an analytical chemist, could protect himself by the mere precaution of seeing that the name and address of the producer are on the label.

Cases will occur in which a sample does not reach the required standard of purity, and does not bear the name and address of the producer. Owing to the article having passed through the hands of various middlemen in the market, it might be difficult and expensive to trace the producer. In view of this, the law should make the retailer responsible if he sells an article which does not bear the name and address of the producer, and is found to contain preservative in excess of that allowed by the Regulations made in respect thereof. If the retailer fails to take the simple precaution indicated he cannot reasonably object to being saddled with the responsibility.

There is nothing new in asking for the name of the producer to appear on the container, for it is required in the case of certified milk and condensed milk by the Regulations controlling the sale of these articles.

Anything in the nature of the warranty defence, so common in milk cases, should be cautiously avoided.

THE RT. HON. JOHN WHEATLEY, M.P., Minister of Health, has appointed Mr. S. F. Perry, M.P., to be his parliamentary private secretary (unpaid).

THE NEED FOR CLOSER CO-OPERATION BETWEEN MEDICAL INSPECTION AND PUBLIC HEALTH WORK.*

BY

J. E. SPENCE, M.B., D.P.H., Medical Officer of Health, Eccles.

The history of the pioneer work which lead up to the inception of medical inspection and treatment of school children, is well known to you all. By Section 13, 1 (b) of the Education (Administrative Provisions) Act, 1907, the duty was laid upon education authorities to provide for the medical inspection of children immediately before, or at the time of, or as soon as possible after their admission to a public elementary school and on such other occasions as the Board of Education direct, and power was given to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of children educated in public elementary schools. Thus medical inspection and treatment of school children, although essentially a part of a broad scheme of preventive medicine, is by this enactment placed under the control of a government department whose primary concern is the mind and not the body. Whereas we, as physicians, consider health as the first essential requirement of the child, officers of the education department seem to consider the needs of the body as entirely subsidiary to the child's educational progress. This outlook is well illustrated by the attitude which some H.M. Inspectors adopt towards mentally dull and backward children. They practically state that all minds are equal in quality and that all children, provided they are given additional assistance in school, should attain the same standard of educational proficiency, although some may be slower in reaching that standard. They consider that lack of educational progress is due to inefficient teaching or bad attendance at school and not to a deficient capacity for acquiring knowledge. They decline to admit that the intellect of children may vary just as much as the physique. In any group of children you may find all grades of physical fitness, from the supernormal down to the sub-normal, and it is justifiable to assume that a similar variation in intellect may also be found among them. When such an attitude is adopted by the non-medical staff of the Board of Education, it is not surprising that their attitude with regard to the physical well-being of the children is that it should be entirely subordinate to education.

* Paper read at a Meeting of the N.W. Branch in Manchester on 8th February, 1924.

There were great expectations, when the Ministry of Health Bill was before Parliament, that under the new regime medical inspection and treatment of children would be placed in its true position, as a part of the scheme of preventive medicine which is being developed in the country, by its transference to the Ministry of Health. We have, however, been disappointed, as this step has not yet been taken, in spite of the amendment to the Bill which was introduced with the object of bringing about the transfer, although a compromise has been adopted and the medical work of the Board of Education has been co-ordinated with that of the Ministry by the appointment of Sir George Newman as head of both departments.

A similar defect exists in local administration, the school medical service being carried out by a committee whose primary interest is education and not health. Each local authority has a Health Committee whose duty is to promote the health of the community, yet during that part of an individual's life, which is most important, so far as the prevention of disease is concerned, he is practically taken out of their charge. For nine of the most important years of his life he is placed under the care of the Education Authority, simply because he happens to be of school age and not because that authority can make better provision for his welfare. This artificial division of the child's life into pre-school, school and post-school periods leads to a lack of continuity in supervision and overlapping of effort.

Under the M. and C.W. Act, each local authority has established a committee whose function is the welfare of the expectant mother and later of her child; the child afterwards passes under the care of the Education Committee. There is no continuity however in the work and from the age of eighteen months or so until he enters school, supervision of his welfare is practically non-existent, with the result that twenty to thirty per cent. of entrants to the schools are found to be suffering from defects requiring treatment. It is obvious that here, there is need for co-operation which could be provided quite easily as the M.O.H. is almost always also S.M.O. Were medical inspection of school children the duty of the health instead of the education committee the problem of devising a homogeneous scheme would be a simple one. An obstacle, however, exists at present, in the fact that there are two committees to be consulted, the approval of both having to be obtained to any scheme for co-operation. It often happens that a large proportion of the members of one committee are also members of the other,

but a member of the M. and C.W. Committee, while in that committee, will view problems from the M. and C.W. standpoint. Should he be called upon to consider the same problems in the education committee his view point becomes that of the educationalist.

Another obstacle to the close co-ordination of the school service with other health activities is the fact that the details of administration under the Education Committee are often different from those under the Health Committee and the attitude of directors and secretaries of education towards the school medical service hampers it, even if it is not actually hostile. In some instances these education officials are inclined to regard the S.M.O. as a subordinate official of the Education Committee even though he may also be M.O.H.

The first step therefore in the co-ordination of school work with public health work is the co-ordination of committees. This of course can only be effected by legislation as the M. and C.W. committee is a statutory committee. The Ministry of Health Act provides for the transfer of the medical department of the Board of Education to the Ministry of Health by an order in council, but I am uncertain whether these powers will also permit of the transfer of school medical inspection and treatment from the Education Committee of the Local Authority to the Health Committee. If this transfer could be effected there is no reason why all health matters such as M. and C.W., School Medical Service, Tuberculosis, Mental Deficiency, Infectious Diseases, Housing, etc., should not be dealt with by one committee in each sanitary area. In larger areas it would be necessary of course to refer matters of detail to sub-committees, but the principal committee would remain responsible for the general policy and ensure co-ordination of the work. Under such a scheme the M.O.H. would be an administrative officer responsible to the committee for all branches of preventive work and there would be no obstacle to the closest co-ordination of all measures designed to prevent disease and improve the health of the community.

The branches of preventive medicine which can with advantage be closely co-ordinated with the school medical service are: infant welfare work, tuberculosis, control of infectious diseases and the care of mentally defectives. In addition the duties of M.O. under the F. and W. Act might be added.

I will refer to the M. and C.W. work first, as it is this branch of preventive medicine with which the individual first comes into contact. The supervision of infant life commences during pregnancy and is carried on intensely until the end of the first year, afterwards becoming

rather haphazard owing to the fact that the health visitor and the M. and C.W. medical officer feel that the child will shortly pass out of their care. Concentration of attention particularly on the first year of life is also due in part to the prominence given during the present century to infant mortality and the relative neglect of the importance of sickness and mortality during the subsequent years. Another factor which leads to the neglect of child life from one to five years is the arrival of a second infant in the home demanding a very large portion of the mother's time. The result is that the child does not continue in attendance at the I.W. clinic and, with the present limitation of staff, he is only visited at long intervals by a Health Visitor whose interest in him gradually wanes, as she knows that he will soon cease to be her responsibility. Thus the child, after twelve or eighteen months of intensive supervision, is left to wander through no man's land without a guiding hand to steer him clear of the many pitfalls which exist there.

Although the mortality of the second year of life is low when compared with the mortality of infancy, the young child is still exposed to many serious dangers such as measles, whooping cough, etc., and careful supervision is just as necessary during this period as it has been previously. Mortality is by no means the total sum of the damage done by the illnesses of this period. Much crippling and ill-health are the result of measles and whooping cough and these diseases are responsible to a great extent for the puny, ill-nourished children found during the inspection of entrants in the schools. Sir George Newman, in his last report, says "the fact is that after the first year of life the young child has to bear a heavy burden of environmental neglect associated with bad housing, poverty and absence of hygienic supervision. As a result the school medical service is faced with the hard issue that, out of infant population born healthy, thirty-five to forty per cent. of those who are admitted to school at five years of age bear with them physical defects which could have been prevented or cured. . . . Here we have the most serious and wasteful defect in our national health service."

Here, then, co-ordination of our health services should commence so that this gap can be filled and the supervision of child life made uniform and continuous from birth until the leaving age. This end can be attained by making the infant welfare and school medical services, one, by having the same officers to carry out both branches of the work. The supervision of pre-school children should be extended at the infant welfare centre by making provision for routine

examination at intervals until they are admitted to school; by making provision for the treatment of minor ailments, tonsils and adenoids, etc., either at the school clinic or the I.W. centre and the number of health visitors should be increased so that the domiciliary visiting of infants may be much more frequent during pre-school years.

The fusion of the two staffs would render the interest of the workers in the children continuous, and the combination of duties would lead to economy of time and energy. The officers carrying out the work would have smaller and more compact districts and would get to know the family history and social conditions of the people with whom they were dealing so that the duplication of enquiries would be obviated; instead of two nurses going into the home there would only be one whose visits would be more frequent. She would soon know the family intimately and come to be regarded as a friend whose visits would be anticipated with pleasure and whose advice and help would be gladly welcomed, rather than as an official of the corporation prying into the family affairs. At the present time one of the principal criticisms levelled against municipal welfare services is that they are responsible for the multiplication of officials who, for one reason or another, visit the home making endless enquiries. The housewives become "fed up" with the recurring request for information, much of it a repetition of what has already been supplied to another member of the health department staff, and are too annoyed and irritated to take advantage of assistance or advice the health visitor may have to offer.

The unification of the services would also result in a continuous medical history of the child, including the ante-natal history, being available for the School Medical Officer at the time of the child's routine examination in school.

This co-ordination of the School Medical and Infant Welfare Services with extension of supervision of the pre-school child does not, however, completely provide for the welfare of the children coming from artisan homes, particularly in the poorer districts where there is need for some other form of care for the pre-school child. This is particularly the case in districts where children are not admitted to school until they have attained the age of five years. At the present time there is a movement on foot to establish nursery schools, the object being to provide some place where these children can be looked after during the day instead of being allowed to play in back streets and courts among filth and dirt as at present. The primary object of such schools is to be

preventive, rather than educational and their development should be watched so that when they are established they will be placed under the health service instead of being under the education authority.

The second direction in which school work should be co-ordinated with health work is in connection with the supervision of infectious diseases. The majority of infectious diseases have their greatest incidence during the school and pre-school period. The incidence of scarlet fever and diphtheria falls on children, not on adults, and the administrative action taken in connection with these diseases is designed to prevent their spread among school children; it is reasonable therefore that the control of them should be a duty placed on the staff dealing with the welfare of school children. Under the present conditions, cases of infectious disease among children are investigated by the Sanitary Inspector and reported to the school nurse and health visitor and, in addition, notice is sent to the education authority with regard to the exclusion of the infected child and contacts from school for the information of the Head Teacher and School Attendance Officer. It is often desirable to make an examination of scholars in the same class as the patient for missed or unrecognised cases, a duty which can only be carried out by the school nurse who has entry to the schools. If the whole of the investigation of the cases were her duty this could be done as a routine without the time of two officials being wasted in the duplication of work.

Investigations into the home conditions, the question of isolation at home, or the necessity for removal to hospital as well as instructions as to precautions against the spread of infection, etc., can be carried out quite well by the school nurses. Perhaps this work can be done more efficiently by nurses than by sanitary inspectors, as many of the nurses engaged in health work have had experience in fever hospitals and possess a greater knowledge of fevers than sanitary inspectors, whose knowledge in many cases has been obtained only by domiciliary visits following on the notification of infectious diseases. In addition the nurse, who is continually visiting the homes in connection with school or I.W. work, already possesses much of the information which it is usual to obtain when following up infectious diseases and in this connection also co-ordination would obviate the duplication of enquiries. After the completion of the necessary investigations by the nurse the records could then be handed to the S. I. for such further action as may be

necessary by his department and for disinfection on the recovery of the case or after removal, should this be considered necessary.

Objection will no doubt be taken to this proposal on the ground that the nurse is working mainly among a population particularly susceptible to infectious diseases and might be liable to spread infection. Except in the case of small pox, there is no evidence of there being any danger on this account if ordinary precautions are taken. If there were much danger, the general practitioner would be responsible for the propagation of much infection, as during his day's work he visits infectious and other cases indiscriminately and comes into much closer contact with the patients during his examination than a nurse would do while making her investigations.

Tuberculosis work is the third branch of preventive medicine which can be closely co-ordinated with the school medical service. Although the problems of tuberculosis are different from those of other infectious diseases owing to its chronicity and latency, its prevention is just as much a public health problem as the prevention of small pox or cancer. There has been a tendency to regard tuberculosis work as an entirely isolated section of preventive medicine and in some instances to sever it entirely from the other branches of preventive medicine. This I think is a retrograde step. Tuberculosis is not an incurable disease, but the results of treatment up to the present have been disappointing. Direction of more attention to the prevention of infection and the hygienic treatment of contacts than to the treatment of open pulmonary cases will in the end be more economical and productive of better results.

Tuberculosis is mainly a disease of children in so far as the infection is contracted during the first few years of life, although there may be no symptoms of infection evident at the time. The appearance of symptoms in adult life is due not so much to fresh infection as to auto-infection or lighting up of old foci, which have remained quiescent since childhood. We have yet to learn that much infection is contracted by adults, and the investigation of marital infection in this disease leaves us more convinced that adults are relatively immune.

The problem of dealing with the disease can be divided into four parts. Firstly there is the supervision and treatment of the advanced open cases of pulmonary tuberculosis. In most instances this resolves itself into education of the patient in the prevention of the spread of infection and the careful disposal of the sputum. In some cases isolation of the patient in hospital may be possible, but as a rule this is only of short duration, the patient spending most of

his time spreading the disease in his own home and neighbourhood. Secondly there is sanatorium treatment for a minority of early cases in which a cure may be expected or the patient sufficiently improved to permit him to follow his own or another occupation for a few years. Thirdly there is the varied group of cases designated as surgical tuberculosis, whose treatment is carried out either in hospital or at home. Lastly there is the most important and to my mind the most hopeful part of the work, namely the examination and supervision of contacts. It is here then that close co-ordination of school work with tuberculosis work will prove most valuable as the contacts are mainly children whose supervision and treatment is already the duty of the school medical service. There is no doubt that much malnutrition and ill-health found among school children is due to infection with tubercle bacilli. Many of the infected children have just enough resistance to the disease to prevent its development to a stage when it is recognisable by the clinical methods at present in use. A long struggle is, however, being waged in the child's body between the tissues and the bacilli, which saps the child's vitality and results in listlessness, poor nutrition, low vitality and slight evening temperature. These children, particularly if there is any evidence of association with an open case of tuberculosis, are undoubtedly tuberculous and require special supervision either in school or at the tuberculosis dispensary.

Under the existing order of things each child is examined by the school medical officer at least three times during its school period, and in addition is brought before him as a special case if the teacher or parent is not satisfied with his physical condition. In the majority of cases, however, the S. M. O. has no definite information as to the family history with regard to tuberculosis of the children when he examines them, which, in the case of contacts, would be of greatest assistance. It would be therefore a great advantage if the S. M. O. were assistant tuberculosis officer for the district in which his schools are situated, and the school nurse were tuberculosis nurse. He could then have full information with regard to the child's family history uppermost in his mind at the time of examination and would, in the case of children from tuberculous families, be on the look out for early signs or symptoms of the disease. He would also be able to mark down these contacts for special supervision and re-examination at frequent intervals, a task which could be well carried out along with his routine work in the schools.

The work of the tuberculosis nurse also could

be combined with that of the school nurse. Practically all the information obtained by the tuberculosis nurse with regard to the home and social conditions of the family are already in the possession of the school nurse, while the supervision of the patients mode of life and the prevention of infection could be carried out quite well by her along with her other duties.

Many education authorities have provided open air schools for the education of physically defective children, a large proportion of whom are children threatened with tuberculosis, contacts with tuberculosis, or children who have had active tuberculosis for which they have received sanatorium treatment but whose condition might relapse if they returned to the ordinary elementary schools. Here the school medical service is undertaking work ancillary to that of the tuberculosis dispensaries while, in connection with tuberculosis schemes, sanatorium schools, recognised by the Board of Education, have been established for the concurrent treatment and education of tuberculous children. This overlapping of the two services could be avoided by co-ordination and combination of duties.

The supervision and care of mental defectives is another branch of public health work which should be closely co-ordinated with the school medical service. This work at the present time is unfortunately in an unsatisfactory condition owing to the weakness of the Act and lack of institutional accommodation for certified children. The mentally defective child is brought to the notice of the health authorities either by the infant welfare or the school medical service, but it is not until he attains the age of seven years that anything can be done for him. Children who are educable remain under the supervision of the school medical service, while those who are uneducable are reported to the authority under the Act. In county boroughs the certifying officer is the M. O. H. and, where he is also S. M. O., the children in practice remain under the same supervision as before certification, but in the case of non-county boroughs the child is reported to the county authority, which in Lancashire is the Asylums Board, and, if they are not removed to an institution, no supervision is provided for them.

Section 2 of the Blind Persons' Act, 1920, places the duty upon the council of every county and county borough of making arrangements for promoting the welfare of blind persons resident within their area. In most instances this work has been referred to the health department. In this work also it is essential to have the co-operation of the school medical officer, as most of the new cases which will in future be added to the list of blind

persons are children who have been successively under the care of the infant welfare and school medical services.

Juvenile employment bureaux have been established in all areas by education authorities in conjunction with the Ministry of Labour, the officer in charge being an officer of the education authority. His duties comprise the licensing and supervision of school children who are employed out of school hours in the sale of newspapers or as errand boys, the licences permitting them to work out of school hours being granted after the S. M. O. has certified that such employment will not be prejudicial to their health or will not prevent them from benefiting by education in school. The juvenile employment bureau is also engaged in registering for employment children who have left school and in assisting them to obtain suitable employment. In this work the officer has the assistance of reports from the head teacher and, where he is in touch with the S. M. O., records of the child's medical history are also available for his guidance, or in doubtful cases he is able to confer with the S. M. O. before placing a delicate child.

When the children obtain employment in a factory or workshop they must submit themselves for medical examination by the factory surgeon. The object of this examination is to ascertain whether young persons are able to stand the strain of the work they desire to take up or whether it is likely to be injurious to their health. This object, however, is defeated by the totally inadequate fees paid for the work, which will by no means compensate a medical man for even the most perfunctory examination. Probably you all can call to mind children with delicate chests or threatened with tuberculosis who have gone to work at a dusty occupation indoors, or children with well marked myopia who, while at school, have persistently refused to wear glasses, even when these have been provided through the education committee, but after leaving have been permitted to undertake an occupation involving considerable eye-strain. These children have been seen by the factory surgeon, but their eyes have not been examined nor has a stethoscope been put on their chests, and the report as to their fitness for the work they are undertaking is absolutely valueless. There is no one better situated to undertake this work than the school medical officer who has had these children under his supervision for nine years at school, and who has at hand a complete record of the child's medical history since birth. Such an appointment would be a safeguard against children

undertaking unsuitable occupations. Also if the parents knew that the children would be subject to examination by the S. M. O. before they could obtain employment after leaving school, the threat that they would be turned down, if treatment were not obtained for defects revealed by medical inspection, would be far more effective than the threat of prosecution under Section 12 of the Children's Act for the failure to obtain treatment.

These are the chief branches of preventive medicine which, when combined with medical inspection will lead to economy of time and money, increased all round efficiency and the prevention of overlapping.

In conclusion I wish to refer to the duties of the nurses and medical officers if co-ordination of the various branches of public health with the school medical service were carried out.

The sanitary inspector can be a valuable agent in assisting to raise the social status of the submerged population of the slums by educating and encouraging the indolent and tempering his official duties with humanity, but a woman, with a nurse's training, who could be sympathetic yet firm, would be an even greater factor for social advancement. In many districts women are already employed as sanitary inspectors. In some they carry out the duties usually allotted to male sanitary inspectors, while in others they are appointed for special duties. With the exception of systematic examination of houses which involves some knowledge of building construction, the testing of drains, and the inspection of slaughter houses and meat, the duties of a sanitary inspector can be carried out quite well by women. With these exceptions then, the duties of sanitary inspector could be combined with the other work carried out by the nursing staff, and a single official instead of several be responsible for the supervision of all branches of public health work in a district.

The combination of these duties by one official would mean that the district allotted to each nurse would be small and compact, and less time would be wasted in travelling round the district. The number of homes under her supervision would be small, probably not more than 1,000 to 1,200, so that she would soon become familiar with the family and social conditions of the people in her district, and less time would be spent in duplication of enquiries. She would soon be known intimately by the people and would be regarded as a friend to whom the mother could turn for advice and assistance. The combination of duties would also destroy the idea, which still

exists in many districts, that officials of a health department exist merely to pry into the private affairs of the home rather than to assist the people to health.

It may be thought that a combination of duties as outlined above will necessitate a super medical officer. It will certainly demand a wider experience of medicine than is possessed by some who enter the medical service shortly after graduating. This Society is already endeavouring to attain this object by recommending that entrants into the public health service should have had three years' clinical experience to fit them for their duties. In this time a graduate should be able to acquire a sound working knowledge of clinical medicine and surgery and also a sufficient knowledge of the diseases of infancy and childhood, of tuberculosis and infectious diseases to enable him to undertake successfully what may be described as the post of general practitioner in the preventive medical service.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

PROCEEDINGS.

ANNUAL PROVINCIAL MEETING.

The Annual Provincial Meeting was held at the Students' Union, Liverpool University, on Friday, 18th July, 1924. In the absence of the President, Dr. J. Howard-Jones was invited to take the chair and there were present Drs. H. J. Milligan, Cyril Banks, D. Morley Mathieson, G. H. Pearce, R. Veitch Clark, Charles Porter, Jas. Mair, Cecil L. Williams, J. Macmillan, James Fenton, R. J. Maule Horne, J. Cates, G. F. Buchan, Harold Kerr, F. Hauxwell and F. A. Belam.

The minutes of the last Annual Provincial Meeting having been approved, the Chairman proposed that the Executive Secretary should write a letter to the President expressing regret at the illness which prevented his attendance that day, and wishing him a quick recovery. The proposal was adopted by acclamation.

A letter was read from the Royal Sanitary Institute in reference to the Factories Bill now before Parliament, reporting that the Institute had written to the Prime Minister, the Home Secretary and the Minister of Health, recording a strong protest against the proposal that the powers regarding the sanitary conditions of workshops should be taken out of the hands of the Local Sanitary Authorities. The letter also ex-

pressed the opinion that all the sanitary provisions relating to "Factories," which in the Bill include "Workshops" and "Workplaces," should be enforced by the Local Sanitary Authorities. The Institute offered to co-operate with the Society in any action taken in support of the above views. The Chairman pointed out that a representative of the Society (Dr. W. J. Howarth) was already serving on the Committee of the B.M.A. concerned with the provisions of the Factories Bill, and no doubt he (Dr. Howarth) would indicate any opportunity for useful joint action. After some discussion the Executive Secretary was directed to write to the representative bodies of the Local Authorities affected by the Bill, pointing out that the provisions of the new Bill could only be effectively administered if carried out by Local Sanitary Authorities.

By request of the Chairman, the Chairman of the Salaries Committee (Dr. G. F. Buchan) gave an account of the present position in regard to the Society's Scale of Salaries as affected by recent negotiations. Dr. Buchan was cordially thanked for the persistence and ability with which he had contended for the adoption of the scale, and for the considerable measure of success which had resulted from his efforts.

A number of interesting points in reference to recent appointments were raised by Dr. Cecil L. Williams, who suggested that it was the duty of the Society to take action to ensure the selection of the best candidates for vacant posts. The meeting agreed that so long as appointments of Medical Officers are made by Local Authorities any intervention by the Society would not be justified, provided that such Medical Officers have the statutory qualifications.

The following candidates, having been duly nominated, were elected as Fellows of the Society: Blackham, Olive Gertrude, B.A., M.D., B.Ch., Dub.; Bull, Wm. Edward Hugh, M.C., M.A., M.B., B.Ch., Cantab., M.R.C.S., L.R.C.P.; Champneys, Weldon Dalrymple, M.B., B.Ch., Oxon., D.P.H.; Doherty, Annie, M.B., B.Ch., N.U.I.; Galvin, Wilfred Louis, M.B., B.Ch., N.U.I.; Hebblethwaite, Arthur Stuart, M.C., M.B., Ch.B., Leeds, D.P.H.; MacLachlan, Jessie Brown, M.B., Ch.B., Glasg., D.P.H.; Macpherson, Douglas Gordon, M.B., Ch.B., N.Z.; Parker, Edward, M.B., B.Ch., Dub.; Robertson, Agnes Annie Sloan, M.B., Ch.B.; Robertson, Arthur, M.B., Ch.B., Glasg., D.P.H.; Smyth, Elsie Stuart, M.B., B.Ch., Dub.; Speight, Alfred, L.R.C.P., and S., Ed., D.P.H.; Walmsley, Norman W., M.D., Ch.B., Liv., D.P.H.; Wilson, David McGruther, M.B., Ch.B., Glasg., D.P.H.

A number of candidates having been nominated for election at the next meeting the proceedings were adjourned.

EASTERN BRANCH.

Annual Meeting held on July 5th, 1924, at the office of Dr. J. T. C. Nash, the Shirehall, Norwich, Dr. H. H. Back, M.O.H. of Aylsham R.D., and of Blofield R.D., elected President for the ensuing year.

It was brought to the notice of the meeting that the Norfolk Education Committee were advertising in the lay press for an Assistant S.M.O. at a salary below the scale recognised, and that two candidates (female) from Scotland had been invited to meet the Committee.

The Hon. Secretary of the Branch was instructed to bring the matter before the local branch of the British Medical Association. This was done the same day.

The Ministry of Health having supported the M.O.H. of the R.D. of Mutford and Lothingland in his refusal to accept a reduction in salary the matter appears now to have dropped.

MIDLAND BRANCH.

The Annual Meeting was held at the Town Hall, Stratford-on-Avon, on Saturday, July 12th, 1924.

Present: Dr. Hamilton Wood in the chair, and 19 members.

Election of Officers and Council.—The following were elected:—

President, Dr. R. Woolsey Stocks; *President-Elect*, Dr. W. H. Davison; *Vice-Presidents*: Drs. A. Bostock Hill, George Reid, John Robertson, T. Ridley Bailey, E. H. Snell, H. Gibbons Ward, A. Hamilton Wood; *Council*, Drs. G. A. Auden, Rose L. Molloy, J. M. Cowie, W. L. M. Goldie, J. A. Watt, J. B. Ferguson, K. E. Tapper; *Treasurer*, Dr. T. Ridley Bailey; *Secretary*, Dr. R. H. H. Jolly; *Branch Correspondent*, Dr. W. H. Davison; *Auditor*, Dr. W. M. Clendinnen; *Representatives on Council of Society of Medical Officers of Health*, Dr. E. H. Snell, Dr. R. H. H. Jolly.

The usual vote of thanks to the Corporation of Birmingham for the continued use of a Committee Room was passed unanimously.

A letter was read from the Executive Secretary asking whether the Branch considered it desirable for the Society to make a pronouncement regarding the risk of conveyance of infection by the circulation of books. This was referred to the Branch Council. It was also decided to ask the Branch Council to give consideration to the ques-

tion of disinfection of rooms after a case of Tuberculosis.

The Hon. Sec. reported the action taken by him in connection with the appointment of Public Health representatives on the Midland Branch Council of the British Medical Association, and further stated that the nomination of Dr. Boobyer and Dr. Watt for these posts had been successful.

At the conclusion of the meeting the Members and Ladies accompanying them proceeded by motor to Compton Wyniates and were conducted over the beautiful and historical home of the Marquis of Northampton.

At 5.30 p.m. the President and Mrs. Hamilton Wood, accompanied by the Mayor of Stratford-on-Avon, entertained the party to tea at the Shakespeare Café.

At the conclusion of this function Dr. Ridley Bailey proposed a hearty vote of thanks to the President for the interesting and enjoyable programme arranged by him and for his hospitality. This was carried by acclamation and Dr. Hamilton Wood suitably responded.

NORTHERN BRANCH.

The Summer Meeting of the Northern Branch was held on Friday, 20th June, 1924, at the Club House of the Tyneside Golf Club, Ryton-on-Tyne.

There were 18 members present and two visitors.

Dr. J. W. Smith, ex-Medical Officer of Health, Ryton U.D.C., presided.

Apologies for absence were received from 13 members.

Correspondence.—Letters of acknowledgment were received from the President and Vice-President of the Branch, Drs. A. G. R. Cameron and T. Horne, of the messages of sympathy and good will sent to them at the previous meeting.

The Honorary Secretary was instructed to put forward their names at the Annual Meeting in October for Honorary Membership of the Branch.

To a letter from the Executive Secretary asking for an expression of opinion as to the risk of conveyance of infection by the circulation of books, it was decided to reply that the Branch had little or no definite information on the subject, but reference was made to the personal investigation carried out some years ago by Dr. Henry Renney, Medical Officer of Health, Sunderland, from which it appeared that infective organisms had very brief survival in books.

Election of Officers.—On the nomination of Dr. J. D. Leigh, duly seconded, W. H. Dickinson, O.B.E., M.D., M.R.C.P., D.P.H., etc., T.M.O., Newcastle-upon-Tyne, was elected President for the Session 1924-25, and Roderick MacLeod, M.B., Ch.B., M.O.H., Hetton-le-Hole U.D.C., Vice President.

Dr. Harold Kerr was re-elected Honorary Secretary and Treasurer, and also Representative of the Branch on the Council of the Society.

B.M.A. Representation.—In anticipation of an invitation to nominate two direct Representatives upon the North Eastern Branch of the B.M.A. the names of Drs. W. H. Dickinson, and D. F. Macrae, were proposed and agreed to.

The Honorary Secretary was also instructed to invite the North of England Branch to nominate a direct Representative upon the Council of the Northern Branch of the Society. (The direct representation of the Society on the B.M.A. Executives is being arranged approximately in the proportion of 1 to 30; the Council of the North of England Branch of the B.M.A. consists of about 60 members, and the Council of the Northern Branch of the Society 15 members).

The Honorary Secretary drew special attention to the considerable number of Public Health Officers who had so far been elected upon B.M.A. Divisional Executives. The Society had been particularly fortunate in this respect in Newcastle-upon-Tyne and in Sunderland, and the hope was expressed that members would be equally alert in this respect in the other Divisions. There was assurance also of satisfactory representation upon the Council of the North of England Branch of the B.M.A.

New Members.—Dr. F. D. Ross-Keyt and Dr. Isabella Lane were elected members of the Northern Branch.

The members were then invited to luncheon by Dr. James W. Smith. Contrary to custom there were several toasts including "The King," followed by the "President Elect" proposed by the Chairman. Dr. Dickinson replied and proposed the health of the host, referring to Dr. Smith as the grand old man of medicine and of public health in the North Country. This toast was received with great acclamation and musical honours.

The majority of the members then proceeded to investigate the delights and difficulties of the golf course, the play being carried on until a late hour in the evening under perfect weather conditions; and so ended a typical Northern Branch Summer

Meeting, than which there is no more pleasurable event in the summer calendar.

NORTH WESTERN BRANCH.

Proceedings of the Annual Meeting of the North Western Branch of the Society of Medical Officers of Health held at Peel Hall Pulmonary Hospital, Little Hulton, near Bolton, on Friday, June 6th, 1924.

Present: 22. Dr. G. Lissant Cox (President) in the chair, and 21 members.

Minutes of the last Meeting read and confirmed.

Finance.—Hon. Treasurer's statement of accounts was submitted and adopted.

Report.—The report of the Hon. Secretary was also submitted and adopted.

Officers.—The following officers were elected for the Session 1924-25: *President*, Dr. Joseph Beard; *Hon. Treasurer*, Dr. H. H. I. Hitchon; *Hon. Secretary*, Dr. G. W. N. Joseph; *Council Representatives*, Drs. James Wheatley, Joseph Beard and the Hon. Secretary; *Committee*, Drs. Daley, Morley, Mathieson, Peyton, Wood, together with Vice-Presidents and officers.

The President reported on the discussion at the recent meeting of the Council on the risk of conveyance of infection by the circulation of Library Books and stated that the matter had been referred to the Branches for an expression of opinion. After discussion it was proposed by Dr. Marsh and seconded by Dr. Winifred Gray that (1) there is a considerable risk of books conveying infection, (2) no library books be sent to a house in which there is a case of Infectious disease, (3) books from infected houses should be destroyed.

An amendment was moved by Dr. Mulholland and seconded by Dr. Grahame that this Branch is of opinion that it is not desirable to make a definite pronouncement on the subject at the present time.

On being put to the meeting the amendment was carried and on being put as a substantive motion it was also carried.

Dr. Lissant Cox then welcomed the members of the Branch to Peel Hall Pulmonary Hospital on behalf of the Lancashire County Council and gave some interesting details as to the establishment and administration of the Hospital and the visitors were shown over the Institution by Dr. Cox and Dr. Jessel, the visiting Medical Supt.

Those present were entertained to tea by Dr. and Mrs. Cox, who were cordially thanked for their hospitality on the motion of Dr. Sharpe.

METROPOLITAN BRANCH.

The Annual Meeting of the Branch took place at the Society's House in London, on Friday, 27th June, 1924, the President (Dr. Frederic Thomson) occupying the chair. Fourteen members were present.

Dr. Charles Porter, on being elected to the Presidency for the session 1924-1925, was warmly thanked for his valuable services to the Branch as Hon. Secretary for the past fifteen years. Dr. C. S. Thomson and Dr. James Fenton were appointed Hon. Treasurer and Hon. Secretary respectively, and Dr. Porter and Dr. Fenton were chosen to represent the Branch on the Council of the Society.

The report of the work accomplished by the Branch during 1923-1924 was adopted, and copies will be circulated to members in due course.

With a view to affording information of the greatest value and in a form likely to be most useful to the Departmental Committee, a discussion took place on the circular from the Ministry of Health inviting the assistance of medical officers of health in an inquiry directed to obtain information regarding changes in incidence and type of scarlet fever throughout the country in recent years and details of present administrative procedure evolved from the result of past experience or the circumstances of the district. Bearing in mind the note of the Chief Medical Officer that, while in the case of certain areas (including Metropolitan Boroughs) the circular generally was not directly applicable, any observations on the subject would be welcomed, it was eventually agreed that it should be left to each London medical officer of health to fill in the questionnaire and statistical form as he considered most appropriate.

In connection with a reference from the Council of the Society regarding the desirability of a pronouncement concerning the risk of conveyance of infection by public library books, the Branch expressed the opinion that there is such a risk.

HOME COUNTIES BRANCH.

The Annual Meeting of the Home Counties Branch of the Society of Medical Officers of Health was held at the Town Hall, East Ham, on Thursday, 26th June, 1924, at 2 p.m.

The Minutes of the previous meeting were read and approved.

The Secretary submitted a letter from the Secretary of the Metropolitan Branch in which it was

suggested that the Home Counties Branch might join the Metropolitan Branch in visiting some of the premises of the United Dairies, Ltd. It was agreed that the invitation be accepted and that the November meeting should, if possible, be arranged for this purpose.

The Secretary also submitted a letter from Councillor H. B. Harper, J.P., Mayor of East Ham, in which he apologised for his inability to attend the meeting and wished the Branch success in their visit to East Ham. The Secretary was instructed to write the Mayor and thank him for his hospitality.

The following officers of the branch were elected for the Session 1924-25:—

President, Dr. Alfred Greenwood; *Hon. Treasurer*, Dr. A. E. Porter; *Hon. Secretary*, Dr. H. J. Milligan.

The following members were elected to the Executive Committee:—

The Retiring President (Dr. W. Benton), Doctors Buchan, Cates, Linton, and Nash, together with the above mentioned officers.

The President, Dr. Alfred Greenwood, the Hon. Secretary, Dr. H. J. Milligan, and Dr. Cates, M.O.H., Surrey, were elected Branch Representatives on the Council.

As the arrangement whereby meetings were held alternately on the first Thursday and Friday of each month has not been successful, it was resolved that the meetings during the Session 1924-25 be held on the first Friday in each month.

It was proposed by Dr. Nash and seconded by Dr. Kerr Simpson that it be a recommendation to the Executive Committee to consider the use of the ballot in the election of the officers of the branch.

The members were thereafter conveyed by motor charabanc to the Beckton Gas Works where they were shown in detail by Mr. Adam, the Chemist of the works, all the processes for the use of the by-products in the works.

The members were entertained to tea by the Manager of the works, after which Dr. Benton most cordially thanked the Directors and Mr. Adam for their kindness in providing a most pleasant and instructive demonstration.

Mr. Adam suitably replied and the meeting then terminated.

TUBERCULOSIS GROUP.

A Group Committee Meeting was held at the Offices of the Society on Friday, July 4th, at 4.45 p.m.

Present: Drs. Shinnie, Christopherson, Swan, Watt, E. Ward and Neville Cox (Chairman).

The minutes of the last meeting were read and confirmed.

(1) The Secretary narrated that Dr. Bushnell had been elected one of four P.H. representatives on the representative body of the B.M.A.

(2) A letter was read from Dr. Bushnell offering to do his best for the tuberculosis service at the July Meeting. The Secretary was instructed to thank him for this and to inform him of the opinion of the Group on the receipt of fees for private consultations by full time Health Officers. The Committee considered that in this matter no binding rule should be made—it must depend on local conditions and professional feeling.

(3) Professor Lyle Cummins was re-elected President of the Group for the Session 1924-25.

(4) Dr. E. Ward was elected Hon. Secretary and Council Representative.

(5) Dr. Ward described the salary negotiations between the representatives of this Society and the B.M.A. with the Public Health Authorities.

(6) Dr. Watt raised the question of disinfection of rooms and belongings of tuberculous patients. He wished the opinion of the meeting as to (a) the best method of disinfection, (b) the occasions when disinfection should be advised.

The Committee considered that a report of the deliberations and decisions of the Society of County Medical Officers of Health should be published in "Public Health," and they would then be in a position adequately to consider the subject and to discuss it at the next meeting. The matter might then be placed before the Council of the Society.

MIDLAND TUBERCULOSIS GROUP.

The Fifth Meeting of the Midland Tuberculosis Sub-Group of the Society of Medical Officers of Health was held at the Council House, Birmingham, on Saturday, March 22nd, at 2.45 p.m.

Letters of apology were received from Drs. Edwards, Parker, Dormer, Hefferman, Bell-Ferguson, and Dixon.

The Minutes of the last Meeting were read and confirmed.

Dr. A. G. Campbell read a paper, "Some remarks on the Initial symptoms in 3,000 cases of Tuberculosis."

Dr. Campbell having drawn attention to the difficulties confronting the Clinician owing to the absence of a Syndrome, Pathognomonic of the disease and to the varied character and complex

nature of the symptomatology, mentioned the various adjuncts to correct diagnosis.

Dr. Campbell assumed that the initial symptoms noted may be taken as the true outstanding complaints that heralded the oncoming of ill-health, and these he mentioned in order of the greatest frequency and not necessarily in order of their greatest importance.

Coughs and Colds (39.43 %) were the chief complaint.

Coughs.—Dr. Campbell considered as a rule to have any significance in the clinical evidence, should be a member of a team of symptoms and will yield to the investigator the source from which the trouble springs, and having got so far, may be considered to be a confirmatory link in the diagnostic chain.

Colds.—Proved two significant facts: 1, Weak mechanism of defence against microbic invasion; and 2, Suitability of soil for microbic life.

Pleuritis (18.9 %).

Dr. Campbell agrees with Burrell that Pleurisy is usually caused by the tubercle bacillus and that this condition should be considered the result of, rather than the cause of, pulmonary tuberculosis.

Pain in the Chest (14.2 %).

The frequency among chest suffers by the indefinite type of pain was mentioned. Its significance is largely dependant on the cause.

Bronchitis (13.6 %).

Dr. Campbell considers this disease a distinct entity in itself and non-tubercular in origin. The question to be answered therefore is, "is there a tubercular infection as well?"

Haemoptysis (12.03 %).

Pneumonia (9.3 %).

Dr. Campbell laid great stress on the thorough investigation and analysis of the symptoms in each case, the repeated examination of sputa in patients suffering from cardiac lesions, chest trauma and bronchitis.

Dr. Watt and Dr. Gordon Smith in discussing the paper, congratulated Dr. Campbell on the excellence of his paper.

The Secretary was requested to write and thank Dr. Dixon for his kind offices in obtaining for the Group the use of the Room.

The Ministry of Health has issued a revised list of clinics for venereal diseases in England, Wales, Scotland, and Northern Ireland.

DR. A. G. WILKINS has resigned his appointment as senior school medical inspector for the Staffordshire county council.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

CENTRAL MIDWIVES' BOARD.

From Dr. Jervis, M.O.H., Leeds.

Sir,—Your timely remarks anent certain criticisms of the Central Midwives Board which have recently appeared in the correspondence columns of "Public Health" and other journals ought to do much to allay the fears of those who may have got the impression that the Board is an effete and altogether untrustworthy body, which should either be re-modelled or scrapped.

In criticising an important judicial body like that of the Central Midwives' Board, it must always be borne in mind that it has a very difficult part to play. Its duty is to adjudicate on matters which have an interest, not only for midwives and local supervising authorities, but also for the public at large. Unlike the ordinary judicature, as you have pointed out, it does not possess the power of sub-poena, and has to depend for its evidence entirely on the goodwill of such witnesses as care to attend. Witnesses are not put on oath, an omission which renders their evidence, if not less reliable, more open to question. It is unfortunate, as has been pointed out on many occasions, that the Board has to act both as judge and prosecutor, but this is not the fault of the Board which, I understand, has had no choice in the matter.

As a member of the Board, and one who takes a very lively interest in its proceedings, I have formed the opinion that it does its work in a highly creditable manner. Its judgments are, on the whole, fair. Justice is administered without harshness and, generally speaking, an attitude of complete impartiality is adopted towards the cases which are brought before it. It would be strange indeed if it did not at times err. Its most enthusiastic supporter would hesitate before claiming infallibility for its decisions, but when one takes everything into consideration, and particularly when one considers the many interests to be studied, I think it is to be congratulated on the efficient manner in which it conducts its business.

Some of the criticisms which have recently been levelled at the Board for its conduct of certain cases are less than fair, and could not have been made had the critics been in possession of all the facts. The cases referred to presented very unusual difficulties, but the weight of evidence in

my own opinion—in which the majority of members of the Board concurred—fully justified the decisions arrived at.

If by a majority the Board decides that the principal counts in an indictment have not been proved, or that there are extenuating circumstances, or that the offence committed is one in an otherwise faultless record, it is entitled, after taking all the facts into consideration, to give the defendant the benefit of the doubt and pass sentence in accordance with the evidence. The judgment may not appear fair to all parties but, if it is in accordance with the facts given in evidence, then surely it is the only judgment possible and ought to be accepted as such. It is always open to any of the parties should they be dissatisfied with the decision to appeal to the High Court. The fact that the number of such appeals is so insignificant speaks volumes for the fairness and impartiality of the Board's judgments.

There are other matters which have been the subject of criticisms and on which one might say a great deal, but I shall refrain. I would, however, remind the critics that if they think the Board incapable of administering the Midwives' Acts, their plain duty is to say so in a letter to the Ministry of Health, which is the Government Department responsible, and ask for an enquiry.

J. JOHNSTONE JERVIS.

THE SOAP AND WATER SCHOOL OF DISINFECTION.

From Professor H. R. Kenwood.

Sir,—I am certain that Dr. Simpson would not wilfully misrepresent me, and so I am forced to the conclusion that he did not read carefully our original paper in "Public Health."

I have never disputed that the bulk of secondary infection results from personal transference. I have never assigned "an important part" to infection from infected room surfaces, if by "important" Dr. Simpson implies "considerable"—although I am disposed to attach importance even to an infrequent source of infection, and was under the impression that all practical sanitarians did so. Lastly, what I called "the merest conjecture" was Dr. Simpson's own conclusion that *practically in every instance* the secondary cases of scarlet fever which he investigated were due to personal infection.

In our paper we were mainly concerned to point out certain facts which lead to the conclusion that the disinfection of the surfaces of rooms recently

occupied by persons who give off infection is desirable, and that to abandon the use of agents of proved value and to recommend soap and water, fresh air and sunlight in lieu thereof, is tantamount to substituting something which is comparatively useless, within the time allowed to us, for far more efficient agents. Of course the man who *really* disbelieves in the need for any such disinfection will not recommend a substitute of any kind.

I am,
Yours, etc.,
H. KENWOOD.

SIR MALCOLM MORRIS MEMORIAL FUND.

May, 1924.

Dear Sir or Madam,—The death of Sir Malcolm Morris, K.C.V.O., F.R.C.S.Ed., on February 19th last, marks the passing of one who was widely known and greatly respected, both by his professional colleagues and the public generally, for his work in connection with dermatology, tuberculosis, public health and medical literature.

To perpetuate his memory it was resolved at a recent meeting of representatives of the various hospitals and organisations with which he was particularly associated, to endeavour to raise a sum of money sufficient to provide for an annual lecture on the preventive aspects of public health and dermatology. If funds permit it is hoped also to endow a bed for cases of skin disease at St. Mary's Hospital, London. These objects are known to accord with Sir Malcolm Morris's expressed view that the only fitting memorial to a life of successful endeavour is one that carries on the causes of which that life was devoted.

A representative Committee has been formed and we invite contributions, in any amounts, which will be gratefully acknowledged if forwarded to the Honorary Treasurers, "Malcolm Morris Memorial Fund," at 12, Stratford Place, London, W.1.

Yours faithfully,

THOMAS HORDER,
Federation of Medical and Allied Services.
E. B. TURNER,
British Medical Association.
E. GRAHAM LITTLE,
St. Mary's Hospital.
C. NEVILLE ROLFE,
Nat. Council for Combating Ven. Diseases.
W. GRIFFITH,
St. John's Hospital.

A. E. HAYWARD PINCH,
Radium Institute.
H. T. HERRING,
Cremation Society of England.
N. HOWARD MUMMERY,
Hon. Secretary.

THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

A Royal Charter has been granted for the incorporation of the governing body of the London School of Hygiene and Tropical Medicine, established by the gift of 2,000,000 dollars from the Rockefeller Foundation. The Government have undertaken to provide towards the upkeep of the School a grant at the rate of £25,000 a year for the first five years. It is proposed that the functions of the school shall be primarily instructional, but facilities will be afforded for research. Its scope will cover the maintenance of health and the prevention of disease in their widest applications, not only in temperate but in arctic and tropical climates.

A site for the school has been acquired in Gower Street; Dr. Andrew Balfour has been appointed director, and negotiations have been opened with other bodies operating in the same sphere for their amalgamation or co-operation with the new school.

DR. ROBERT MUSCHAMP, of Guiseley, has resigned the position of medical officer of health for the Yeadon urban district, an office he had filled for a considerable number of years. Dr. Muschamp is relinquishing the position on the grounds of ill-health and increase of work, and his resignation will take effect from 30th September next. Apart from his professional duties, Dr. Muschamp has taken a leading part in local public affairs for many years. For twelve years he was a member of the West Riding county council. Dr. Muschamp has always taken a keen interest in his public health duties. Although only a part-time officer, he took the D.P.H. in 1908, and he is one of the senior Fellows of the Society of Medical Officers of Health.

FOR SALE.

"Manlove Alliot Autoclave (Lyon Type) in good order, for sale, cheap or will exchange for a smaller size. Cuxson, Gerrard and Co., Ltd., Oldbury, near Birmingham.

Public Health

THE JOURNAL OF

The Society of Medical Officers of Health.

No. 12.

SEPTEMBER, 1924.

VOL. XXXVII.

Subscription price, 31s. 6d. per annum, post free
in advance. Single copies, 2s. 6d., post free

CONTENTS.

EDITORIAL—	
The Strangle-hold of the Voluntary Association...	301
Maternity and Infant Welfare. Birth Control ...	302
Death Certification	303
OBITUARY—	
Dr. Andrew Smith	304
SPECIAL ARTICLES—	
"The Organisation of Propaganda in the Interests of Public Health" (By W. Allen Daley, M.D., (Medical Officer of Health, Blackburn)	305
Venereal Diseases and their Relation to Maternity and Child Welfare (By A. C. Roxburgh, M.D. Cantab., M.R.C.P. Lond., M.R.C.S. Eng., Asst. Med. Off. V.D. Dept. and Chief Asst., Skin Dept., St. Bartholomew's Hospital, Consultant, Battersea Borough Council Ante-natal (V.D.) Clinic)	313
Diet after the Period of Infancy (By Robert Hutchinson, M.D., F.R.C.P.)	319
The Prevention of Venereal Disease (By Sir Auckland Campbell Geddes, G.C.M.G., K.C.B., P.C., M.D., LL.D.)	321
SOCIETY OF MEDICAL OFFICERS OF HEALTH—	
Annual Dinner	301
Neech Prize	304
REVIEWS—	
Clinicians as Teachers of Prevention	323
CORRESPONDENCE—	
Women in Public Health Appointments	324
NOTES—	
Sir George Newman's Annual Report	324

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ANNUAL DINNER.

The Annual Dinner of the Society will be held at the Hotel Cecil, Strand, W.C., on Friday, October 17th, at 7.30 p.m. Reception at 7.10 p.m. A number of distinguished guests have promised to be present. A musical programme is being arranged to follow the dinner.

Ladies are invited, and members, or candidates nominated for election, are asked to give early notice to the Executive Secretary of their intention to be present, with the names of their guests. A payment of 12/6 for each ticket should be made with applications sent before October 11th; after that date the cost of tickets will be 15/- each.

Editorial.

THE STRANGLE-HOLD OF THE VOLUNTARY ASSOCIATION

The Minister of Health may, in the course of his duties, receive many important and significant deputations, but the one which attended at the Ministry on July 31st possessed a peculiar importance and was most significant in the lesson that it taught. The deputation was from the National League of the Blind, a body whose sole object is to promote the real interests of blind persons. This deputation waited on the Minister of Health in order to urge acceptance of the Bill to amend the Blind Person's Act, 1920, now before Parliament. The deputation pressed for the abolition of the voluntary system in connection with the welfare of the blind, and the establishment of direct municipal and state control. At long last therefore it appears as if it were beginning to be realised that these voluntary associations for the care of various persons and things are as a general rule failures when they attempt to undertake administrative work on a large scale such as that which is necessary when dealing with the blind persons of counties and county boroughs. So long as voluntary associations are small and local, and are run entirely by voluntary labour, they are capable of a vast amount of useful work. Among such associations may be mentioned the small local associations for after-care of tuberculous persons, and defective school children, and the local voluntary associations connected with the maternity and infant welfare centres all over the country. But as soon as these associations combine and become "national councils" and employ whole-time officers and attempt to thrust themselves between the public and the expert public officers of the large local authorities they cease to exercise useful functions and become public dangers. The Blind Persons Act, 1920, has been administered largely through voluntary associations throughout the country and the results have been so meagre

69 267

L15M56, M82
M.C.D. 22

and so unsatisfactory that it is now necessary to produce a Blind Persons Act, 1920, Amendment Bill. It is probable that if the Blind Persons Act, 1920, had been administered by public officers working under direct municipal and state control a far greater amount of useful work would have been done and it might therefore now have been unnecessary to amend the Act.

A similar condition of muddle and confusion has resulted from the Mental Deficiency Act, 1913. In many areas this is administered largely through a local voluntary association whose whole-time officer, posing as an expert in mental deficiency, has frequently received no medical or nursing training of the slightest description, but who as a rule finds no difficulty at all in "diagnosing" the most difficult cases of mental deficiency and advising the medical officer as to what he should do. These voluntary associations moreover have local representatives who in many instances pay far greater attention to local gossip and local prejudices than to the essential facts of the case. The unfortunate defectives are therefore being supervised in some instances by local busybodies with no training or experience, in spite of the fact that the local supervising authority itself usually has a staff of well-trained nurses who would be far more competent to visit and report upon such cases and who would, there is not the slightest doubt, be far more welcome as a general rule in the homes of the poor.

Another sphere in which the big voluntary association has established an even more deadly stranglehold upon public health is in connection with health visiting. At the time of the great economy stunt there was an energetic campaign undertaken by nursing associations all over the country to secure public money in the greatest possible quantity in the sacred name of economy, and to oust the fully trained health visitor by substituting her efficient services for the perfunctory attentions and untrained intelligence of the district nurse. It is no exaggeration to say that where this system is in force real public health work is carried on at a definitely lower level than in those areas where special whole time officers are appointed, and there is now a growing demand that all public health administration must be freed entirely from the local tyranny and prejudice which is so frequently attached to small local bodies such as nursing associations.

In most of the discussions which have taken place with regard to the relative efficiency of the voluntary associations as compared with whole-time officers employed by public bodies every possible interest is represented except those un-

fortunate people in whose interests the work is being mainly undertaken, i.e., the average poor person. The position of the blind people, as represented by the National League of the Blind, seems to indicate most emphatically what their views are, and, in fact everyone with experience of work amongst poor people knows quite well how bitterly they resent the inquisitorial visits of the average voluntary worker and how differently they regard the impartial and tactful whole-time officer of the local authority.

MATERNITY AND INFANT WELFARE. BIRTH CONTROL.

The Minister of Health, the Right Honourable John Wheatley, M.P., received a deputation from the Standing Joint Committee of Industrial Women's Organisations on the 31st July, introduced by Mrs. Harrison Bell.

Dr. Marion Phillips urged the importance of the Government ratifying the Washington Maternity Convention. The provision under the Factory Acts was notoriously inadequate and it was common knowledge that this provision could not be effectively administered. What actually happened was, that the women worked as long as they could, and returned to work as soon as they could. Other countries including some which were not parties to the convention had already ratified it and according to her information were effectively administering it. She mentioned especially Russia, Poland and Austria. It was a great pity to press forward the reform of the Factory Acts by the new Bill without dealing with this question.

Mrs. Baker urged that the teaching of methods of birth control at maternity centres should no longer be prohibited. There was great ignorance among working women on this subject and a strong desire to learn. Harm was done to both women and children by the too rapid succession of babies and the practice of abortion was growing alarmingly. The statement that women found to be in need of advice on the subject of birth control at maternity centres were referred to private practitioners or hospitals was no answer, as in fact, women were very often refused the information when they did apply for it accordingly.

Mrs. Davies urged that an Inquiry into the working of maternity benefit and general provision for maternal welfare should be instituted. It was originally designed so that the nursing mother might have proper nourishment as well as nursing, etc., but in practice 30/- of it was

given to the midwife and the rest was used to pay for domestic assistance during the time of the confinement. The nursing mother did not get any. The care of maternity should be paid for by the Central Authority more largely so that the work of local authorities could be undertaken more energetically.

Mr. Wheatley in reply said that he would bring the question of the ratification of the Maternity Convention before the Government, but some time would necessarily be occupied in the consideration of the question. He had no information which indicated that those countries which had adopted the Convention worked it very effectively. Even when allowance was made for all the drawbacks in this country he doubted whether there was any country in the world which did so much both through the Maternity and Child Welfare Acts and through the National Insurance Acts to help the working mother. If the Convention were adopted and applied only to employed women he was advised that it would cost 1½ millions; for all mothers it would require an extra 15 millions.

With regard to the general care of maternity, he could not say that he was satisfied with the present position, but although the organisation was of quite recent date there were already 2,200 infant welfare centres in the country and 3,650 women employed on infant welfare work. There were also 135 maternity hospitals and homes. Infantile mortality had been reduced in 25 years from 150 to 69, but the death rate among mothers, he was sorry to say, had remained practically stationary for thirty or forty years. The proper place for a woman to be confined was in her own home and he hoped that the housing scheme would bring about an improvement generally, but there would always be a need for maternity homes and hospitals for special cases, and under the circular issued soon after he came into office withdrawing the economy restrictions a number of schemes had been put forward by local authorities. He could not agree that the State ought to provide all the money for this work. The sound English practice was local control for local affairs and this would not be possible if the money were provided centrally, because that would involve central control.

With regard to birth control he must draw a distinction between the question whether or not birth control was desirable and whether or not it should be taught in a particular place and manner. The question was highly controversial and he doubted whether the working classes were really united on this subject. It seemed to him

likely that if this subject were taught at maternity centres many women, not only on account of religious, but on account of other objections too, would be deterred from attending the centres. If it was true that women who were referred to private practitioners or hospitals from the clinics were denied the knowledge which they were advised to get he would see that such cases were investigated, but he must make it quite clear that while expressing no opinion at the moment as to the case for teaching of birth control he was not prepared to agree to its introduction into maternity centres without the express authority of Parliament.

Dr. Phillips suggested that there was more loose talk on birth control than on any other medical subject; it might well be the subject of an expert Inquiry.

The Minister promised to consider this suggestion.

DEATH CERTIFICATION.

During an inquest recently Dr. Waldo, City Coroner, said that as a former M.O.H., and during the past 23 years as a Coroner, he knew of cases in which as many as nine *stillborn* children—certified as such by midwives—had been deposited for a small money consideration by undertaker's men in an attic where they remained until the insanitary condition caused by the remains declared their locality. He also knew of a midwife who was removed from her house to hospital suffering from a notifiable infectious complaint, and in the cellar of whose house the Sanitary Inspector discovered the remains of stillbirths, or newly-born children, then decomposed, the condition of which remains made it difficult to say whether or not the children had been born alive or dead.

At present all that was needed was for a midwife to certify that an infant was stillborn, and then it was buried, often in the coffin of an adult to save expense by an undertaker, or anywhere, in fact. The want of supervision over stillborn children led at times to crime. It was quite easy to murder a child directly after birth and for the individual to protect herself by certifying that it was stillborn. Such cases were not unknown to him.

Lieut.-Colonel F. E. Fremantle, M.P., in his Bill dealing with the certification of births and deaths, dealt with the matter in a very practical and thorough manner, and he (Dr. Waldo) was pleased to see that provision was made in the Bill for the payment of a fee of 5s.—to doctors—after viewing dead bodies for their certificate.

OBITUARY.

DR. ANDREW SMITH.

On 1st August there passed away Dr. Andrew Smith, Medical Officer of Health, Urban District Council of Whickham, one of the most honoured and best beloved members of the medical profession in the North of England.

Dr. Smith, who was in his 70th year, was an Edinburgh University graduate, and had been in practice in Whickham for almost half a century. Twenty years ago he became Medical Officer of Health (part-time), and performed his official duties with just the same enthusiasm and conscientiousness that he gave to everything he undertook.

Dr. Smith was a member of every Medical Society and Association in the district, and has been President of most, if not all, of them, and one of their mainstays. He never missed a medical meeting or gathering of any description if he could help it, and his kindly and genial presence, and his thoughtful and well informed contributions were always welcomed.

He took an active, if unostentatious, part in medical politics; he was a Representative at the A.R.M. in Bradford this summer, and for some years a member of Council; and he was for many years a member of Council of the Northern Branch of the Society of Medical Officers of Health, holding the office of President in 1908-9, and 1909-10. He attended the recent Summer Meeting of the Branch at Ryton Golf Club, and only the day before his death he took part in the Annual Meeting of the North of England Branch of the B.M.A. at Sunderland.

It is impossible to think of Dr. Andrew Smith apart from his brother, Dr. James W. Smith (Medical Officer of Health, Ryton), who is happily still with us, and whose tastes he shared so closely. The two brothers were almost unique in their comradeship, and in their love of their fellow men. The medical profession in the North owes much indeed to their friendship, and to the inspiration of their worthy example, and their high standard of honourable endeavour, and straightforward simple honesty.

Dr. Andrew Smith leaves four sons and three daughters. Three of his sons were in practice with him, and both they, and numerous past assistants, will look back upon their association with him with pride and affection.

The attendance at the last rites in the old country churchyard was very large, and included many members of the medical profession from

near and far. Of the Society of Medical Officers of Health there were present Drs. Andrew Smith, Junr., Jas. Anderson, R. A. Bolam (who represented B.M.A. Headquarters), W. H. Dickinson, Geo. Foggin, T. Eustace Hill, J. A. Hislop, Harold Kerr, J. M. MacLachlan, Howard Morrison and W. F. J. Whitley.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NEECH PRIZE.

Members of the Society of Medical Officers of Health are reminded that entries for the *Neech Prize* for the Session 1922-23 should be forwarded at once to the Executive Secretary. The conditions of the award, as embodied in the deed of settlement, are as follows:—

1. The prize shall be called the Neech prize.
2. It shall be awarded annually for the best paper contributed to the Branch Meetings of the Society in the United Kingdom during the year—the year being Medical Officers of Health Society's year, i.e., October to September.
3. No such paper shall be eligible for award unless two typewritten copies are formally sent to the Executive Secretary of the Society.
4. The amount or value of the prize shall be the annual interest arising from the investments for the time being and if in any one year no prize shall be awarded the amount shall be added to the next year.
5. The paper must have reference to Public Health subjects, and originality and research shall be taken into consideration. No consideration of seniority of membership or professional standing shall influence the award of the prize which shall be open to all members of the Society.
6. The assessors shall be the president and editor of the Society for the time being, with two members of the Council—the latter to be elected annually by the Council at the first Council Meeting of the year. Dr. James Thomas Neech shall be entitled to nominate a fifth assessor if and when he thinks fit.
7. The decision of the assessors shall be final.
8. It shall be within the power of the assessors to delegate one or more of their number the duty of perusing and making a list of the papers from which shall finally be selected the winner of the prize, such selection being made at a full meeting of the assessors.
9. The award shall be made known within a period of three months of the close of the Society's year.
10. The successful paper shall be offered for publication to such representative journal as may be decided by the Council from time to time and such Journal shall have free right of publishing the paper.

"THE ORGANISATION OF PROPAGANDA IN THE INTERESTS OF PUBLIC HEALTH."*

BY

W. ALLEN DALEY, M.D., Medical Officer of Health, Blackburn.

In opening a discussion on the Organisation of Propaganda in the Interests of Public Health it is desirable to mention first why educational work with a view to the enlightenment of the public on health matters is necessary, for there are still a few medical men who believe that the less people know about their insides, the better. Opposition to propaganda has been particularly noticeable with regard to publicity concerning cancer. It is feared by some that after hearing a lecture or reading a leaflet setting out the early signs and symptoms of the disease, nervous men and women would work themselves into a panic through imagining that they have the symptoms described, just as it is alleged that medical students fear that they themselves suffer from the diseases about which they read—this, however, did not occur in my own case—and just as the readers of advertisements of patent medicines are induced, by the phraseology used, to believe that their health is in a precarious condition and the only way to restore it is to take regular doses of the pills or medicine advertised. I do not believe that this danger is sufficiently important for me to do more than mention it. In the case of cancer an experienced lecturer will confine himself to two or three salient facts which everyone ought to know, such as that a lump in the breast of a woman over forty may be cancer. He goes on to say, "If you have such a lump consult a doctor at once." Again the statement is: "irregular bleedings after the change of life may be cancer": the advice is: "consult a doctor": or: "a hard persistent sore on the tongue or lips may be cancer": "consult a doctor." The lecturer does not terrify people and give them no hope—he says: "it may be cancer": "make sure by consulting a doctor at once." "If it is cancer it is curable, if taken early": "if you neglect it, it will be fatal." The great thing is to emphasize the need for early medical advice and the curability if taken early. These are words of comfort to a woman in the audience who is racked with fear because of a hidden lump which in her heart she thinks is cancer. She has not, however, gone to a doctor because she has heard

* Paper read before the Society of Medical Officers of Health, on Friday, March 14th, 1924.

that cancer can never be cured; but after such a lecture she will probably consult a doctor, may learn it is a simple tumour, or may have the breast removed and live for years. There is no valid reason why the people should not be told about cancer or about tuberculosis or other diseases. Objection has also been taken to propaganda on venereal diseases. The reasons are:

1. It is an unpleasant subject.
2. There was acute controversy amongst doctors as to the advice which should be given at the lectures.
3. Some regarded venereal disease as a Heavensent retribution for immorality and therefore no effort should be made to allay the effects of this retribution.

Time and education have removed most of these objections and it is seldom now that there is serious opposition to propaganda which aims at setting out the ravages of venereal diseases: pointing out that it attacks both the innocent and the guilty and how the disease should be prevented, or treated, if a person has been exposed to, or is suffering from, the infection.

The great reason, however, why health propaganda is so necessary now is because of the new orientation of the whole of public health endeavour. Thirty years ago attention was confined rightly to the removal of grossly insanitary conditions. Pure food and water had to be provided, privies abolished, proper scavenging arranged, and building bye-laws passed. In most of our towns the environmental conditions are now good except for atmospheric pollution. Speaking broadly, raging epidemics and serious endemic infectious diseases which were associated with insanitary and filthy surroundings have disappeared, but our statistics still contain considerable numbers of deaths from preventable diseases, and to cope with them the Public Health Service has now to deal not only with the environment but with the individual as well. A Health Authority can improve environment at its own volition—it is mainly a matter of money. It cannot, however, deal with individuals without their voluntary co-operation. Hence with the change from environmental hygiene to treatment of the individual has come the urgent need for health propaganda.

The lack of intelligent co-operation of the public in our work may be demonstrated by reading the Annual Report of any Medical Officer of Health. The writer of the report deplores the fact that the patients who present themselves at the Tuberculosis Dispensaries are mostly in an advanced stage of the disease: that those who attend the V.D.

Centres leave before they are cured: that diphtheria is spread because it was not realised that the patient was suffering from an infectious disease: that many cases of severe heart disease in children occur because the parents did not know that growing pains were serious: that maternal mortality is high because expectant mothers cannot be induced to attend the ante-natal clinics.

An enlightened public opinion on the points mentioned above would help our work enormously. Other important health propaganda would deal with food and teeth: with the importance of measles and whooping cough and with general health such as exercise, sleep, clothing, cleanliness, health habits for the middle-aged, for the elderly, etc. Further, the focussing of public attention on health would facilitate the passage of the Public Health Department's estimates through the narrows of the Finance Committee's domains and would lead to needed health reform. Again, if the beacon light of publicity were thrown upon the hiatuses of medical knowledge, as well as on its triumphs, the money required for medical research would be the more easily forthcoming.

The present is an opportune time for inaugurating health publicity work because it is a development which can be undertaken, even on a large scale, at a relatively small cost.

It is for the above reasons that many Health Authorities have recently engaged in considerable health publicity efforts, but the fact that there has been no definite lead from the Ministry of Health, except in connection with Child Welfare and Venereal Diseases, has kept back many Authorities who would otherwise have commenced the work. A further difficulty is that there is, I believe, no definite authority in the Statutes for the expenditure of public money on lectures, or other means, directed to the improvement of general health: and in areas where the accounts are subject to Government audit this is a serious matter but one which, I understand, is not insuperable.

Another difficulty is the absence in this country of suitable cinematograph films for the illustration of health lectures. Unforeseen obstacles impede the zealous health educationist: I may mention two in my own experience. I found that the League of Red Cross Societies had at their office in Paris a number of public health cinematograph films. I arranged to borrow four for a lecture I was about to give. They were held up at Dover until I paid a duty of 1d. per foot on the films. The duty would amount to £15 which I considered an unreasonable charge for one show. In the course of a lengthy correspondence with the Com-

missioners of Customs and Excise I suggested that the duty should be refunded if the films were returned immediately after the free educational lecture at which alone they would be shown, but I was informed that the Statutes did not provide for this. Accordingly I took only two of the films and had to pay duty amounting to £8 for their use on a single occasion.* More recently I arranged with the Board of Guardians that their Registrars of Births should hand to the parent of every infant whose birth was registered a leaflet pointing out the benefits of vaccination. The Ministry of Health have, however, written to the Guardians to say:—

"I am directed by the Minister of Health to inform the Guardians of the Blackburn Union that Registrars of Births and Deaths cannot be authorised or required to distribute any forms beyond the notices of the requirement of vaccination handed to parents at the registration of births." Surely a curious action of a Ministry of Health! The leaflets will now have to be delivered by the Health Visitors, but they do not visit the largest houses: the leaflets will have to be sent there by post.

A great difficulty in the way of securing effective health propaganda in this country is the absence of any one body, either voluntary or official, which would organise health publicity on a large scale and would give advice on the manifold educational activities which would be comprised in a complete scheme. No individual Health Authority can afford to produce films or even buy them for one or two shows only: nor can they afford to get up exhibitions which would be open for only a few days, but the same film, the same exhibition, with very few local additions would be most useful all over the country. I know that films and an exhibition are available on application to one or other of the societies which deal with special branches of public health work, but to my mind it is preferable that our main object should be education on general health and that such things as cancer, venereal diseases, and tuberculosis, should be brought in, incidentally. Health lectures were given in Edinburgh forty years ago: some of their titles should be noted:—

"Care of the Body."

"Food and Drink."

"Lungs and Air."

"The Human Body."

"Brain Health."

"Clothing."

* P.S.—On the withdrawal of the McKenna duties on August 1st, 1924, films can be imported without payment of duty.

"How to Live Long."

"Exciting Causes of Disease."

"Popular Errors in Regard to Medicine."

"Habit and Control."

"How we work, or The Human Mechanism in Action."

"Tear and Wear."

All, you will see, are titles of a general character. There is at present a source of weakness in health education owing to the difficulty and sometimes even contradictory advice which is contained in leaflets issued by the various, and often neighbouring, authorities. If a central body would undertake the preparation of standard leaflets the tendency would be for the leaflets to be more uniform. Complaint is rightly made that much of our propaganda is futile because the Medical Officers who undertake it are deficient in knowledge of the science of advertising. Advertising is a real science, a full knowledge of which is acquired only after long training. The medical training is such as to tend to retard the development of any native gift for advertising which might be bred in the medical student. A good advertisement publicity editor is a highly gifted individual who demands and receives high fees. It is unreasonable to expect a Medical Officer of Health to undertake this specialised publicity work for which he has no training and generally no aptitude. Even a large Health Authority could not afford to pay such a person but a central organising body could do so.

The above appear to me to be the difficulties associated with the present methods of undertaking health publicity.

The next sub-division of this paper will deal with the methods of publicity.

The most important and the most valuable will be recognised at once as the individual teaching given to mothers at Child Welfare Centres, at Ante-Natal Clinics and at their homes. This individual teaching is one of the most important causes of the recent decline in the rate of infantile mortality. A tactful approach is of course needed before the Health Visitor can get the ear of the mother: in most cases the mother can be induced to attend the Child Welfare Centre. The best advertisement for the Child Welfare Centre is the satisfied client. An analogy with a commercial undertaking can be readily made. We have good advice to dispose of: we send canvassers to those who are likely to accept the advice: we give them a sample at the door and tell them the address of the depot where similar articles can be obtained. Once the canvasser has got the customer to the shop, his work is finished: the goods must do the

rest. So, once mothers come to a Centre they must be treated so well and be made so pleased with their reception that they attend regularly and bring their friends with them. The work of the Health Visitor can be helped materially if other publicity methods are adopted which tend to create a favourable atmosphere towards her work: if there appear in the Press from time to time eulogies of the life-saving work done at the Centres, in the form of reports of speeches by the Mayor and prominent townsmen when addressing annual meetings of local Health and other Societies, or if there appear periodically extracts from reports of the Medical Officer showing the excellent work they do: but it is futile to spend money in getting people to the Centres if they attend only once or twice. The work done at the Centre must be the force which brings the mothers back. A point with regard to the giving of advice by a doctor or nurse at a Centre is that printed leaflets dealing with the matters commonly requiring attention should be available. An ignorant mother may be so busy nursing a restive baby that her mind is only half focussed on what the doctor or nurse says and she needs the leaflet to bring the advice back to her memory when she has returned home.

The publicity required for most health messages is such that it will reach all sections of the community, particularly the more thoughtless. Two methods may do this. Firstly, advertisements in the Press: for practically everyone nowadays reads some newspaper: and secondly, by posters on the hoardings. The Press notices should not be in the advertisement section but should be amongst the general news and should be written with striking headlines and in a popular way. Often the very best health publicity is given by the reports of meetings or lectures at which health problems have been discussed. Paid advertisements in the Press may be costly, but good Press notices are essential for a health campaign to be really successful. The field available for posters is not large but such posters as "Have you brushed your teeth this morning?" are useful if the importance of care of the teeth is being urged. Such posters make people talk about health and when that is done a very desirable object is attained. I show samples of posters, prepared by school children in a central school in my area, which would be suitable for general display. Most deal with just one idea, such as, "Go to Bed Early": "Drink Four Glasses of Water a Day": "Eat Plenty of Fruit and Vegetables": but one shows ten health rules marked each on a stone which leads over a morass labelled

"Disease" to the citadel of health in the distance: it is called, "Stepping Stones to Health."

Handbills may be printed and left at every house in a town. Boy Scouts are very useful for this work. A certain proportion will be read if they are in a popular form. If these are in official language and contain long and technical words they are not worth the paper on which they are printed.

Other methods of publicity which are not quite of such universal application may now be described. First there is the Health Exhibition which contains stalls dealing each with a different aspect of the work, e.g., lives saved and to be saved (showing statistics in popular form): dental hygiene: food: fresh air: sanitary appliances: eye-sight: baby welfare: clothing. In my experience such exhibitions are exceedingly well attended, especially if they are advertised properly. Prominent people should speak at the opening: at intervals, health plays should be enacted by children. An efficient band of stewards is essential. School children should visit the exhibition in detachments: popular lantern lectures should be given. If possible a cinema film of the opening should be taken and displayed at the local picture-dromes. Not only is a large exhibition in the centre of a town desirable but also small exhibitions which can be shown in parish rooms or assembly halls in the suburbs.

Leaving exhibitions now, I would point out that demonstrations are valuable on such subjects as "The Production of Clean Milk." The demonstration should take place on an ordinary farm and farmers should be invited specially.

Cookery demonstrations are popular and enable information on good marketing and on vitamins to be given. These demonstrations should be arranged specially for the very poor and if they will not attend demonstrations should be given in the homes of the people as was done by "The Pudding Lady" at St. Pancras.

Open days at Hospitals, Child Welfare Centres, Clinics and special schools should be arranged periodically.

Pram parades with presentation of certificates for good attendance at Child Welfare Centres stimulate an interest in child welfare. Despite certain obvious objections baby shows have their place in a Health Publicity Scheme.

The next subject for consideration is that of health lectures. These are mainly of two kinds: the small, informal lecture, almost a "friendly chat," to audiences of 30 to 100: these talks can be given by any member of a Public Health

Department's staff. If it is known that speakers are available applications for their services will be received from organisations of all kinds, such as church and chapel societies, Y.M.C.A.'s, Boy Scouts, Girl Guides, I.L.P., and other political associations. A free discussion takes place after these talks and the impression made on the hearers is often lasting because they can put forward their own difficulties and receive satisfactory answers. Many towns are now arranging large popular lectures on health. Practically everywhere audiences of from 1,000 to 3,000 can be obtained: the former for lantern lectures, the latter for those where cinema films are shown. In some towns it has been necessary to introduce novelty features such as a concert party to bring the people in, but that is generally unnecessary. The most important factor in the success of a series of such lectures is to ensure that the lecturer really can deliver a popular message: once an audience of 1,000 has been called together to hear a man—no matter how learned—who cannot lecture, the rest of the series will be a failure. Many clever men cannot deliver a lecture save in a halting manner: others speak over the heads of their audiences: others forget that their hearers have come to learn something which will be of value to them in preserving their own health. Some men deliver eloquent persuasive addresses but spoil the effect by attacking existing institutions which cannot be scrapped under present circumstances or by making suggestions which only the very few are wealthy enough to act upon. There are a few popular medical lecturers who are perfect. Their names should be available to all Public Health Authorities. One of them who has specialised in this work makes an appeal to both the ears and the eyes of his audiences by showing on the screen the salient features of the subject on which he is speaking. There is no doubt that suitable cinema films are the most effective means of drawing an audience and of impressing them when they have been gathered together. Few films are self-explanatory and a lecturer is generally needed. I have recently published ("Medical Officer," 23rd February, 1924), a list of public health films available in this country and you will have noted that it is very small. Many important subjects are not touched upon. It is, of course, impossible to please everyone in the production of a film, but some are open to grave objection on the ground of being over-sensational. It is very important that this Society or the Ministry of Health should take a hand in the production of suitable films, or, failing that, in their importation after careful selection.

While on the subject of cinemas, many striking advertisements of health messages can now be shown to the audiences of picture-dromes and as in some towns the weekly attendances at such places exceed one quarter of the total population this is a valuable advertising medium.

A recent method of disseminating information is by broadcasting: it is estimated that listeners in Great Britain now number two millions. To retain the attention, however, of even the majority of these, the speaker would have to be unusually eloquent. Broadcasting of health messages is largely used in the United States of America. In that country also all the large Health Authorities issue weekly or monthly health bulletins. Some are little more than statistical summaries: others contain articles chiefly of interest to Health Officers. A most valuable popular bulletin was issued in Chicago some ten years ago when Dr. G. B. Young was Commissioner of Health. It occupied only four pages: it contained witty health aphorisms, one short popular health article and, most important of all, a health cartoon: if properly distributed, as I am sure it was, this bulletin would do an immense amount of good.

Special importance attaches to the teaching of health to children attending the elementary schools, for if they learn health habits early the habits will become automatic and the health truths which they have learnt will stand them in very good stead in later life. The first matter for consideration is whether the health talks shall be given by specialists or by their usual teacher. In the United States of America much specialist teaching is given by itinerant officers of the Health Authority who dress as clowns, or in some other grotesque manner, and so impress the children more. Even so, much of the follow-up teaching would have to be given by the school teachers, otherwise an enormous staff of specialist health teachers would be required. In the largest areas, an organiser of health teaching in the schools might be appointed with duties similar to those of the Organisers of Physical Training. They would give demonstration lessons, would draft suitable syllabuses and would teach the teachers how to give health lessons. A great difficulty in teaching health in schools is that some of the school premises are examples of unhealthy rather than healthy surroundings, and some of the teachers are by no means as keen as they might be on efficient ventilation of the schoolroom and on requiring scrupulous cleanliness amongst the scholars. The exhibition of health posters in schools, especially if they have been made by the children, is valuable.

Children have the competitive spirit: they like

to have marks awarded and to tot them up day by day. I have found a valuable means of stimulating an interest in health in the issue to parents of a series of health rules for each of which a mark or marks are awarded. The rules include:—

Slept with windows open.

Was in bed — hours.

Took a cold bath or quick dry rub this morning.

Cleaned teeth before breakfast and after last meal.

Had bowel movement to-day.

Carried a handkerchief and used it to protect others if I coughed or sneezed.

Tried to sit and stand straight all day.

Ate my food slowly.

Refrained from eating between meals.

Took one hour's exercise out of doors to-day.

At the end of each month the marks are totalled: the child certifies on its honour that the marking is correct. The parent, of course, can verify most of the items day by day. The parent is asked to give the child a small reward each month provided that not more than a certain number of marks has been lost. If the parents are not interested this method is, of course, valueless.

Rewards—not money—may be given by those interested in Health Publicity for essays written by the children. The children are, as a rule, very interested in the performance of health plays and pageants.

We have now considered the more promising methods of health publicity and the last matter for consideration is how an organised campaign of health publicity in this country can best be brought about.

The first essential is that the Ministry of Health should inform Health Authorities that it is their duty to undertake health publicity and that no difficulties will be raised by Government auditors. The most effective method of stimulating the work would be for the Ministry to require all Health Authorities to submit before a certain date a scheme for their area and that a grant in aid of the expenditure would be made from Government funds.

The next essential is that there must be some central body to act as a clearing house for all matters concerning health publicity. Such a body should be prepared to advise on any matter on which information is desired by an officer of a Local Authority. It would engage a publicity expert who, in consultation with representative Medical Officers of Health and other medical men, would draft standard leaflets, posters, press notices, cinema advertisements, specimen lessons to school children and specimen sermons on health

for use during health week. He would draft material for a standard health bulletin. The middle pages and the cartoon would be standard and space would be left for local matter. He would organise travelling exhibitions, and would arrange for suitable advertisements to be inserted in the programmes of the exhibition. The central body would have a panel of reliable lecturers: it would arrange for the broadcasting of health talks: it would produce or import films: it would be prepared to recommend Organisers of Health Publicity: to advise how £50, £100 or £1,000 could best be spent on publicity in any particular area. It would, in short, be the central clearing house for, and a mine of information upon, all matters relating to health propaganda.

The next question for consideration is the nature of this central body: several alternatives suggest themselves:—

The Ministry of Health,

The Society of Medical Officers of Health,

One of the Societies already doing some of this work, such as the Royal Sanitary Institute,

The National Council for Combating Venereal Diseases, or

The National Baby Week Council.

There is no doubt that if the Ministry of Health would undertake this work very great assistance would be afforded to Health Authorities, but to be a success it would have to be run on commercial rather than strictly official lines: that is to say, a letter would have to be answered within two or three days of its receipt and the Local Health Authorities directing the campaign would have to be given a free hand in the detailed work.

A further point here is that if a Government grant were made available for this work it would be better to assess it on a population basis subject to the total expenditure being more than double the Government grant. Otherwise if it were the usual 50 per cent. grant prolonged correspondence on details of expenditure might result.

If the Society of Medical Officers of Health or the Ministry of Health undertook this work it would be satisfactory from the medical side in that competent medical advice and criticism would be readily available. So far as the Society of Medical Officers of Health is concerned the difficulty would be financial. A considerable capital cost would be necessary and it is possible that our Articles of Association would not allow us to embark on such a project, but once the capital were raised the scheme should be self-supporting or even run at a profit. The standard leaflets would be sold: the exhibition and cinema films would be hired by Local Authorities at such a cost

as would amply repay the capital and depreciation. It is not unlikely that Local Authorities would contribute towards the cost of such a central body under the wing of the Society, if they could obtain free advice on the various publicity problems which present themselves. Representatives of the Associations of Local Health Authorities and County Councils should be invited to be members of any Committee of the Society which undertook this work.

The other alternatives are The Royal Sanitary Institute, whose Health Week Committee has done so much for health education in this country, and, in this connection, it should be pointed out that although health publicity should go on all the year round, special intensive efforts will still be necessary. Failing the Ministry of Health or the Society of Medical Officers of Health, I consider the Royal Sanitary Institute would be very suitable for undertaking this work provided it could find the capital. The National Council for Combating Venereal Diseases has done most admirable publicity work in its own field: if it could dissociate itself from venereal diseases and leave the "V" out of its name, becoming the National Council for Combating Disease, its past experience would make it a suitable nucleus for the central body I suggest. The National Baby Week Council has already seen fit to work in co-operation with the Health Week Committee of the Royal Sanitary Institute and no doubt would amalgamate with any voluntary body which undertook general health publicity. The need for separate bodies for the purpose of educating the public on individual diseases or on how to preserve the health of special groups of the population would disappear if an energetic campaign on general health were inaugurated.

I hope that I have provided sufficient matter for discussion and that immediate steps will be taken to remove at least some of the difficulties which now prevent a full development of health propaganda in this country.

Discussion.

Dr. Charles Porter (M.O.H., St. Marylebone) asked the meeting to join with him in thanking Dr. Daley for having brought forward so important a subject in such an interesting way, and for having displayed for their guidance and information an exceedingly striking series of propaganda pictures. It was well known that members of the society and of the public health service generally were becoming more and more interested in publicity schemes, and there was certainly a large field still to be worked at. Mention had been made several times in the paper of the United

States in connection with propaganda, and Dr. Porter said that while in America he had endeavoured to obtain information on the subject. In Washington an interesting address on propaganda had been delivered by the Head of the Division concerned with publicity and publications, and one thing that had struck him was the insistence upon the value of lectures, because he had thought that the least valuable thing in relation to propaganda was the lecture. The speaker on that occasion, however, insisted that it was the most important, the chief reason being that personality counted for so much when there was a lecturer who knew what he was talking about. He had also seen a number of excellent health films, many of which were for propaganda work amongst local authorities. Indeed, it seemed that the bulk of the really sound and important propaganda work was being done by the State Boards with the object of encouraging the local boards to undertake health work. The view was held that the place in which they were going to get the best results from health propaganda was the school. A great deal was therefore being done in that direction, and when the members of the interchange went visiting schools one of the things that was generally done for their entertainment was to get the children to perform a little play. Some of them were delightful, and the lessons the plays conveyed were very good. In a school in the South of Virginia they had witnessed children taking part in a game, with a set of health rules as the basis. The teacher called out a child, who said, for example, "I am thinking of something I did before I had my breakfast," and then he indicated some other child who was to find the answer to what he was thinking. The children enjoyed the game and, of course, all told untruths. They said they had had a bath in the morning or had brushed their teeth four times a day when it was perfectly obvious that they had done no such thing. Broadcasting had been referred to, and he had heard a great deal about that too. The Public Health Service in Washington did weekly broadcasting, but he had gathered that generally speaking, after a time, the Broadcasting Company got tired of it.

Dr. Eustace Hill, O.B.E. (County M.O.H., Durham), also expressed his appreciation of Dr. Daley's address, and referred to a point not touched upon in the paper—the difficulty in getting propaganda work done in county districts as compared with towns. It was easy for a borough with an energetic medical officer of health to obtain successful results, but in county districts it

was very different. He quite agreed that the essential thing was individual teaching. Lectures were important if one got the right lecturer, but it was to be feared that most public health departments could produce but few people able to sustain the interest of an audience. He shared Dr. Daley's views that something was needed to attract apart from the bare lecture. In a county district so much depended upon spade work, and upon the energy of the local medical officer of health. Health Week efforts had in some cases been a great success and in others a dead failure. In Durham they had relied largely on the influence of health visitors and health centres in the county. They also had another factor of great value in a welfare journal, founded and edited by the superintendent of health visitors, with the public health staff and midwives as contributors. The Council supported it and guaranteed any deficiency in the working and after the first year it was self-supporting. There were over 3,000 working mothers who paid a penny a month for the journal, which was looked forward to by all interested in health work. Dr. Hill was glad to hear reference made to the influence of the Royal Sanitary Institute, and the importance of its efforts in connection with propaganda ought to be realised.

Mr. C. D. Wallis (D.O., West Sussex), speaking mainly from the dental point of view, said the greatest difficulty was financial. In his area lectures were given and films displayed, involving a large amount of work which was entirely voluntary and largely done in their own time. He considered Dr. Daley's suggestion of a central body ideal. In France they had a propaganda department which lent out to local school authorities films, slides, and model lectures. It was rather an educational than a propaganda effort, and the government very directly encouraged it. One of the obstacles in trying to teach people to preserve their health was that preventive measures seemed so trivial, though the benefits were so great, that it was not easy to get them interested. In regard to the treatment of temporary teeth, for instance, people would say that if they were left alone they would fall out, and a similar attitude was adopted in a number of other things, but it was those little acts of commission and omission, trifling in themselves, which might become serious in after-life. Poster and newspaper campaigns were very costly, as were also films. A film that took about eight minutes to show would cost at least £1,000 to produce.

Dr. E. T. Nash (M.O.H., Heston and Isleworth) said the last speaker had struck the note

he himself had desired to make, viz., that the emphasising of minute points, the dotting of i's and crossing of t's of their sanitary work, was not going to lead to very good results. The first effort should be on much broader lines. One had been trying in a quiet way to do a certain amount of work in propaganda, but the difficulty was to get the right perspective into the people's minds. He had been pressed to spend substantial sums in regard to dentistry and because there had been hesitation in doing so he had been regarded from the dental viewpoint as an entirely hostile person. He had, however, been trying to take the broader view as to what was the greatest good for the greatest number. Referring to the posters and rules exhibited, Dr. Nash again urged that they were too detailed, and contended that it was useless putting forward universal propaganda features which could not be adopted by at least 75 per cent. of the people. Far better in early propaganda to have a few broad things which could be aspired to than set up rules, excellent though they might be, which people would give up because they could not be attained. Care also had to be exercised so as not to offend the susceptibilities of the people whose conversion was being attempted.

Mr. Wallis, in relation to the last speaker's remarks, was afraid he had not made himself clear. He had endeavoured to convey the view that it was the little things that mattered. The condition of a child's mouth, to take one instance, might have been entirely prevented by early attention.

Col. Herbert Jones (M.O.H., Herefordshire C.S.D.), was rather afraid that, especially after hearing Dr. Porter's experiences, the child's rules of health, distributed by Dr. Daley, were going to make liars and little prigs. Speaking of public health propaganda generally, Col. Jones confessed that if the education of school children in health matters had been carried out 20 years ago or more then this propaganda for the growing up population of to-day, which was the child population of that period, would certainly not have been necessary. He could not at this date understand why it was they did not press more for the teaching of health matters in schools and to the teachers themselves. They were greatly indebted to their cousins on the other side of the Atlantic for the work they had done, and it might be of interest to remark in passing that as long ago as 1876, when he attended the Centenary Exhibition in Philadelphia, the Americans stopped the habit of spitting on the floor by the issuing of notices in

the exhibition to the effect that "gentlemen will not, and others must not, spit on the floor." That probably was the first propaganda the Americans instituted.

Dr. Caroline Maule (late P.H. Services, U.S.A.), who was elected a fellow of the Society that day, accepting an invitation from the President to take part in the discussion, spoke of her experience in propaganda work whilst holding posts in the American Public Health Service and on the Directorate of the Bureau of Education and American Red Cross Society. Dr. Maule proceeded to say that she could spend much time in suggesting what should not be done, but agreed that the proposal to set up a central body, which should be a clearing house for ideas for every form of propaganda, was an excellent one. A very small committee under the Society could act as a clearing house for propaganda, or even one person could form the nucleus of such a body. It was necessary to make medical men realise that they could co-operate, and what had been done in America was the education of medical men to show them that propaganda and work by health visitors really increased their practice instead of taking it away. Effective bodies for propaganda in America were the Californian League for the Conservation of Health, which began with one man, and the Life Extension Institute. Far too much money had been spent on cinema films, but lectures on some fundamentals of health had been successful for it was found that the spoken word carried much further than the written thing. Public schools and any public auditorium had been utilised to obtain an audience for health lectures.

Dr. Cyril Banks (M.O.H., Halifax), agreed that propaganda work was very necessary, but it was full of small difficulties in some of the provincial towns, where the spade work had to be done by the medical officer of health himself, usually after the day's work. Even on the occasion of a Health Week with a committee to do the spade work every detail had to be watched. Another difficulty was as to what they should say. Some authorised pamphlets conveying the considered opinions of people, who knew, were needed, and it was essential to avoid saying things that all could not subscribe to. In some exhibitions he had seen contradictory statements in two different stalls under the same organisation. With regard to the question of getting audiences he had found that the best way was to make use of existing societies. Dr. Daley and he were both Rotarians, a factor of great value in propaganda efforts.

The President moved a cordial vote of thanks to Dr. Daley for his very interesting address.

This was carried with acclamation. The President added that reference had been made to a central authority for propaganda purposes, and certain suggestions had been put forward. The members would be interested to know that the Society had approached the Ministry of Health on the question of propaganda. There was a special committee appointed by the Society to go into the whole matter and draw up a scheme, and they had been particularly insistent upon one point, and that was that the propaganda work should be carried out by the Society with the assistance of the Ministry of Health and possibly the help of some other societies. As medical officers of health must do the bulk of the propaganda work it had been insisted that the general control must be in the hands of the Society.

Dr. Daley, in acknowledging the vote of thanks accorded to him, said it had been a real pleasure for him to prepare a paper on what he personally considered an important subject. Controversial matter had been put forward in order to stimulate discussion, and endeavour to obtain the views of all. There were, however, several points to which he would like to refer. Mr. Wallis had mentioned the cost of the production of films. As a matter of fact, a film taking ten minutes to show might not cost more than £150, provided elaborate scenery were not required. In regard to Dr. Nash's remarks, it was important that ideals should be put before the people, and rules must be definite. Concerning the rules of health, he had not yet quite made up his mind about them. They had been tried on his own children, who had really carried them out. He had had a number printed and sent to certain headmasters in order that they might induce the parents to get their children to try them. If it was found that they led to the telling of lies their use would be discontinued. In America prizes were given in a whole town to those who obtained the largest number of marks, an arrangement which, in his view, was to be deprecated. Dr. Daley concluded by emphasising the importance of having one central organisation which would standardise propaganda work, and he had hoped for more discussion upon the nature and functions of such a body.

DR. R. A. LYSTER will be installed as President of the Society of Medical Officers of Health on Friday, October 17th, at 4.30 p.m. Later on the same day he will preside at the Annual Dinner of the Society, when a number of distinguished guests have promised to attend.

VENEREAL DISEASES AND THEIR RELATION TO MATERNITY AND CHILD WELFARE.*

BY

A. C. ROXBURGH, M.D.Cantab., M.R.C.P.Lond.,
M.R.C.S.Eng., Asst. Med. Off. V.D. Dept. and
Chief Asst., Skin Dept., St. Bartholomew's
Hospital, Consultant, Battersea Borough Council
Ante-natal (V.D.) Clinic.

The chief venereal diseases, and the only ones we need consider in connection with maternity and child welfare, are two in number. Gonorrhoea, vulgarly known as "the clap," and syphilis also known as "the pox" or "the bad disorder."

There is, or there used to be, much confusion in many peoples' minds between these two diseases, whereas they are really about as distinct from each other as it is possible for two diseases to be, they are as unlike as shall we say, scarlet fever and malaria.

They have only one point in common, namely that they are usually contracted in the same way, that is by sexual connection with an infected person. This being so they not infrequently occur together in the same individual.

The frequency of these two diseases is exceedingly difficult to estimate with any accuracy, as it varies in different countries and in different strata of the population, and is greater in cities than in country districts. Suffice it to say that at the public venereal clinics in this country, that is England and Wales, 29,000 new cases of gonorrhoea and 25,000 new cases of syphilis were examined in 1922, and these are supposed to represent less than half of all the new cases which occurred. It was estimated that in 1920, the worst year for venereal diseases since figures became obtainable in this country, there were 200,000 new cases of venereal diseases in England and Wales out of a population of 37 millions.

Let us consider gonorrhoea first as it is the commoner of the two diseases, there being supposed to be two or three times as many new cases of gonorrhoea as of syphilis in each year.

Gonorrhoea consists primarily in an infection of certain parts of the urinary and genital passages by a minute organism called the gonococcus which is shaped rather like a bean. This infection gives rise to a discharge but the infection may remain for years after the discharge has subsided.

* A popular lecture delivered in Battersea Town Hall, on April 24th, 1924.

It is a very ancient disease.* In the 15th chapter of Leviticus Moses, about 15th century B.C., refers to what was no doubt gonorrhoea and lays down definite regulations to limit its spread. An old Japanese manuscript, written B.C. 900, contains an accurate description of gonorrhoea. Descriptions of what was no doubt gonorrhoea occur in many ancient Greek and Roman writings. Cleopatra refers to the disease, from which she no doubt suffered herself. In the literature of the Middle Ages in Europe many descriptions of gonorrhoea are found together with regulations for its control and methods of treatment. It was not until 12th July, 1879, that Albert Neisser, at Breslau, definitely discovered and identified the gonococcus which is the cause of the disease.

Now to consider the effects of gonorrhoea on a woman. Apart from the discharge and discomfort in the early stages, it may cause abscesses about the genital organs, and not infrequently the infection spreads upwards into the womb and infects what are called the Fallopian tubes which lead from the ovaries into the womb. The infection of these tubes and its results is one of the most important aspects of gonorrhoea from our point of view to-night. Such infections are responsible for an enormous amount of sterility and of chronic ill health in women, and are the direct cause of a very large proportion of all the operations which are required to be performed on women's reproductive organs. It is estimated that in three per cent. of all childless marriages the sterility is due to gonorrhoea. This is equivalent to a loss of 23,000 potential children in this country in each year. If the infection spreads beyond the tubes general peritonitis and death may occur, though this is fortunately not very common.

Gonorrhoea also often causes inflammation of the joints, which results in temporary, or permanent, crippling. It may also cause a very severe inflammation of the eyes leading to impairment of vision or even blindness.

Supposing now that a woman with gonorrhoea becomes pregnant or contracts gonorrhoea during her pregnancy. She may miscarry but as a general rule the pregnancy proceeds to full time and the child is born. The great danger to the child is that its eyes may become infected during birth and that it will develop what is called "Ophthalmia Neonatorum," that is, ophthalmia

of the new born. This is a severe inflammation of the child's eyes, with a profuse discharge of infectious matter and this disease alone is considered to be responsible for one-third of all the cases of blindness in children in this country. In 1921 there were 8,000 new cases of ophthalmia neonatorum notified, and no doubt a large number escaped notification. In cases where the mother is known to have gonorrhoea during her pregnancy precautions can be taken at the birth to protect the child's eyes from infection and in many such cases a child may thus be saved from ophthalmia although the mother has uncured gonorrhoea.

Little girls again are apt to get an infection of their genital organs with the gonococcus, accidentally conveyed by sponges, towels, etc., from a patient, who may be man, woman, or child, suffering from the disease. This is one reason why children should, whenever possible, have their own towels, sponges, etc., and should not share a bed with an adult or another child. Occasionally outbreaks of this disease occur in the female wards of children's hospitals, orphanages, etc., and are sometimes exceedingly difficult to stamp out.

Gonorrhoea in women, then, is a very common cause of sterility and of chronic ill health and leads to many operations. In little girls it often causes a local inflammation which may cause great loss of school time and therefore of education. In babies it causes much impairment of sight and blindness.

How then are we to reduce the ravages of this disease in this country? The first thing is to try to educate women as to the existence, and the importance of this disease, for many women have it without knowing the nature and cause of their troubles.

The second step is to get the disease properly diagnosed and treated either at a public clinic, or by a private practitioner, and here we come at once to a difficulty. Many women will not go to the public venereal disease clinics and the cure of gonorrhoea in women is often a long and laborious process for which the average private practitioner cannot afford the time at the fees which his poorer patients can afford to pay. Herein lies the importance of antenatal V.D. clinics such as that which the energy and enterprise of your medical officer of health, Dr. Lennane, got started in this borough about 2½ years ago. This clinic is run in connection with the ordinary antenatal clinics in the borough, and any expectant mother, who on examination at the ordinary antenatal clinic gives a history or shows

signs suggestive of gonorrhoea, is referred to the special clinic where the diagnosis can be settled and the treatment carried out in conditions of privacy.

Turning now to syphilis. This, though less common than gonorrhoea, is an even more serious disease, and has more far reaching effects.

In marked contrast to gonorrhoea, there is no sign or trace of the existence of syphilis in the old world until 1493, when Columbus returned from the discovery of America. In that year it was introduced into Bayonne, Barcelona and Lisbon by his sailors, who had acquired it from the natives of Hayti, in the West Indies. The disease was so well known to the natives of the new world that they had become accustomed to it and no longer regarded it as a serious disease. Many of the bones found in the prehistoric cemeteries of Mexico, Peru, and Central America show undoubted evidence of syphilitic disease.

At the end of the year 1493 Charles the Eighth, King of France, led an army of mercenaries through the length and breadth of Italy. This army was accompanied by an enormous horde of prostitutes, many of Spanish origin. The disease was thus carried to Italy and widely spread there. Two years later, in 1495, the army melted away after an orgy of debauch at Naples and the soldiers carried the disease to all parts of Europe. It reached Bristol from Bordeaux in 1497, and in the same year it had reached such proportions in Aberdeen that the Town Council framed special regulations to deal with it.

The disease, as yet nameless, acting upon an unprotected, because unaccustomed, population, spread with extraordinary rapidity and virulence through every class of society. The spread of the epidemic was as follows: Italy and Spain 1494, France, Germany and Switzerland 1495, Holland and Greece 1496, England and Scotland and also Hungary and Russia 1497, India 1498, and Japan not until 1569. The English, Scots and Turks called it the French Disease, the Italians the French or the Spanish disease, and the French called it the Italian disease. It was not called Syphilis until 1530, when an Italian called Fracastorius published a poem in Latin, called Syphilis or the French Disorder. The name is no doubt derived from the two Greek words *σφύ* with, and *φίλος* love.

The celebrated Italian goldsmith, Benvenuto Cellini, in his entertaining autobiography, describes the visit to Rome of one Giacomo da Carpi, a great surgeon from Bologna. Benvenuto says: "This able man in the course of his other practice undertook the most desperate case of the so-called

French disease. In Rome this kind of illness is very partial to the priests and especially to the richest of them. When therefore Master Giacomo had made his talents known he professed to work miracles in the treatment of such cases by means of certain fumigations, but he only undertook a cure after stipulating for his fees which he reckoned not by tens, but by hundreds of crowns. He was a person of great sagacity and did wisely to get out of Rome, for not many months afterwards all the patients he had treated grew so ill that they were a hundred times worse off than before he came. He would certainly have been murdered if he had stopped."

Benvenuto also suffered from the disease himself and describes not only his symptoms, but also how he acquired the infection.

Among other accusations against Cardinal Wolsey when he was indicted before the House of Lords in 1529 was that of infecting Henry the Eighth by breathing on him! This was probably the invention of some ingenious lawyer who wished to stand well with the King.

The cause of the disease was unknown until 1905 when Schaudinn and Hoffmann demonstrated a minute spiral organism rather like a very fine corkscrew without a handle, which they called "Spidochaeta Pallida."

In 1907 Wassermann produced his test for the disease which is performed on a specimen of the patient's blood, and has proved an exceedingly valuable means of detecting syphilis in patients who show no outward and visible signs of the disease. In 1909 Ehrlich invented the Arsenical compound Salvarsan or "606," one of the most potent remedies that has ever been produced for any disease.

I must now try and give you some idea of the nature and appearances of the disease itself and then pass on to consider its effects on mother and child.

To consider first of all how people may catch this disease. The usual way as I have indicated, is by sexual connection with a person who has the disease, but it is not infrequently conveyed by kissing, and cases also occur in which doctors and nurses get their fingers infected through a cut or scratch when dealing with a syphilitic patient, or by pricking themselves with a knife or needle when operating on a person with syphilis. Much less commonly it is carried by such articles as spoons, forks, tobacco pipes, etc., and cases have occurred in groups of glass blowers who pass a blowpipe from one to the other. Infection by these indirect methods is however uncommon because the spirochaete dies very quickly outside

* For the history of these diseases I must acknowledge my debt to the works of Sir D'arcy Power and Mr. J. E. R. McDonagh.

the body, especially if it gets dry, and nearly all cases of acquired syphilis are contracted by sexual connection, or by kissing an infected person. The essential condition is that the living spirochaete must find a tiny abrasion or scratch on the skin or mucus membrane through which it can enter, but such an abrasion may be so small as not to be visible.

The spirochaete having entered, the patient notices nothing for three weeks or so and then a small sore begins to appear at the site of infection. This is usually rather hard and is called the primary sore or chancre. As this develops the lymph glands in the neighbourhood become swollen and hard, in the groin, in the case of genital sores, and under the jaw if the sore is on the lip. If untreated the sore usually lasts a few weeks or months, and about three months after its first appearance the patient begins to feel out of sorts, gets anaemic, perhaps gets bad headaches, and then breaks out in a rash, accompanied usually by a sore throat and by enlargement of most of the lymph glands in the body. At this time too the patient probably has some spots inside his mouth, the so-called "mucus patches," which are swarming with spirochaetes. It is in this stage that the patient is most infectious to other people and is especially liable to infect others by kissing or by using the same spoons or forks, if the latter are improperly washed. This is the so-called "secondary stage" and if untreated lasts for a few weeks or months and then gradually disappears. The patient now enters on the latent stage of the disease in which there is nothing obviously the matter with him, but in which he is practically certain to infect any children he may have.

After a lapse of some further time, which may be as short as six months, or as long as sixty years, and is usually something over three years, the patient enters on the "tertiary stage" of the disease.

In this tertiary stage the patient often develops lumps called gummata which may occur in any part of the body, either on the surface, in the skin, or deeper, in the muscles, bones, liver, heart, or brain. These lumps may be of all sizes and either few or many. On the skin they may give rise to ulcers especially on the legs, though of course not all, not even most, ulcers on the legs are syphilitic, most are due to varicose veins. On the skin also certain eruptions are common in the tertiary stage but the most serious conditions are those which occur out of sight, in the heart or great vessels or in the brain or spinal cord. Take for example the aorta, the great main artery which receives from

the heart the blood for the whole of the body. The wall of this vessel becomes weakened by syphilis and the vessel bulges, forming what is called an aneurysm, this may lead directly to the patient's death. Or the blood vessels in the brain or spinal cord may become obstructed owing to the thickening of their walls by the syphilitic inflammation and this may lead to paralysis and even to death. Another late effect of syphilis is seen when it attacks the brain itself and causes General Paralysis of the Insane, a disease which is usually fatal in two years from its onset and once developed is for all practical purposes incurable. This disease is always due to syphilis, and it forms a large proportion of all the cases in asylums to-day (15 % of male admissions and 3 % of female).

The disease again may attack the spinal cord and give rise to that very trying, usually long lasting and sometimes very painful disease, Locomotor Ataxia.

So much for the briefest possible outline of the ordinary course of acquired syphilis, a disease which can attack every single organ and system in the body and in such varied ways that the late Sir William Osler used to say, "If a man knows syphilis, he knows medicine."

Having now, I hope, given you some general idea of this disease it is time to consider its relation to maternity and child welfare.

First of all I must tell you that in its visible effects it is often a less obviously serious disease in women than in men. In many women the disease is scarcely noticed by the patient and its presence is only discovered when she gives birth to syphilitic children. A woman infected with syphilis may never notice the primary sore at all and the secondary rash may be of the slightest. Suppose that a woman who has syphilis become pregnant, a number of different things may happen.

1. The foetus may die and constitute an early abortion.
2. More often, it dies later and forms a miscarriage at the 5th to the 7th month or an early premature labour at the 8th month.
3. The child may be born at full time either dead, or else alive, but showing signs of syphilis at birth. In this case it usually dies after a few days or weeks.
4. It may be born apparently healthy but develop signs of syphilis at 4-8 weeks old.
5. It may remain apparently healthy for some years and only then develop what is called late congenital syphilis. It is very possible, however, that all these so-called late

cases did show signs of the disease in early childhood but these were overlooked.

6. Lastly it may escape infection altogether and be a healthy individual.

Supposing the mother to be pregnant first and to contract syphilis during her pregnancy, an important point is the stage of pregnancy at which she becomes infected. If in the first month or two of pregnancy, abortion is practically certain to occur. Between the third and the sixth month the child is certain to be infected, if at the seventh month or later the child will very likely escape infection.

I will now give you some figures to show the appalling results of syphilis as it affects women. (Hochsinger). 134 women who showed no visible signs of syphilis but had given birth to syphilitic children, were observed over a period of years. These 134 women gave birth 569 times. Of these children no less than 253 were born dead, that is 44 %, 316 were born alive but syphilitic and only 53 out of the 569 were healthy.

Another observer (Veeder) watched 100 syphilitic families. There occurred 331 pregnancies which resulted in 30.2 % abortions, 9.3 % stillbirths, and 60.5 % living births. But of the 200 babies born alive only 33 or about one-sixth were healthy.

That is to say, if a woman who has syphilis and is not treated has ten pregnancies she will probably have four abortions or still births, five syphilitic children of whom one or two will die before they are four years old, and only one healthy child out of the whole ten pregnancies.

This emphasises the enormous importance of syphilis to the community. You must not however go away with the idea that syphilis is the commonest cause of still-birth. Complications of labour are still much the largest single cause, being responsible for about 51 %, while syphilis is a bad second being accountable for only 16 %.

I must now try to give you some idea of how these unfortunate syphilitic children are affected by the disease. Occasionally the symptoms I am going to describe are present at birth, but much more usually the child appears healthy at birth and only begins to show signs when 4 to 8 weeks old. The child begins to lose weight and is cross, it develops snuffles owing to inflammation of the lining of the nose, often leading to destruction of the bones and consequent falling in of the bridge of the nose. You must not think, however, that every baby you see with a snuffy nose has syphilis, most of them have only got colds in their heads.

Then the child gets a rash, usually earliest and

most pronounced on the buttocks and the central parts of the face. It may become covered with blisters including the palms of its hands and the soles of its feet. It gets cracks in its lips and at the corners of its mouth, and its cry becomes hoarse owing to inflammation of its larynx.

Changes also occur in the bones, the ends becoming swollen and tender so that the child will not move its limbs and so has somewhat the appearance of being paralysed. Changes in the bones of the skull also occur causing unnatural prominences on some of the bones.

Most of the internal organs may be affected and a certain proportion of cases of mental deficiency in children are due to syphilis.

If the child does not die, and many do, the symptoms gradually subside even without treatment, and in later childhood further troubles occur, such as painful inflammation of the long bones such as those of the shins, or swelling of the knees owing to fluid in the joints. The eyes are often affected between the ages of 7 and 12 or later, and the sight may be permanently damaged or even lost. The ears too are occasionally attacked and the patient gradually becomes deaf. The central front teeth of the second or permanent set in the upper jaw are often peg shaped, with a notch on the cutting edge, the so-called "Hutchinson's Teeth" after the late Sir Jonathan Hutchinson who first described them.

General paralysis may also occur in children as the result of congenital syphilis, though fortunately it is relatively uncommon.

Children may also, as a result of congenital syphilis, exhibit the ordinary signs of tertiary syphilis such as I described as occurring in adults.

After a congenitally syphilitic child has reached adult life it is unusual for any further signs of the disease to become evident and it appears to die out or at least to become quiescent. Under conditions of unusual strain, however, it may show itself again, for example many cases of a certain eye disease (interstitial keratitis) which occurred in young soldiers during the war were probably the result of congenital syphilis, but would very likely never have occurred apart from the severe stresses imposed on the soldiers eyes by the conditions of war.

Supposing that a child with congenital syphilis survives, comes to adult life, and marries. Can he or she transmit the disease to his or her children, that is to the third generation? To this very important question the answer is that transmission to the third generation probably can, and very rarely, does occur, but in the enormous

majority of cases the child of a congenital syphilitic by a healthy partner will be healthy.

I have shown you the dark side of the picture, let us now turn to the bright side. If a woman with syphilis is thoroughly treated during the greater part of her pregnancy by modern methods one can almost guarantee that she will have a healthy infant. This is to me one of the most satisfactory sides of medical practice, the securing of healthy babies from mothers who without treatment would almost certainly have given birth to syphilitic children. To show how successful such treatment can be I will give you the results of the treatment at another centre which has been running for some years longer than ours at Bolingbroke Grove. In the Thavies Inn Centre of the Metropolitan Asylums Board my friend Dr. John Adams has had the following results:

TABLE 1.

Results of Treatment of Pregnant Women at Thavies Inn Centre, by Dr. John Adams.

Year.	Syphilitic Mothers Delivered.	Babies Born Alive. Wassermann Reaction.		Babies Dying of Syphilis.	Stillbirths due to Syphilis.
		Positive.	Negative.		
Expected results in Absence of Treatment ...	30	15	3	6	12
1917-1918 ...	28	17	6	3	5
1918-1919 ...	30	8	21	1	1
1919-1920 ...	37	1	36	0	0
1920-1921 ...	23	5	16	0	2*
1921-1922 ...	18	7	9	0	2*

* Mothers not treated. Admitted in Labour.

TABLE 2.

Results to date 31/3/24. Battersea A.-N. V.D. Clinic.

10	1	6*	0	0
----	---	----	---	---

* Plus 3 apparently healthy but not yet tested.

I have put above for comparison the results to be expected according to the statistics I gave you earlier in the evening if these mothers had not been treated.

In considering these results one must remember that many of the mothers whose children were born alive but giving positive blood tests for the disease came to the clinic only late in pregnancy and so could not have sufficient treatment to secure a healthy baby. But these babies born syphilitic if promptly put under treatment can be cured and need never have any of the troubles which I have enumerated above as possibly the lot of a syphilitic infant.

In our own clinic at the Battersea Borough Council Maternity Home we have up to date treated fourteen mothers during their pregnancies. Six healthy babies have been born, three more apparently healthy, but whose blood has not yet for various reasons been tested, one baby was born with a positive blood test and four have not yet arrived. There have been no still births in this series.

To cure the ordinary case of syphilis in a man or woman two or three years' treatment are required, but even this will not make certain that a woman will thereafter always have healthy children although it makes it much more probable. In the case of a woman who has ever had syphilis it is most desirable that she should be treated throughout every pregnancy even if she is not treated at all in between times, in order to make sure of each child being healthy.

When the infection is of many years standing the chances of the woman having a healthy child, even without treatment, increase, but at no time is it safe to say that any particular child will be healthy unless the woman is thoroughly treated during that pregnancy.

There seems to be some antagonism between the reproductive organs of a woman and the organism which causes syphilis, for many women who have shown no signs of the disease during their childbearing period of life, develop signs of tertiary syphilis when they reach an age of 50 or 60 although the infection may have been acquired thirty or forty years before.

The best time to treat any case of syphilis is the earliest possible moment, and the best time therefore to treat a child is before it is born and indeed as soon as possible after it is conceived. If one does this one can in nearly all cases prevent the child becoming syphilitic at all, and in this disease more perhaps even than in most, is prevention better than cure.

Hence you see the great importance of prospective mothers having their blood tested early in pregnancy, so that treatment can be started while there is yet time to prevent the child from becoming syphilitic.

I should add, however, that, like other human inventions, the blood test is not infallible, especially in pregnant women, and some syphilitic women give a negative blood test while they are pregnant which becomes positive again a month or so after delivery.

This being so it is often worth while for a woman who has had repeated still births, even if she gives a negative blood test, to have a course of

treatment during her pregnancy, to see whether this will result in a healthy living baby.

Acting on this principle lately, I treated a mother who had had five still births or miscarriages, but gave a negative blood test, with the happy result that she produced a healthy boy weighing 8½ lbs. with whom I need hardly say she was extremely pleased.

The treatment of syphilitic children is satisfactory if commenced soon after birth and before definite signs have showed themselves, but if left for some years it becomes less and less satisfactory and then the marks which the disease has made on its victim can never be effaced.

I hope I have said enough now to make clear to you firstly the great frequency of Venereal Diseases in this country. Secondly their enormous economic importance, especially as affecting maternity and child welfare, and thirdly the immense importance both to the patient and to others of early diagnosis and skilful treatment.

DIET AFTER THE PERIOD OF INFANCY.*

{ BY

ROBERT HUTCHINSON, M.D., F.R.C.P.

For dietetic purposes we may regard the period of infancy as ending when the child is three years old; after that age the diet should conform, in its composition, to that of an adult. There is a common tendency, however, to continue the "baby" diet too long, and one often finds children beyond the age of three being kept on "sloppy" foods and getting too much milk and an insufficient quantity of meat, with the result that digestive disturbances and "biliousness" ensue. The idea—so widely prevalent—that meat is difficult of digestion and unsuitable for young children is mistaken, and meat in some form should enter into the daily diet from the age of 18 months. As regards milk one pint a day is a sufficient allowance from the third year onwards.

It being agreed that after the period of infancy (as above defined) the diet should resemble that of the adult in kind, we have next to consider what scientific data we possess to guide us in determining the amount of food required at different ages and the best sources from which the various nutritive constituents should be derived. Such data have, until lately, been very scanty—at least when compared with the amount of knowledge we possess bearing upon the diet of the

adult. In recent years, however, a good deal of careful scientific work on the subject has been carried out, especially in America, the results of which have been collected in Dr. Emmet Holt's book, "Food, Health and Growth,"* to which I wish to express my indebtedness for many of the data contained in this lecture.

(1) The first question we have to consider is the *total energy requirement* (in calories) at each age. This is made up of the following fractions:

(a) *Basal requirement*.—By this is meant the amount of energy required for the basal metabolism, that is to say the energy required simply to "run the machine" by providing for the indispensable work of circulation, respiration, heat production and so forth. It is an amount which is not large and which is fairly uniform for all children of the same weight.

(b) *Growth requirement*.—This is an extremely important fraction of the total energy in childhood for upon it depends the proper maintenance of growth. It will therefore be largest during the period when growth is most rapid: in girls that is between the ages of 11 and 15 and in boys between 13 and 17. The proportion of the total energy intake which is expended in growth will therefore be largest at those ages in the two sexes respectively.

(c) *The Energy requirement* is the fraction which is spent in muscular work—in outside activities as opposed to the inside activities to which the basal requirement is devoted. It will naturally vary greatly in different children, depending upon their temperament; the more active the child the larger will the energy requirement be. If too much of the total energy intake is devoted to muscular work the "growth requirement" may have to go short—hence the danger of excessive athletics or of over-work at physical training or gymnastics in growing children. Rest in bed of course greatly economises this form of expenditure and leaves more energy over from the diet for other purposes. This is the reason why children who are confined to bed from some slight illness often grow rapidly.

These are the chief ways in which the energy of the diet is expended and, owing largely to the demands of growth, it follows that an active child will require a relatively greater total intake than an adult doing moderate work. During adolescence when growth is most rapid the total daily calories required may rise in the cases of boys to 4,000 and in girls to 3,300

* Paper read at Meeting of M. & C.W. Group, Soc. of M.O.H., March 20th, 1924.

* Macmillan and Co. 1922.

which is at least 700 more than is required by a full-grown man or woman.† Put in another way it may be said that three adolescent boys or girls will eat as much as four men or women doing moderate muscular work.

(2) The next question we have to consider is the quantity of each nutritive constituent required daily.

(a) Of the nutritive constituents of the diet Protein is the most important as it alone can supply the raw material required for growth. Estimates of the total protein required daily vary to some extent but there is now fairly general agreement that 15 per cent. of the total calories of the diet should be in this form. In the case of a boy of 16 this means an intake of 150 grms. of protein daily as opposed to the adult standard of 100 grms.

(b) Greater variation may be allowed in the standard for fat than in that for protein. Fat, of course, is a valuable source of heat, but does it fulfil any functions in the body which cannot be equally well met by carbohydrates? Much depends upon the answer to this question and different replies have been given to it, but for my own part I think there can be no doubt that fat does fulfil special functions in metabolism and that it cannot be entirely replaced by carbohydrates. There is reason to believe, for instance, that deficiency of fat in the diet lessens resistance to certain infections—particularly tuberculosis—and experience during the war seemed to confirm this. There is some reason to think, also, that fat is a food of special value for the nervous system and that a deficiency of it favours the appearance of functional neuroses. In addition to this fat is certainly a vehicle of the growth vitamin and it also favours the absorption of calcium from the bowel.

Apart from these reasons for a fat ration, however, there is no doubt that if too large a part of the diet is taken in the form of carbohydrates—and there is always a temptation to this owing to the relative dearth of fat—digestive troubles arise and every worker in a children's out-patient department knows how common "carbohydrate dyspepsia" is.

It is probably wise, therefore, to let the fat in the child's diet equal the protein in amount. Some observation by Dr. Chalmers Watson on the diets of children of the upper classes show that this standard is actually adopted in practice, for at the age of five these children

† A boy of five requires about 1,500 Calories daily and a boy of about ten about 2,300. Girls at the same ages require slightly less.

were taking 72 grams of protein and 69 grams of fat.

(c) The balance of the total energy of the diet will be derived from *Carbohydrates*, and about 50 per cent. of the total calories will be so obtained. The exact amount will depend to a considerable extent on the activity of the child, but in the case of an adolescent who takes much muscular exercise 500 grams of carbohydrate may easily be required daily.

(d) There is little to be said about the *Mineral constituents*. Calcium and iron are the most important and a reasonable amount of milk and meat in the diet will ensure a sufficient supply of each.

(3) We have next to consider from what source each of the nutritive constituents should be derived.

(a) Protein may be obtained either from vegetable or animal sources. As it has been found that animal protein has a much higher "biological value" than vegetable—that is to say, a little of it goes a much longer way in tissue-building—it is generally agreed that animal protein should enter largely into the diet of the growing child, and most authorities are of the opinion that two-thirds of the total protein of the diet should be of this origin. This means that vegetarianism, whatever may be said of it in the case of adults, is not well suited to the needs of the child.

(b) Fats may also be derived from either animal or vegetable sources. As regards their fuel value the two varieties are equal, but it is possible that some of the other functions of fat in the diet are better fulfilled by animal than by vegetable fats. In practice it is a question of butter versus margarine. Much depends upon the importance one attaches to the vitamins; if the fat-soluble vitamin is regarded as very essential then the animal fats will be preferred. A diet, however, which contains a sufficiency of animal protein can hardly fail to provide also the necessary proportion of animal fat.

(c) As regards *carbohydrates* there is an abundant choice, and practically, so far as they are concerned, it is a question of how much should be in the form of starch and how much in that of sugar. In America it has been found that children take about half of their total carbohydrates as sugar. This is probably too high a proportion and must tend to favour digestive and other disorders. It is impossible, however, to lay down any definite rule as to the exact quantity of sugar which the child's diet

should contain. Much depends on individual taste and digestive peculiarities.

I may deal briefly with the question of *vitamins* because I believe that their importance in the diet tends, at the moment, to be greatly exaggerated. Scurvy, after the period of infancy, is practically never seen so we need not trouble about the anti-scorbutic vitamin, and as the growth vitamin is contained in green vegetables as well as in animal fats there is no great danger of a shortage of it in the diet. The statement—so often made—that various vague conditions of ill-health are due to vitamin-deficiency is entirely lacking in any clinical foundation, and in brief, it may be said that if the diet is right in other respects the vitamins may safely be left to look after themselves.

Finally, I may say a few words on the "technique" of feeding. The difficulty in the case of town children especially is that they have often poor appetites and weak digestions. Want of out-door exercise and the strain of school-life are largely responsible, yet until appetite and digestion have been restored the most scientific diet will fail to produce health. To what extent, also, are the "whims" of children in matters of diet to be considered? So far as these relate to disinclination for any particular constituent of the diet, such as fat, I believe they are often the expression of a natural digestive disability and must be attended to. Many children, for instance, who dislike milk are really made bilious by it. If, on the other hand, a child is merely fanciful about "dishes" (for example if it will take rice pudding but not tapioca), the fancy may safely be ignored. Closely related to the question of appetite and digestion is what we may call the "aesthetics" of diet—good cooking, attractive serving, the provision of variety and so forth. There can be no doubt that these matters are often sadly ignored in the feeding of children both at home and, perhaps more, at schools, and that health and digestion suffer as a consequence.

As to meals themselves it is unnecessary to lay stress upon the importance of punctuality and regularity and to seeing that enough time is allowed so that there is no excuse for "bolting." As far as possible there should be no food between the regular meals and no rushing off to games immediately after them. Work of any kind before breakfast is physiologically extravagant and should be discouraged.

When all is said and done the successful feeding of children beyond the age of infancy comes to this: see that the conditions of the child's life are

such as to promote a good appetite and then let him satisfy it with an unstinted but plain and mixed diet.

THE PREVENTION OF VENEREAL DISEASE.*

BY

SIR AUCKLAND CAMPBELL GEDDES, G.C.M.G.,
K.C.B., P.C., M.D., LL.D.

Since it was announced that I was to become President of the Society for the Prevention of Venereal Diseases I have observed that we are under suspicion as being in intention corrupters of youth, or at best careless whether we corrupt youth or not. That suspicion is false and foul. Many in this generation are frightened of the subject of sex. They attempt to repress their feelings, to pretend they do not exist and to burke decent discussion of the problem. In result, it haunts them like some guilty secret. Let us face the facts. Sexual appetites are strong in youth and can only be controlled and kept in check without moral and mental harm when there is understanding and frank recognition of their existence and normality. The policy of hush is often fatal. What is required in my judgment, is a great deal more regulated frankness about these matters. I agree that to determine the age at which childish innocence should end is difficult. There is no doubt that it is essential to preserve it in childhood, but highly wrong and dangerous to allow it to continue too long. I have met it at 25 years of age—I have met with complete sophistication at 10 years of age. Whatever age line we draw must be arbitrary, for some too late, for some too early. But considering all things I think that 18 years of age is a fair average for complete knowledge in the case of males. Females have, I think, to be dealt with much more individually, but certainly information should be available for them on request at any time after they are 18.

I know the dangers. There is some risk of encouraging in young unbalanced minds the belief that all young persons should indulge, indeed are expected to indulge, in promiscuous sexual intercourse. But in the case of normal young men if they have not met that idea by the time they are 18, they will certainly meet it at 19 or 20. The remedy for this danger, in so far as it exists, is not in my view to withhold knowledge, but in the years before, by the proper influence of religion and training, to build stronger and better balanced characters.

I have no patience with those who claim on moral grounds the right to withhold knowledge from adults. Morality based on ignorant fear is no morality.

*Subject of an Address delivered in July.

It has no foundation and under the tauntings of companions may be swept away.

We are not, therefore, engaged in attempting to corrupt childhood. On the contrary, we seek to protect childhood and through knowledge to make adolescence stronger—not only morally, but physically.

Children form the section of the community which would gain most from the stamping out of venereal disease and then adolescents next in order would not only gain physically but morally. Some dispute this, but I have never known a case in which the contraction of venereal disease by an adolescent through sexual channels has not been morally harmful. I have known many cases where for a time anti-social, promiscuous sexual intercourse has been practised but in which a deepening social sense has led to the ending of the practice. In such cases, if there has been no venereal infection, the ending of the anti-social habit has been followed by the apparent total disappearance of the moral injury; but, where there has been venereal infection, it is rare to see the moral injury disappear. For this reason, alone, if for no other, I am altogether in favour of the widest possible dissemination of knowledge compatible with the need of safeguarding proper childish innocence. I need not here dilate upon all the other reasons which make it so important to prevent venereal infection. No disease has caused so much unhappiness or more suffering to those whom we might call the guilty (though their guilt is often slight because of ignorance forced on them by a foolish reticence) and the innocent—more especially the innocent.

It appears to me that much of the controversy that has existed has been based upon a failure to recognise that there are two sides to this question as there are to the problems of all organismal diseases—the human side and the organismal side.

In practically all diseases there are questions of human knowledge, self control, care of others and so on, in short, morals enter. Take tuberculosis. In any cases of tuberculosis there is the question whether everything has been done that knowledge dictates to prevent infection. We have all known cases of tuberculosis in which moral responsibility akin to that of manslaughter rightly attaches to some parent or guardian. We do not on that account encourage the tubercle bacillus to spread and multiply. Why, because there is a human lapse from the highest standard of morality should anyone wish to permit the venereal organism to increase and prosper?

If we are to exterminate the disease we have to wage ceaseless and relentless war on causal organisms wherever they are or may be suspected to be. That

is our policy, to wage war without quarter on the organisms which so far as we can judge are wholly impervious to moral considerations. Their simple philosophy is to multiply. Ours with regard to them can be equally simple—to kill. That does not mean that we are not fully alive to the human problems involved, but it does mean that we find it difficult to understand the minds of people, if there be any such left, who declare it to be their desire to combat venereal diseases and then try to secure complete protection and assistance for the organisms at their most vulnerable, and yet if not attacked, most dangerous, moment.

If we had one strong society recognising equally the two sets of problems—the human and the organismal—I should be glad. But it is no use having union with our sister society unless the two sides of the problem are to be recognised fully by the new united society. Personally, though there is an appeal in unity, I see no case for union either in reason or sense if the result is to be to diminish the weight of the attack on the causal organisms of the venereal diseases. The whole technique and practice of disinfection is an essential weapon and arm in the struggle against venereal diseases. Let that be frankly recognised and union is at once possible.

I consider, I think I may say, we consider, that it is universally acknowledged to be the duty of the State to support and assist the spread of knowledge beneficial to national morals and national health, I therefore have real pleasure in moving a Resolution:—

THAT this meeting respectfully requests the Minister of Health to allocate to the Society for the Prevention of Venereal Disease and equitable proportion of any sum set aside for the education of the Public regarding Venereal Disease and its Prevention; and draws his attention to the acknowledgement of the value of the educational work of the Society for the Prevention of Venereal Disease by former Ministers of Health; by the Committee of Inquiry recently held under the chairmanship of Lord Trevethin; and also by eminent leaders of religious thought of all denominations; and further desires to emphasise the fact that while in the past financial assistance out of public funds has been granted to an organisation specially interested in moral prevention and treatment after infection, that education in the important aspect of medical prevention has hitherto been left to the Society for the Prevention of Venereal Disease to carry out without any such assistance from public funds.

REVIEWS.

CLINICIANS AS TEACHERS OF PREVENTION.

In some quarters the strange doctrine that the teaching of prevention should be delegated to the ordinary clinical teachers of the medical schools has been preached industriously, but up to the present there seems to be little or no indication that the clinicians concerned are as a whole in the slightest degree interested in the subject. We have on numerous occasions expressed our dissent from such a suggestion, as a wide experience in teaching has convinced us that no specialist in any particular subject is likely to prove a good teacher in another branch even if the two are more or less intimately associated. Our contention is that the average clinician is not in any way interested in prevention and is never likely to be a good teacher of it even if he could be persuaded to undertake to devote a few of his lectures to that part of the subject.

In view of our expressed opinion, which we adhere to in every way, it gives us particular pleasure to record the publication of two handbooks of eminent clinicians which deal adequately and scientifically with the subject of prevention. Both these writers are prominently associated with prevention and are at the same time skilled clinicians. Their textbooks are likely to be of the greatest possible use to the average student and medical practitioner, and will at the same time be read with much interest and considerable profit by every medical officer of health.

1. Gynaecology with Obstetrics. A Text Book for Students and Practitioners, by John S. Fairbairn, B.M., B.Ch., (Oxon.), F.R.C.P. (Lond.), F.R.C.S. (Eng.) Published by Humphrey Milford, Oxford University Press, 1924. Price 25s. net.

In Dr. Fairbairn's prologue he discusses the relation of midwifery to general medicine and surgery, and gives his view of the importance of the reproductive cycle to the community and discusses its public health and social bearings. Throughout the book he emphasises the preventive side, as, for instance, in such things as abortion, the medico-legal and ethical sides of which are thoroughly discussed; similarly in the chapter on the toxæmias of pregnancy. Considerable public health interest is also contained in the discussion on the management of labour and uterine inertia. In the sections dealing with the newly-born infant and breast feeding the

subject is viewed largely from the physiological side. Even in such a subject as dysmenorrhoea the preventive treatment and investigation receives considerable attention as is also the case in the section dealing with the nervous and psychical aspect of gynaecology. The last section on public health, and social and ethical aspects, is one which will appeal specially to all people interested in public health, and is obviously written by one who is an enthusiast on public health and preventive progress.

The book is evidently the work of an experienced and enthusiastic teacher with the highest ideals, and it will be read with a great deal of pleasure by all.

2. Venereal Disease: Its Prevention, Symptoms and Treatment. By Hugh Wansey Bayly, M.C., formerly Pathologist to the London Lock Hospital, etc. Published by J. and A. Churchill. 1924. Price 7s. 6d.

Few textbooks can compare with this medium sized production, either in clearness of arrangement, excellency of type, or useful illustrations. As would be expected in a production from Major Wansey Bayly, the subject of prevention receives special attention, and is dealt with efficiently. Anyone who desires to have a concise and accurate summary of the present position of prevention of venereal diseases will obtain such knowledge from this book. The medical student, and practitioner, and also the V.D. officer will find the book of very great use in all branches of their studies and their work, both practical and theoretical, and the book can be unreservedly recommended. The five sections into which the volume is devoted are respectively, (1) Prevention, (2) Syphilis, (3) Gonorrhoea, (4) Non-Specific Lesions, (5) The Patient. In the last section useful advice is given with regard to the equipment of the consulting room, methods of home treatment; examination of patients, taking of specimens, marriage, sterility, neurasthenia. The book is written in a clear, attractive and practical style, and its issue at the low price of seven shillings and sixpence should insure a large sale.

3. A Text Book for Midwives. Papers for Practising Midwives: edited by M. Olive Haydon, published by "Nursing Notes," price 1s.

These papers entitled respectively, "Booking of Patients," "Discomforts of Pregnancy," "The Midwife and the Nervous Patient," "Management of Labour that will Avoid Complications," "Posture in Obstetrics (illustrated)," "The Comfort and Proper Dieting of the Lying-

in Mother," "The Midwife and the Doctor," "The Good-bye Visit," "The Management of the District Baby," "Breast-feeding and Its Difficulties in District Practice," cover most of the grounds of the midwife's practice, and every paper is full of sound advice which, if read, understood, and carried out by the midwife, would result in a vast improvement in the general midwifery practice in this country. It is written by a midwife and teacher of very great experience, and one who evidently understands fully the difficulties of midwifery practice. The booklet might usefully be placed in the hands of all practising midwives.

CORRESPONDENCE.

The Editor does not accept responsibility for the opinions of correspondents.

WOMEN IN PUBLIC HEALTH APPOINTMENTS.

Sir,—Reference your paragraph in "Public Health" of August, 1924, and the letter in the B.M.J. of 9th August, I think more could be done to prevent such unfortunate situations, but it seems unfair to blame these young inexperienced women entirely. It is not only women who accept these posts as seen, for example, from the recent appointment at Leeds of a male assistant M.O.H. at less than the minimum.

We refer to the fair candidates for the Medical Education posts two of the candidates were daughters of medical men of (understood) good standing and one has accepted the post below minimum salary as assistant to the Aberdeenshire Education Authority.

Medical men on the Committee frequently take no steps to prevent these appointments and yet they (the successful candidates) are allowed to continue members of the British Medical Association. The salaries of senior Public Health Officers in Scotland are in many cases below that of assistant Medical Officers in England, which must make some difficulty in maintaining the minimum £600 per annum for assistants in Scotland, hence there are apparent more "black legs" in the North.

WOMAN ASSISTANT MEDICAL OFFICER.

SIR GEORGE NEWMAN'S ANNUAL REPORT.

The Annual Report for 1923 of the Chief Medical Officer of the Ministry of Health has just been issued. The Report is in form similar to that of previous years and contains vital statistics showing that the year under review was the healthiest on record. The chapters are devoted to a number of subjects concerned with personal and public health, including Tuberculosis, Maternity and Child Welfare, the Insurance Medical Service, the Poor Law Medical Service, etc. Particular reference is also made to the remarkable decline in the mortality from typhoid during the last 50 years, the smallpox outbreaks, and human nutrition.

The Report, including four short Appendices, is 211 pages in length and may be obtained either direct from His Majesty's Stationery Office or through any bookseller, price 3/-.

A section has been added to the United States education law providing that a specialist shall assist the State Medical inspector when he makes eye and ear tests on public school pupils.

Mr. W. H. S. JONES, Fellow of St. Catharine's College, Cambridge, has edited the earliest Greek, Latin and Arabic MSS. of the "Hippocratic Oath," the famous oath upon which the ethical rules of the medical profession have been based. In addition to the MSS., the volume will contain translations, an essay and an appendix; it will be entitled "The Doctor's Oath: an Essay in the History of Medicine," and will be published by the Cambridge University Press.

The death occurred suddenly on 7th July of Dr. William Arnold Evans, of Oakworth, near Keithley, Yorks., for over twenty years medical officer of health for the city of Bradford. Dr. Evans was found in a state of collapse in his surgery and died before medical aid could reach him. Dr. Evans qualified in 1883 as M.R.C.S. and L.S.A. In 1888 he took the M.D. of the London University, in 1890 D.P.H. Camb. and B.Sc. Vict. in 1904. Before settling in practice in Bradford, he was for a time house physician in the Wolverhampton General Hospital, house physician at the Manchester Royal Infirmary, and resident at Monsall Fever Hospital. He was appointed medical officer of health for Bradford in 1904, hence there are apparent more "black legs" in the North. He took up practice in Oakworth.